

Research Institute, Yonsei University College of Nursing, Seoul, Seoul-t'ukpyolsi, Republic of Korea, 3. Yonsei University, Seoul, Seoul-t'ukpyolsi, Republic of Korea, 4. Korea Armed Forces Nursing Academy, Daejeon, Taejon-jikhalsi, Republic of Korea, 5. Yonsei University Graduate School, Seoul, Seoul-t'ukpyolsi, Republic of Korea

Sleep disturbance is a common and significant symptom experienced by older adults with dementia. Early detection and timely treatment of sleep disturbance are critical to prevent adverse consequences including decreased quality of life for persons with dementia and increased caregiver burden. While direct observations and sleep diaries are often unreliable, actigraphy is a cost-effective method in measuring sleep problems in older adults with dementia and provides reliable and rich sleep data. Therefore, this study aimed to examine sleep disturbance objectively measured by actigraphy and its risk factors in community-dwelling older adults with dementia in Korea. This is a prospective study consisting of a two-wave dataset. The model was fitted using Wave 1 data (n=151) and then validated using Wave 2 data (n=59). Independent variables were demographics, cognitive and physical function, depressive symptoms, physical activity level, and neuropsychiatric symptoms measured by Neuropsychiatric Inventory (NPI), and clinical factors including dementia type, sedative use, and comorbidities. Sleep disturbance was defined as less than six nighttime sleep hours and sleep efficacy less than 75%. Using the Youden's Index, the sample was dichotomized into sleep disturbance group (n=83) and sound sleep group (n=68). The results of the generalized linear mixed model showed that the risk factors for sleep disturbance included vascular dementia, age, step count, and having three neuropsychiatric symptoms (i.e., delusions, depression, and disinhibition). Individuals with dementia at risk for sleep disturbance should be identified to prioritize early prevention strategies and individualized interventions. Particularly, management of delusion, depression, disinhibition is critical in preventing disturbed sleep.

SOURCES OF POSITIVITY IN THE DAILY LIFE OF FAMILY CAREGIVERS OF PERSONS WITH DEMENTIA

Kyungmi Lee,¹ Breannlyn Archer,² Kaitlyn Cox,² and Carolyn Pickering,² 1. University of Alabama at Birmingham, Hoover, Alabama, United States, 2. The University of Alabama at Birmingham, Birmingham, Alabama, United States

Family caregivers often experience fatigue, burnout, and health complications yet also enjoy many aspects of caregiving that may benefit their well-being. This study identifies positive aspects of caregiving in the daily life experiences of dementia family caregivers in order to inform interventions to support caregivers' well-being. This case study entails a secondary analysis of open-ended question data obtained from 165 family caregivers who answered daily diaries over 21 days (n = 2841 responses). We used content analysis to organize and elicit thematic categories from the data collected in response to the question "what was the best part of your day." A final 762 responses were selected as meeting the "care" criteria for the study, with an inter-rater reliability of 91.6%. Data analysis revealed three major sources of daily positive aspects including: caregiver-focused, patient-oriented,

and support-system based. The analysis also revealed seven different kinds of daily positive aspects, such as getting to enjoy time with the care recipient or getting to accomplish other non-caregiving tasks. Many of the positive aspects of caregiving reported were enabled by social support, but they were ultimately from how they utilized that support (e.g., getting alone time) that provided the positivity. The findings of this study demonstrate the important role social support plays in caregiving, as well as highlights other possible intervention targets to create easier, more positive days for family caregivers.

