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Introduction: Traumatic brain injury (TBI) may alter dementia progression, although co-occurring neuropsychiatric symptoms (NPS) have received less attention. The mild behavioral impairment (MBI) construct relates NPS to underlying neural circuit disruptions, representing an important area of inquiry regarding TBI and dementia.

Objectives: (1) to examine the influence of prior TBI history (preceding study enrollment) on MBI incidence in all-cause dementia (prior to dementia diagnosis, i.e. MBI's original definition) and (2) to utilize MBI domains as a construct for examining the influence of TBI on related NPS across the course of dementia onset and progression.

Methods: Using National Alzheimer's Coordinating Center data, individuals progressing from normal cognition to all-cause dementia over 7.6 ± 3.0 years were studied to estimate MBI incidence and symptom domains in 124 participants with prior TBI history compared to 822 without.

Results: Moderate-severe TBI was associated with the social inappropriateness MBI domain ($OR_{adj.}=4.034$; $p=0.024$) prior to dementia onset, and the abnormal perception/thought content domain looking across dementia progression ($HR_{adj.}=3.703$, $p=0.005$). TBI (all severities) was associated with the decreased motivation domain looking throughout dementia progression ($HR_{adj.}=1.546$, $p=0.014$).

Conclusions: TBI history is associated with particular MBI domains prior to onset and throughout progression of dementia. Understanding TBI's impact on inter-related NPS may help elucidate underlying neuropathology.

Disclosure: No significant relationships.

Keywords: Dementia; neurodegeneration; traumatic brain injury; mild behavioral impairment

EPP0141

Diagnosing dementia in the Arctic: translating tools and developing and validating an algorithm for assessment of impaired cognitive function in Greenland Inuit

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Introduction: The ageing Arctic populations raise the need for work-up of cognitive function that reflects language and cultural understandings.

Objectives: To translate and evaluate tools for work-up of cognitive impairment in Greenland.

Methods: Step A: An expert panel was established to select tools suitable for the work-up of cognitive impairment at three different settings in Greenland. Step B: Tools were translated in a multiple-step process of independent translations with back-translation and adaptations by two independent translators and two Greenlandic physicians. Step C: a testing and validation process of the tools at three locations: the national hospital in the capital city; regional hospital in a town; health care centre in a small town.

Results: Tools selected were Mini-Cog and RUDAS. Participants for testing of tools were 43 of 61 invited, of which six had dementia. RUDAS and Mini-Cog scores were associated ($p < 0.001$). The smoothed AUC was 0.87 (95%-CI, 0.65–0.95) for Mini-Cog and 0.90 (95%-CI, 0.76–0.97) for RUDAS. The sensitivity of Mini-Cog with a cut-off at ≤ 3 was 83.3%, and specificity was 62.2%. For RUDAS with a cut-off at ≤ 23 , these were 100% and 75.7%, respectively.

Conclusions: Requested tools have been translated for assessing cognitive function in the native Arctic setting. Small town residents with a Mini-Cog score of 3 or lower should be referred to a regional hospital for RUDAS, and a score of 23 or less should cause referral to the national hospital for a full work-up of cognitive function.

Disclosure: No significant relationships.

Keywords: mini-cog; Dementia; RUDAS; cognitive function

EPP0142

Which residual symptoms predict relapse after successful electroconvulsive therapy for late-life depression?

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Introduction: Residual depressive symptoms are common after a successful acute treatment of late-life depression (LLD), and their presence predicts increased risk of relapse. While electroconvulsive therapy (ECT) is the most effective treatment for LLD, little is known about which particular symptoms remain and impact long-term outcome after a successful acute ECT course.

Objectives: We aimed to assess the association between specific residual depressive symptoms after an effective acute ECT course for LLD and relapse at six-month follow-up.

Methods: In this prospective cohort study, including 110 patients aged 55 years and older with LLD, information about relapse was collected six months after the acute ECT course. Relapse was defined as a Montgomery-Åsberg Depression Rating Scale (MADRS) score >15 , hospital admission or restart of ECT. We used multivariable stepwise logistic regression models including the scores on the 10 individual MADRS items at the end of the acute ECT course to predict relapse.

