

Park, Pennsylvania, United States, 3. Penn State University, University Park, Pennsylvania, United States

Loneliness is a risk factor for dementia, however its relationship with cognitive health during midlife is unclear. We evaluated whether loneliness was associated with profiles of objective and subjective memory in younger and middle-aged adults. Participants (aged 25 to 64 years) underwent an initial loneliness assessment, followed by 14-days of momentary (5 per day) cognitive assessments (objective memory) and daily ratings of memory (subjective memory). Cluster analysis was conducted using person-level means of objective and subjective memory. Three clusters were identified: (1) highest objective and subjective memory (9%); (2) lowest subjective but not objective memory (84%); (3) lowest objective but not subjective memory (7%). There was a trend for higher levels of loneliness in Cluster 2 relative to Clusters 1 and 3. Results suggest that loneliness is more closely related with subjective than objective memory during midlife and are informative for development of interventions targeting cognitive health. Part of a symposium sponsored by the Measurement, Statistics, and Research Design Interest Group.

LONELINESS AND COGNITIVE FUNCTIONING OVER TIME: USING AMBULATORY COGNITIVE ASSESSMENT

Jee-eun Kang,¹ Karra Harrington,¹ and Martin Sliwinski,²

1. Pennsylvania State University, University Park, Pennsylvania, United States, 2. Penn State University, University Park, Pennsylvania, United States

Loneliness has been investigated as a risk factor for cognitive health, but results were inconsistent. This study used three measurement bursts of ambulatory cognitive assessment to determine whether loneliness affects longitudinal changes in cognitive functioning in daily life. At each burst, participants performed cognitive assessment five times a day for 14 days. 138 adults (Mean=49.4) who completed all three bursts were included in this study.

Growth curve modeling showed that, on average, scores of cognitive functioning were improved across a 2 year period ($p < .001$). The chronic lonely group (in the highest tertile at all 3 bursts) showed less improvement in scores compared to non-lonely people ($p < .01$), although there was no difference in cognitive functioning at the baseline between two groups. This study indicates that we need a repeated measurement of cognitive functioning and longitudinal approach to detect the effect of chronic loneliness on the rate of cognitive change. Part of a symposium sponsored by the Measurement, Statistics, and Research Design Interest Group.

BAYESIAN MODELING OF COGNITIVE IMPAIRMENT IN THE PRESENCE OF RETEST EFFECTS

Zita Oravec,¹ Nelson Roque,² and Martin Sliwinski,³

1. Pennsylvania State University, State College, United States, 2. Pennsylvania State University, University Park, Pennsylvania, United States, 3. Penn State University, University Park, Pennsylvania, United States

Diagnosing the early onset of neuropathologies, such as mild cognitive impairment (MCI), requires repeated

evaluation of cognitive skills several times per year -- a measurement design known as a "burst design." Detecting the often subtle cognitive decline in the presence of retest effects requires careful statistical modeling. The double exponential model offers a modeling framework to account for retest gains across measurement bursts, as well as warm-up effects within a burst, while quantifying change across bursts in peak performance. This talk highlights how a Bayesian multilevel implementation of the double exponential model allows for flexible extensions of this framework in terms of accommodating different timescales (nesting) and person-level predictors and drawing intuitive inferences on cognitive change with Bayesian posterior probabilities. We will use reaction time data to show how individual differences in asymptotic performance and change can be related to predictors such as age and MCI status. Part of a symposium sponsored by the Measurement, Statistics, and Research Design Interest Group.

SESSION 5455 (SYMPOSIUM)

ARTS-BASED INTERVENTIONS FOR DEMENTIA CARE: EAST MEETS WEST SYMPOSIUM

Chair: Fei Sun

Co-Chair: Angel Duncan

Discussant: Nancy Hooyman

This East Meets West symposium presents evidence of arts-based interventions in dementia care in different societal settings, focusing on the U.S.A. and China, where live about one-third of the world's total estimated 49 million dementia population. The first study from Kansas in the U.S. outlined the varieties of arts being applied in dementia care and recommended dementia care, inter-professional teams, to involve those professionals in arts and humanities. The second paper, based upon secondary national representative data, examined the association with arts-related hobbies and cognition status among Chinese older adults. The authors called for more research to shed light on the underlying mechanisms between arts and cognition. The third paper discussed two arts-based clinical trials on persons with dementia (PWD) at different stages living in Hong Kong. It found that dancing body movement therapy improved behavioral and emotional outcomes among those at the mild dementia stage. In contrast, music and movement worked better for those at the moderate dementia stage. The fourth study reviewed the effectiveness of body movement therapies for PWD, using an example of the Wheelchair-bound Senior Elastic Band for older adults with disability and dementia. The last study examined the effectiveness of a program that used museum tours to empower, educate, and inspire PWD. One discussant will share lessons learned across studies, and the other discussant from AARP Global Council on Brain Health will speak to the effects of music relating to the AARP 2020 consensus report on music and the brain health.

