Results: Correlation analysis showed that there was significance between RCS and BPSD at baseline and third month (r = –0.301, p < 0.05), and between EE and BPSD (r = 0.378, p < 0.001). Furthermore, mediation analysis demonstrated that caregivers' EE significantly mediated the association between RCS and BPSD in dementia patients. The indirect effect of RCS on BPSD through caregivers' EE was found to be significant, with a 95% confidence interval (CI) of (–0.6097, –0.1790), where the CI excludes zero. This indicates that the mediation effect of caregivers' EE on the relationship between RCS and BPSD is statisticallysignificant.

Conclusions: It suggests that interventions aimed at improving caregiver-patient relationships and managing caregivers' EE could be crucial in mitigating BPSD, providing a direction for future research and intervention development to support both patients and their families in the dementia care.

Keywords: dementia, mediation, expressed emotion, family care

P50: Fraud Victimization and Scam Vulnerability in the Arakawa Cohort Study Conducted in an Urban Area of Japan

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Objective: In 2023, the damage caused by "special fraud'' will amount to approximately US\$285 million in Japan, with a marked increase in the number of victims among the older population aged 65 and over, who account for about 86.6% of the total. "Special fraud'' is a crime in which suspects phone victims and pretend to be police officers, victims' family members, etc. to have victims transfer cash to the suspects' bank account. In other cases, a suspect visits a victim's house after such a phone call and directly receives the victim's cash and/or cash cards. The purpose of this study is to clarify the factors that contribute to fraud victimization among the elderly and to strengthen measures to prevent victimization.

Methods: The subjects of the analysis were 840 residents of Arakawa Ward, Tokyo, aged 65 years or older, who participated in the Arakawa 65 Years and Older Survey or the Arakawa 85 Years and Older Survey. Data on participants' fraud experiences, level of caregiving, living environment, and various psychological measures, including the Fraud Vulnerability Score (SVS), the Satisfaction with Life Scale (SWLS), the Resilience Scale (RS), the Mini-Mental State Examination (MMSE), and the Geriatric Depression Scale (GDS) were collected. Multiple logistic regression was used to explore the relationship between these factors and fraud victimization, adjusting for age, gender, level of caregiving, and living situation.

Results: Fraud victims (n = 37) and non-victims (n = 803) differed significantly in terms of SVS and SWLS. Fraud victims had higher fraud vulnerability scores and higher life satisfaction. Logistic regression analysis confirmed that higher SVS and SWLS were significantly associated with a higher likelihood of experiencing fraud (SVS OR = 0.799, CI: 0.720 – 0.887, p < 0.001; SWLS OR = 0.928, CI: 0.870 – 0.989, p = 0.(022).

Conclusion: Given that fraud victimization is correlated with fraud vulnerability and high life satisfaction, it is critical for older adults and their caregivers to implement strategies aimed at reducing fraud risk. This study highlights the need for targeted interventions that address the unique vulnerabilities of the urban elderly population.

P48: Network Structure of Depressive Symptomatology in Elderly with Cognitive Impairment

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Objective: Patients with cognitive disorders such as Alzheimer's disease (AD) and mild cognitive impairment (MCI) frequently exhibit depressive symptoms. Depressive symptoms can be evaluated with various measures and questionnaires. Geriatric Depression Scale (GDS) is a scale that can be used to measure symptoms in geriatric age. Many questionnaires usually sum up symptom scales. However, core symptoms of depression in these patients and connections between these symptoms have not been fully explored yet. Thus, the objectives of this study were: 1) to determine core symptoms of two cognitive disorders, Alzheimer's disease and mild cognitive impairment; and 2) to investigate the network structure of depressive symptomatology in individuals with cognitive impairment in comparison with those with Alzheimer's disease.

Methods: This study encompassed 5,354 patients with cognitive impairments such as Alzheimer's disease [n = 1,889] and mild cognitive impairment [n = 3,464]. The Geriatric Depression Scale, a self-administered questionnaire, was employed to assess depressive symptomatology. Using exploratory graph analysis (EGA), a network analysis was conducted and the network structure was evaluated through regularized partial correlation models. To determine the centrality of depressive symptoms within each cohort, network parameters such as strength, betweenness, and closeness were examined. Additionally, to explore differences in the network structure between Alzheimer's disease and mild cognitive impairment groups, a network comparison test was performed.

Results: In the analysis of centrality indices, "worthlessness'' was identified as the most central symptom in the Geriatric Depression Scale among patients with Alzheimer's disease, whereas "emptiness'' was found to be the most central symptom in patients with mild cognitive impairment. Despite these differences in central symptoms, the comparative analysis showed no statistical difference in the overall network structure between Alzheimer's disease and mild cognitive impairment groups.

Conclusion: Findings of this study could contribute to a better understanding of the manifestation of depressive symptoms in patients with cognitive impairment. These results are expected to aid in identifying and prioritizing core symptoms in these patients. Further research should be conducted to explore potential interventions tailored to these core symptoms in patients with Alzheimer's disease and mild cognitive impairment. Finding out core symptoms in those groups might have clinical importance in that appropriate treatment for neuropsychiatric symptoms in patients with cognitive impairment could help preclude progression to further impairment.

Keywords: Network analysis, Depressive symptom, Cognitive dysfunction, Major depressive disorder, Alzheimer's disease, Mild cognitive impairment