THE RELATIONSHIP BETWEEN NEUROPSYCHIATRIC SYMPTOMS, NIGHTTIME BEHAVIORS, AND ALZHEIMER'S DISEASE CSF BIOMARKERS

Meina Zhang,¹ Young-Eun Cho,² and Chooza Moon,²

1. University of Iowa, Iowa City, Iowa, United States,

2. University of Iowa, university of Iowa, Iowa, United States

Alzheimer's disease (AD) commonly involves neuropsychiatric symptoms (NPS), such as nighttime behaviors (or sleep disturbance), hallucination, delusion, or mood changes. However, it is unclear how NPS and sleep disturbances are correlated with AD biomarkers. The purpose of this analysis was to examine how NPS and nighttime behaviors are associated with AD CSF biomarkers by cognitive status. A total of 1,667 subjects' (mean age = 69.4 SD=9.3, 48 % (808) were male) data from the National Alzheimer's Disease Coordinating Center (NACC) were used, including subjects with dementia (n = 577), mild cognitive impairment (MCI, n = 363), cognitive impairment but not MCI (n = 47), cognitive impairment due to Alzheimer's etiology (n= 608), and normal cognition (n = 680). The nighttime symptoms, number, and severity of NPS were assessed using the Neuropsychiatric Inventory Questionnaire Quick Version (NPI-Q). Cerebrospinal fluid (CSF) samples were analyzed for A β 42, dft5 t-tau, p-tau. We used generalized linear models to explore the associations accounting for age, sex, APOE4 alleles, and BMI. We found the number of NPS were associated with A β 42 (p = 0.042) in individuals with MCI, impaired, or dementia due to Alzheimer's etiology. Yet, the number of NPS were not associated with t-tau or p-tau in individuals with and without dementia. The severity of NPS including nighttime symptoms were not associated with biomarkers. Our results could suggest that the number of NPS can be reflected by higher CSF A β 42 levels in the individuals with Alzheimer's etiology. Future longitudinal analyses are warranted to understand the causal relationships.

TIME-VARYING INSOMNIA SYMPTOMS AND INCIDENCE OF COGNITIVE IMPAIRMENT AND DEMENTIA AMONG OLDER US ADULTS

Nicholas Resciniti,¹ Bezawit Kase,² Valerie Yelverton,² and Matthew C. Lohman,² 1. University of Southern California, Los Angeles, California, United States, 2. University of South Carolina, Columbia, South Carolina, United States

There is conflicting evidence regarding the association between insomnia and the onset of mild cognitive impairment (MCI) or dementia. This study aimed to evaluate if time-varying insomnia is associated with the development of MCI and dementia. Data from the Health and Retirement Study (n = 13,833) from 2002 to 2014 were used (59.4% female).

The Brief Insomnia Questionnaire was used to identify insomnia symptoms compiled in an insomnia severity index, ranging from 0 to 4. In the analysis, participants' symptoms could vary from wave-to-wave. Dementia was defined using results from the Health and Retirement Study (HRS) global cognitive assessment tool. Respondents were classified as either having dementia, MCI or being cognitively healthy. Cox proportional hazards models with time-dependent exposure using the counting process (start-stop time) were used for analysis. For each one-unit increase in the insomnia symptom index, there was a 5-percent greater hazard of MCI (HR = 1.05; 95% CI: 1.04–1.06) and dementia (HR = 1.05; 95% CI: 1.03–1.05), after fully adjusting. Using a nationally representative sample of adults aged 51 and older, this study found that time-varying insomnia symptoms are associated with the risk of MCI and dementia. This highlights the importance of identifying sleep disturbances and their change over time as potentially important risk factors for MCI and dementia.

WHICH COGNITIVE BEHAVIORAL THERAPY FORMATS WORK FOR DEPRESSION IN DEMENTIA FAMILY CAREGIVERS ?

Yue Sun,¹ and Zhi-wen Wang,² 1. *School of Nursing, School of Nursing, Peking University, Beijing, China (People's Republic)*, 2. *Peking University Health Science Center, Beijing, Beijing, China (People's Republic)*

