Results: The SEED model proposed that music enhances reminiscence through: Summoning autobiographical memories, eliciting physiological responses, evoking emotional reactions and pleasure, and defining and describing self-identity and social connectedness. Findings of the EEG study suggested that for the individual participants, both verbal and music-assisted reminiscence therapy resulted in widespread and lateralised activation. These activations were stronger for music- assisted reminiscence than for verbal reminiscence, particularly in the central and frontal areas. Only participants who received music-assisted reminiscence demonstrated activation in areas associated with emotional regulation and meditation, providing preliminary evidence for the SEED model.

Conclusion: The two presented studies contribute to our understanding of the potential mechanisms for change when applying reminiscence and music-assisted reminiscence therapy interventions to improve wellbeing for older people.

P172: A preliminary study for potential protective role of anti-oxidative stress markers for cognitive impairment: glutathione and glutathione reductase.

Author: Sang A Park

Objective: We aimed to study the relationship between glutathione (GSH), a key molecule of the anti-oxidant defense system in the blood, and glutathione reductase (GR), which reduces oxidized GSSG to GSH and maintains redox balance, with the prevalence of Alzheimer's dementia and cognitive decline.

Methods: 20 with normal cognition and 20 with Alzheimer's dementia who completed the 3rd f/u clinical evaluation over 6 years were selected by matching age and gender. Plasma glutathione (GSH) and glutathione reductase (GR) concentrations were independent variables. Clinical diagnosis and neurocognitive test scores were used as dependent variables indicating cognitive status.

Results: The higher the GR, the greater the possibility of normal cognition rather than Alzheimer's dementia. Also, the higher the GR, the higher the neurocognitive score. However, this association was not significant in GSH in any way. After 6 years, the conversion rate from normal cognition to cognitive impairment was significantly higher in the lower 50th percentile of the GR group than in the upper 50th percentile.

Conclusion: According to the result of this study, the higher the GR, the lower the prevalence of Alzheimer's dementia and incidence of cognitive impairment, and the higher the cognitive outcome. Therefore, GR can be regarded as a protective biomarker for Alzheimer's dementia and cognitive decline.

P179: Clinical characteristics and potential link to Parkinson's disease and dementia with Lewy bodies in patients with major depressive disorder who received maintenance ECT

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Introduction: Maintaining remission after electroconvulsive therapy (ECT) is of clinical relevance in patients with depression, and maintenance ECT is introduced in patients who fail to maintain remission after ECT. However, the clinical characteristics and the biological background of patients who receive maintenance ECT are barely understood.

Methods: At Keio University Hospital, Patients with major depressive disorder according to DSM-IV who received ECT between January 2012 and March 2019 followed by maintenance ECT (mECT group) and those who did not (aECT group) were included. Clinical characteristics including the results of neuroimaging marker for Parkinson's disease and dementia with Lewy bodies were compared between groups.

Results: Thirteen and one hundred forty-six patients were included in mECT and aECT groups, respectively. Compared with aECT group, the age of onset and the age of the first ECT was older in mECT group. Besides, mECT group showed significantly higher prevalence of melancholic feature (92.3% vs. 27.4%, p<0.001) and catatonic feature (46.2% vs. 9.6%, p=0.002). The results of neuroimaging marker obtained in 123I-metaiodobenzylguanidine scintigraphy and dopamine transporter scan revealed that 5 of 13 patients and 16 of 146 patients showed Parkinson's disease and dementia with Lewy bodies in mECT and aECT groups, respectively.

Conclusion: Patients who underwent acute and maintenance ECT have impaired dopamine function. Investigating the neurobiology of patients who receiving maintenance ECT is an important area for development of appropriate treatment for depression.

P183: Online support and training for informal caregivers of people with dementia: usability and feasibility of iSupport for Dementia

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Introduction: Internet-based interventions have been explored for their potential to minimize the negative outcomes of caring, accounting for their convenient delivery, ubiquity, potential scalability and presumed (cost) effectiveness. A new online training and support programme for dementia caregivers was recently created by the World Health Organization and culturally adapted to European-Portuguese. The programme (iSupport) was developed to prevent or minimize the negative psychological effects of providing informal care to a person with dementia and relies on problem-solving and cognitive behavioural therapy techniques.