WHY ARTS MATTER TO PEOPLE AND FAMILIES LIVING WITH DEMENTIA: INTERPROFESSIONAL HEALTH HUMANITIES COLLABORATION

Teri Kennedy, *The University of Kansas Medical Center, Kansas City, Kansas, United States*

This presentation will share examples of arts-based and creative interventions serving people and their families living

with dementia representing evidence-based and promising practices in the United States. Such interventions offer effective non-pharmacological approaches to dementia care including use of the visual arts (e.g., drawings, paintings, sculpture) and performing arts (e.g., music, theatre); literature and writing including reminiscence, biographical approaches, and life story work; photography and Photovoice; and dance and movement as intervention modalities. Current evidence will be presented that demonstrates the effectiveness of arts-based interventions as a form of psycho-social and self-care to alleviate the effects of dementia and enhance the quality of life. Recommendations for future research will be discussed. Strategies will be proposed to develop interprofessional health humanities networks between universities, healthcare systems, libraries, museums, and the arts community to collaborate on the creation of arts-based programs in communities currently without the benefit of such programs.

THE RELATION BETWEEN COGNITION AND INTERESTS IN ARTS AMONG CHINESE OLDER ADULTS

Xia Li, Yuan Fang, Qi Qiu, and Shixing Qian, *Shanghai Mental Health Center, Shanghai, China*

This study aims to examine the association between arts related interests and cognition among older Chinese. Data were drawn from 3,243 participants (Mage=71.1, SD=7.8) in the China Longitudinal Aging Study collected in 2011. About 54.4% were female, the average education was eighth grade, 560 interested in music, 86 interested in drawing, and 69 interested in both. Those interested in music or drawing were more likely to enjoy tea and exercise like Taichi, and less likely to smoke or drink ($p < 0.01$). Those interested in both reported best cognitive function, and those interested in music or drawing had better cognitive function than those without these interests ($p < 0.01$). However, the difference in cognition between those interested in music and those without diminished after education was controlled. The effect of arts hobbies in cognition among older Chinese remains to be further examined within the context of education and associated lifestyle factors.

THE HOLISTIC IMPACT OF USING ARTS-BASED INTERVENTION FOR ELDERLY WITH DEMENTIA

Rainbow Tin Hun HO, *The University of Hong Kong, Hong Kong*

The use of creative arts on supporting elderly with dementia has been becoming popular due to its safe and engaging process. This non-pharmacological approach can complement with other treatment methods to support elderly with dementia on various aspects, including physical, cognitive and social functioning. In our randomized controlled trial on dance movement therapy (DMT) for 204 community dwelling elders with mild dementia, we found DMT could significantly reduce the level of depression, loneliness and negative mood ($\beta=0.33-0.42$, $p < .01$), and also the diurnal cortisol slope ($\beta = 0.30$, $p < .01$); while in another trial on 73 elderly with moderate dementia, we found music and movement could help reduce the behavioral and psychological symptoms such as agitation ($\beta = -0.41$, $p < .01$), aberrant motor behavior ($\beta = -1.02$, $p < .01$), and dysphonia ($\beta = -0.61$,

$p < .05$). The present presentation aims to share with the audience our practical experiences, the research procedures as well as the findings of the projects.

THE ART OF BODY MOVEMENT: HEALTH IMPACT ON OLDER ADULTS WITH DISABILITY AND DEMENTIA

Kuei-Min Chen, *Kaohsiung Medical University, Kaohsiung City, Taiwan (Republic of China)*

Body-movement is an art form of self-expression and health promotion. This presentation will provide an overview of studies that employ the use of “movement activities” or “exercise” as non-pharmacological modalities to improve activities of daily living and functional fitness (e.g., cardiopulmonary function, body flexibility, range of joint motion, and muscle strength and endurance) of older adults with disability. These studies have also been shown to decrease depression state and behavior symptoms of older adults with dementia in long-term care facilities. Moreover, the Wheelchair-bound Senior Elastic Band (WSEB) exercise program will be described that are of relevance to the older adults with disability and dementia.

ASCERTAINING CONSCIOUSNESS IN IDENTITY FORMATION: BEST MEDICAL PRACTICES IN DEMENTIA CARE

Angel Duncan, *Albertus Magnus College, New Haven, Connecticut, United States*

This session identifies common misconceptions about identity for persons living with Alzheimer’s disease and related dementias (ADRD). Going beyond diagnostic brain imaging and neurocognitive testing, case studies and research in creativity from around the United States highlights consciousness of persons living with ADRD. Reviewing and discussing artworks is aimed to set dialogue in the question of where memory deposits emerge when engaged in creativity. Through art therapy techniques, this type of self-expression may provide new avenues in treatment for dementia care. Exploring the arts from those with Mild Cognitive Impairment to late stage Alzheimer’s and other forms of dementia, such as frontotemporal dementia, consciousness seems to remain intact despite neural death. This session aims to discourage poor spending allocations and establishing meaningful care. From clinical research trials to creativity of self-expression, the importance of why the arts and sciences matter are demonstrated as effective modalities that enhance quality of life.

SESSION 5465 (SYMPOSIUM)

BECOMING MORE OPEN: INCREASING RIGOR AND REPRODUCIBILITY OF GERONTOLOGICAL SCIENCE

Chair: Brad Taylor

Co-Chair: Lewina Lee

Discussant: Derek Isaacowitz

“Open science” refers to a collection of practices with the broad goal of increasing the transparency and reproducibility of scholarly research. The purpose of this symposium is to illustrate the application of open science practices to gerontological research and address barriers to adopting such practices. Drawing from his experiences in leading a