Cognitive behavioral therapy (CBT) has been shown to be effective to delay cognitive decline for family dementia caregivers (DCs). However, whether cognitive intervention could effectively reduce depression through internet, group, telephone, individual, unguided self-help and combined formats remains unclear. Pubmed, Embase, Cumulative Index to Nursing and Allied Health Literature (CINAHL), the Cochrane Central Register of Controlled Trials, Web of science, China National Knowledge Infrastructure database, Chinese Biomedical Literature database and Wan Fang database were systematically searched. A total of 34 studies were included in our analysis based on a series of rigorous screenings, which comprised 3577 DCs. We conducted a network meta-analysis (NMA) to evaluate the relative effects and rank probability of different CBT delivery formats. A series of analyses and assessments, such as the pairwise meta-analysis and the risk of bias, were performed concurrently. Compared with controls, internet, telephone, and individual showed the largest improvement on depressive symptoms, whereas the unguided self-help delivery format was less effective. Internet delivery formats had the highest probability among the five CBT delivery formats. Our study indicated that the internet might be the best delivery formats for reducing the depression of family DCs. The findings from our study may be useful for policy makers and service commissioners when they make choices among different CBT delivery formats.

Session 9075 (Poster)

Assessment

AGING ACROSS THE LIFE COURSE: RESEARCH COLLECTIONS AVAILABLE FROM THE NATIONAL ARCHIVE OF COMPUTERIZED DATA ON AGING

James McNally, *University of Michigan, Ann Arbor, Michigan, United States*

The creation and maintenance of sustainable data archives can be challenging, but it offers clear advantages. Properly curated data can be used by multiple researchers, testing a variety of hypotheses, and increasing the return on investment to the expensive process of data collection. Having an internally managed archival system also provides greater control and autonomy in the equitable distribution of data resources. This process ensures all researchers will have full use of the data for original research, teaching, and new directions once the data leaves the control of the local investigator's control. This poster reviews the advantages of having a local strategy geared toward the preservation and sharing of gerontological research data. Using the National Archive of Computerized Data on Aging (NACDA) as a working example, the poster offers an overview of collections at NACDA. Using our metadata tools and variable search database, NACDA can identify studies in its collections that examine aspects of aging and health among adults during their lifecourse. Many of the studies are longitudinal or repeat measure cross-sectional studies. We are also able to identify studies that focus on aging that are not maintained by NACDA but which are available to interested researchers. Using a strategy of archival preservation combined with a strong focus on productive research Innovation in Aging, NACDA has amassed data and metadata covering a wide array of studies worldwide that address the aging lifecourse. Because our collections are multinational, we share these data at no cost to interested users worldwide

COGNITIVE STATUS & DEMENTIA SEVERITY IN CVLT-II-SF FORCED CHOICE RECOGNITION: IMPLICATIONS FOR EFFORT ASSESSMENT

Karl Grewal,¹ Michaella Trites,² Megan O'Connell,¹ Andrew Kirk,¹ Stuart MacDonald,² and Debra Morgan,¹ 1. *University of Saskatchewan, Saskatoon, Saskatchewan, Canada*, 2. *University of Victoria, Victoria, British Columbia, Canada*

Effort testing is critical to neuropsychological practice, including dementia assessment. Questions exist around whether cognitive status or impairment severity impacts effort test performance in this population. Presently, we examined whether scores on an embedded effort test - the California Verbal Learning Test II Short Form (CVLT-II-SF) Forced Choice Recognition (FCR) - differed across diagnostic cognitive status groups and how severity of impairment modulated test performance. In a sample of memory clinic patients, three cognitive status groups were identified: subjective cognitive impairment (SCI; n = 92), amnesic mild cognitive impairment (a-MCI; n = 18), and dementia due to Alzheimer's Disease (AD; n = 70). Significant group differences in FCR performance were observed using one-way ANOVA (p < .001), with post-hoc analysis indicating the AD group performed significantly worse scores than the other groups. Using multiple regression, FCR performance was modelled as a function of cognitive status, impairment severity indexed MMSE, and their interaction, with a parallel analysis for the Clinical Dementia Rating Sum of Boxes (CDR-SOB) scores as an alternate severity measure. Results yielded significant main effects for MMSE (p = 0.019) and cognitive status (p = 0.026), as well as a significant interaction (p = 0.021). Thus, increases in impairment severity disproportionately impaired FCR performance for persons