

## **P45: Multimorbidity Patterns and their association with depressive symptoms among elderly: A Latent Class Analysis of the Brazilian Longitudinal Study of Aging (ELSI-Brazil) data**

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**Objectives:** To explore how clusters of chronic health problems can impact depression in older adults.

**Methods:** We performed a latent class analysis using the baseline data from The Brazilian Longitudinal Study of Aging (ELSI-Brazil). Depression was assessed using the Center for Epidemiological Studies Depression Scale (CES-D8). Scores of 4 or higher on the CES-D8 were considered positive for depression. Fourteen self-reported conditions (Diabetes, Systemic Arterial Hypertension, Angina, Myocardial Infarction, Chronic Kidney Disease, Heart Failure, Stroke, Low Back Pain, Arthritis, Osteoporosis, Asthma, Chronic Obstructive Pulmonary Disease, High Cholesterol, and Cancer) were evaluated and combined as a total number of chronic conditions.

**Results:** The total number of individuals in the sample was 4672. The best resulting model is composed of 4 latent classes. The latent classes were organized as follows: Cardiovascular Multimorbidity (Class1); No multimorbidity (Class 2); Musculoskeletal Multimorbidity (Class 3); and Inflammatory Multimorbidity (Class 4). We identified that, in comparison with class 2, (considered the reference class due to the absence of multimorbidity), the odds ratio for depression was 2.56 for the Cardiovascular Multimorbidity class, 2.86 for the Musculoskeletal Multimorbidity class, and 4.59 for the Inflammatory Multimorbidity class.

**Conclusions:** We found that various patterns of multimorbidity are associated with depression when compared with a single disease and that Inflammatory Multimorbidity has the greatest impact on depression.

## **P46: Effect of sleep report feedback using information and communication technology combined with health guidance on subjective and objective sleep discrepancy among older people with and without uncoupled sleep**

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**Objective:** Uncoupled sleep is a phenomenon characterized by a discrepancy between sleep patterns and sleep complaints. This study aimed to evaluate the effect of sleep report feedback utilizing information and communication technology combined with health guidance on improving subjective and objective sleep outcomes in community-dwelling older people with and without uncoupled sleep.

**Methods:** This study was conducted in Sakai City, Japan. The Athens Insomnia Scale (AIS) was employed to evaluate subjective sleep outcomes. Participants were categorized as complaining sleepers if they reported their overall sleep quality as markedly or very unsatisfactory, in addition to having a total AIS score  $\geq 10$ . Non-wearable actigraphy devices were placed under participants' bedding to continuously measure their objective sleep

outcomes. Sleep latency (SL), wake after sleep onset (WASO), and sleep efficiency (SE) parameters were recorded. Participants were classified as poor sleepers if their actigraphy-measured SL was  $\geq 31$  min or SE was  $< 85\%$ , or WASO was  $\geq 31$  min. All measurements were taken prior to and following a 3-month intervention program. Statistical analysis was conducted using SPSS Version 26. This study received approval from the Institutional Review Board of Osaka University.

**Results:** A total of 105 participants completed the study, with 65 females (62%). Among them, 8 were complaining good sleepers, 12 were complaining poor sleepers, 42 were non-complaining good sleepers, and 43 were non-complaining poor sleepers. Improvements in subjective sleep quality were observed across all sleeper classifications ( $P < 0.05$ ). Specifically, subjective SL ( $P = 0.009$ ) and WASO ( $P = 0.023$ ) improved in complaining poor sleepers without uncoupled sleep. Objective and self-reported changes in sleep parameters were demonstrated in non-complaining poor sleepers with uncoupled sleep, specifically manifested as improvements in objective WASO ( $P < 0.001$ ), SE ( $P < 0.001$ ), and subjective sleep quality ( $P = 0.038$ ). However, there were no significant changes in objective sleep outcomes among complaining good sleepers, non-complaining good sleepers, and complaining poor sleepers ( $P > 0.05$ ).

**Conclusion:** The implementation of sleep report feedback and health guidance intervention for community-dwelling older people has demonstrated improvement in subjective sleep quality across all sleeper classifications. Furthermore, it shows promising effects on non-complaining poor sleepers with uncoupled sleep, as evidenced by both objective and subjective sleep measures.

**Keywords:** Sleep disturbance, Sleep monitoring, Health guidance, Older people

#### **P47: Expressed emotion mediate the association between relationship closeness and psychological symptoms dementia people**

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**Objective:** Higher intimacy is associated with less behavioral and psychological symptoms of dementia (BPSD) in people with dementia, however, the processes underlying this association remain unclear. This study investigates the role of expressed emotion (EE) and relationship closeness between caregivers and patients with dementia in the manifestation of BPSD.

**Methods:** We recruited 56 families with dementia and collected 3-month longitudinal data including demographic details of current family caregivers providing care, caregiving relationship closeness (RCS), and BPSD measured using the Neuropsychiatric Questionnaire (NPI-Q). We assessed EE using the validated Family Attitudes Scale (FAS), where higher scores indicate greater intensity of expressed emotion. Correlational and mediation analyses were conducted using baseline and three-month follow-up data to explore the relationships between RCS, EE, and BPSD. Mediation analysis was performed using the SPSS PROCESS Version 4.1 macro. The study received approval from the Institutional Review Board of Osaka University.