delirium reported in international studies and (b) to find out how, why and under what context education for HCPs in nursing homes works.

Methods: A systematic review of the reported prevalence of delirium in nursing homes will be conducted (a). The prevalence study (1) will assess delirium and its proposed associated factors in at least 50 nursing homes using validated measurements. Medication schedules of participating residents will be analyzed to determine potential for delirium. To describe current practice, process-oriented semi-structured guided interviews will be conducted with 30 representatives of the (nursing home) medical service and the nursing service of nursing homes (2). As a theoretical basis for the TEL, a realist review will be conducted to understand the active ingredients of educational interventions and to develop an initial program theory (b). The curriculum for the proposed TEL will be developed based on a synthesis of existing curricula and evaluated by Delphi experts for relevance, comprehensiveness, and content. A final feasibility study will assess the potential increase in knowledge about delirium among HCPs (n = 50) in nursing homes (3).

Expected Results: It is expected that the project and the dissemination of its findings will raise awareness among HCPs and the public about delirium in nursing homes. The developed TEL and its underlying program theory will be further tested.

P200: Association between sleep disturbance and subjective well-being among community- dwelling older people: a serial multiple mediation model

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Objective: Sleep disturbance is negatively associated with subjective well-being in older people, but the potential underlying mechanisms of this association remain unclear. This study aimed to disentangle the pathways linking subjective versus objective sleep disturbance to subjective well-being through the serial mediation effect of loneliness and depression among community- dwelling older people.

Methods: This cross-sectional study was conducted in Sakai city of Japan. A total of 212 aged 65 and over participated in this study. The Athens Insomnia Scale, UCLA Loneliness Scale, Geriatric Depression Scale, and Self-perceived well-being were used to assess subjective sleep quality, loneliness, depression, and subjective well-being, respectively. A non-wearable actigraphy device was used to evaluate the objective sleep quality. Total sleep time, sleep latency, sleep efficiency, wake after sleep onset, number of awakenings, and average activity during sleep were recorded. Serial multiple mediation analysis was performed using SPSS PROCESS Version 4.1 macro. This study was approved by the Institutional Review Board of Osaka University.

Results: Subjective sleep disturbance was found to impact subjective well-being through three significant mediation pathways: (1) loneliness (B=-0.024, 95% CI=-0.055, -0.004), which accounted for 25.72% of the total effect, (2) depression (B=-0.020, 95% CI=-0.044, -0.001), which accounted for 20.94% of the total effect, and (3) loneliness and depression (B=-0.008, 95% CI=-0.019, -0.001), accounting for 8.93% of the total effect. The total mediating effect was 55.58%. As for the objective sleep disturbance, the wake after sleep onset can indirectly impact subjective well-being through loneliness (B=0.005, 95% CI=0.001, 0.010), depression (B=-0.005, 95% CI=-0.011, -0.001), and both (B=0.002, 95% CI=0.001, 0.004); the number of awakenings can indirectly impact subjective well-being through loneliness (B=0.041, 95% CI= 0.012, 0.085), depression (B=-0.034, 95% CI=-0.076, -0.002), and both (B=0.018, 95% CI=0.005, 0.036); the average activity during sleep can also indirectly impact subjective well- being through loneliness (B=0.137, 95% CI=0.034, 0.275), depression (B=-0.128, 95% CI=- 0.282, -0.010), and both (B=0.055, 95% CI=0.011, 0.118).

Conclusion: These findings provided new insights into possible avenues for improving subjective well- being among older people through sleep-based interventions with a multi-faceted approach to mental health.

P201: Effect of Virtual Reality-based Biofeedback in Highly Stressed People

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Objective: Virtual Reality (VR)-based Biofeedback (BF), a relatively new intervention, is rapidly increasing for the treatment of mood disorders. However, research on whether VR-based BF is more effective than traditional BF is still lacking.

Methods: A total of 131 adults from the community enrolled in the study. Participants scored ≥10 on Patient Health Questionnaire-9 (PHQ-9) or ≥9 on Panic Disorder Severity Scale (PDSS) were randomly assigned to VR or BF group. Those who have not met the criteria of PHQ-9 and PDSS were classified as the control group. All participants visited three times across 3 months and received either VR-based or conventional BF intervention. The control group received the same treatment as the VR group. Also, on each visit, the participants completed Montgomery-Asberg Depression Rating Scale (MADRS), State-Trait Anxiety Inventory (STAI), and Visual Analogue Scale (VAS).

Results: The analysis included 118 participants in total (VR: 40, BF: 38, Control: 40). There was no significant difference in demographic variables among the 3 groups. After the treatment, VR and BF groups exhibited significant decreases in MADRS, PHQ-9, STAI, and VAS compared to the baseline within each group ($p<0.005$). Importantly, compared to the BF group, the VR group showed a significantly greater decrease in STAI ($p<0.05$). Further analyses revealed that scores of MADRD, PHQ-9, STAI, and VAS also significantly decreased in highly stressed group compared to the control group.

Conclusion: Findings suggest that the application of VR-based BF was effective in reducing anxiety and depressive symptoms in highly stressed people. Compared to conventional BF, VR-based BF can be a cost-effective treatment option especially for relieving anxiety.