Results: Of the 80 responders with available six-month follow-up data, 29 patients (36.25%) had suffered relapse. Higher scores on the MADRS items 'reduced sleep' (odds ratio (OR)=2.03,

95% confidence interval (CI)=1.11-3.69, $p=0.0214$) and 'lassitude' (OR=1.62, 95% CI=1.00-2.62, $p=0.0497$) at the end of the acute ECT course were significantly associated with increased risk of relapse at six-month follow-up.

Conclusions: *Conclusions:* Some residual depressive symptoms, including sleep disturbance and fatigue, may help better identify patients vulnerable to relapse following a successful acute ECT course for LLD. Future studies assessing interventions that target specific residual symptoms may further reduce post-ECT depressive relapse.

Disclosure: No significant relationships.

Keywords: Electroconvulsive therapy; Residual symptoms; Relapse; Late-life depression

EPP0143

Measuring neuropsychiatric symptoms in early dementia patients using speech analysis

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Introduction: Certain neuropsychiatric symptoms (NPS), namely apathy, depression and anxiety demonstrated great value in predicting dementia progression representing eventually an opportunity window for timely diagnosis and treatment. However, sensitive and objective markers of these symptoms are still missing.

Objectives: To investigate the association between automatically extracted speech features and NPS in early-stage dementia patients.

Methods: Speech of 141 patients aged 65 or older with neurocognitive disorder was recorded while performing two short narrative speech tasks. Presence of NPS was assessed by the Neuropsychiatric Inventory. Paralinguistic markers relating to prosodic, formant, source, and temporal qualities of speech were automatically extracted, correlated with NPS. Machine learning experiments were carried out to validate the diagnostic power of extracted markers.

Results: Different speech variables seem to be associated with specific neuropsychiatric symptoms of dementia; apathy correlates with temporal aspects, anxiety with voice quality and this was mostly consistent between male and female after correction for cognitive impairment. Machine learning regressors are able to extract information from speech features and perform above baseline in predicting anxiety, apathy and depression scores.

Conclusions: Different NPS seem to be characterized by distinct speech features which in turn were easily extractable automatically from short vocal tasks. These findings support the use of speech analysis for detecting subtypes of NPS. This could have great implications for future clinical trials.

Disclosure: No significant relationships.

Keywords: Neuropsychiatric symptoms; Depression; apathy; speech analysis

EPP0144

Subjective age and positive psychiatry: Identifying the positive characteristics associated with successful aging

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Introduction: For older adults, feeling subjectively younger is associated with improvements in cognition, subjective well-being and depressive symptoms. Positive psychiatry is the field that focuses on patient strengths and the promotion of positive outcomes, rather than just mitigation of illness. Younger subjective age may be a useful measure of successful aging, but little is known about how subjective age is associated with positive psychosocial characteristics.

Objectives: Our objective is to characterize how subjective age is related validated positive psychosocial measures, with the goal of better understanding the determinants of successful aging.

Methods: The Successful Aging Evaluation (SAGE) longitudinal study recruited over 1,300 community-dwelling residents of San Diego County, CA, from age 21 to over 100. A single-item question asked "How old/young do you feel?" We used spearman correlations to assess the relationship between subjective age and validated positive psychosocial scales such as the Self-Rated Successful Aging, Life Orientation Test, Personal Mastery Scale, Connor-Davidson Resilience Scale, Satisfaction with Life Scale, Adult Hope Scale, and Social Support Index.

Results: Mean chronological age was 65.5, and mean subjective age was 53.6. Mean age discrepancy was 11.5 years. Younger subjective age was positively associated with most of the positive psychosocial characteristics measured, including self-rated successful aging, optimism, personal mastery, resilience, curiosity, hope, and social support.

Conclusions: There is a growing movement within psychiatry to understand the positive characteristics that lead to successful aging. This is one of the first studies demonstrating younger age identities are associated with positive psychosocial characteristics and successful aging.

Disclosure: No significant relationships.

Keywords: optimism; social support; resilience; Geriatric Psychiatry

EPP0145

Prevention and Management of Falls in Older Adults admitted to Woodlands Hospital, an inpatient Old Age Psychiatric Unit

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