have mild cognitive impairment as indicated by the telephone Montreal Cognitive Assessment (range:13-20). This preliminary sample of 20 women (aged 72.0±3.7) completed the Pittsburgh Sleep Quality Index (PSQI) to assess sleep quality in 7 domains of sleep health over the past month. A global score (range:0-21) is calculated, with a score >5 indicative of being a poor sleeper. Participants also underwent positron emission tomography (PET) with the 18F-MK6240 tracer and T1-weighted magnetic resonance imagining (MRI) to determine tau deposition. Standardized uptake value ratio (SUVR) was calculated using the inferior cerebellum grey matter as the reference region, which was created from Automated Anatomic Labeling atlas in native T1 space. The region of interest (ROI) was a composite meta-temporal region. The Rey Auditory Verbal Learning Test (RAVLT) and Logical Memory (LM) Story A and B were administered to assess verbal memory. The Brief Visuospatial Memory Test-Revised (BVMT-R) was administered to assess nonverbal memory. Analysis focused on the delayed recall scores from the memory tests. Partial correlation was used to analyze the associations between PSQI global score, tau-PET SUVR in meta-temporal ROI, and memory delayed recall scores, while adjusting for age and education years.
Results: 8 women were poor sleepers indicated by the PSQI global score (mean:4.9±2). Worse subjective sleep quality was associated with greater tau in meta-temporal ROI (r=0.63, p=0.005) and lower BVMT-R delayed recall (r=-0.46, p=0.05). Sleep quality was not significantly related to either RAVLT or LM delayed recall (all p's>0.40). Tau in meta-temporal ROI was not significantly associated with nonverbal (p=0.23) or verbal memory (all p's>0.40) delayed recall.
Conclusions: In this preliminary analysis, subjective sleep quality was linked to temporal tau deposition and nonverbal memory delayed recall, which may suggest that poor sleep exacerbates pathogenesis of tau that leads to memory difficulties in older women at increased risk for AD. Although tau was not significantly related to any memory measures, we will explore whether tau will mediate or moderate the relationship between sleep quality and nonverbal memory once we are powered to do so. Continual evaluation and treatment of sleep may be imperative in mitigating AD risk, especially for older women, however, future longitudinal studies will be necessary to investigate this.

Categories: Sleep and Sleep Disorders
Keyword 1: dementia - Alzheimer's disease
Keyword 2: sleep
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56 Outcome Probability Task: Association with Safety Behaviors and Avenues for Future Imaging Research

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Objective: Probability bias—overestimation of the likelihood that feared social outcomes will occur—is a mechanism targeted for symptom reduction in cognitive behavioral therapy for social anxiety. Safety behaviors (i.e., the conscious and unconscious actions taken to reduce discomfort in feared social situations) are related to cognitive biases and can be manipulated to reduce probability bias. The purpose of this research was to test the hypothesis that scores from a newly developed computer task to measure probability bias, the Outcome Probability Task (OPT; Draheim & Anderson, 2022) would be associated with self-reported safety behaviors during a speech task.
Participants and Methods: Participants (*N*=90) included diverse students from a university in a southern, metropolitan area. Individuals reported an average age of 20.74 (*SD*=3.57) and self-identified as 'Woman' (69%), 'Man' (30%), 'Transgender' (1%), or 'Non-binary/Agender' (1%), and 'African American or Black' (52%), 'Asian or Asian American' (19%), 'White' (16%), 'Multi-racial' (7%), 'Hispanic or Latine' (5%), or 'Middle Eastern' (1%). Participants viewed social images and imagined themselves in the scenarios, then rated the likelihood that they would be negatively evaluated on a 0-100% scale (higher ratings indicate greater probability bias), gave a speech, and completed a standardized self-report measure of safety behaviors to rate how often they engaged in avoidant safety behaviors during the speech.
Results: Results from a linear regression indicated that OPT scores (β=.43) were positively associated with self-reported safety behaviors during a speech task, R^2 = .19, F(1, 88) = 20.02, p < .001, 95% CI [0.170, 0.443].

https://doi.org/10.1017/S1355617723011384 Published online by Cambridge University Press

Conclusions: Negatively biased expectations about fear-relevant social situations—measured by a digital imagery task, the OPT—may contribute to increased engagement in avoidant safety behaviors during a speech task among a convenience sample. Outcome probability bias has previously only been measured through self-report, and the OPT is a promising new measure to multi-modally assess this aspect of social cognition. This task could be used along with imaging techniques to better understand the functional brain activity involved in outcome probability bias. Future studies could explore how activity in the orbitofrontal cortex, which is associated with the anticipation of negative outcomes, relates to responses on the OPT. If there is a connection, this brain region could be an indicator of improvement following intervention, such as cognitive behavioral therapy, for probability biases involved in social anxiety.

Categories: Social Cognition
Keyword 1: social processes
Keyword 2: computerized neuropsychological testing
Keyword 3: anxiety
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57 Adaptation of Epilepsy Pre-Surgical Neuropsychological Battery for Spanish-Speaking Patient with Visual Impairment

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Objective: We aim to highlight a unique case that required adaptation of a neuropsychological battery used as part of a pre-surgical workup for medically refractory epilepsy, to meet the needs of a culturally and linguistically-diverse patient with visual impairment.
Participants and Methods: Comprehensive pre-surgical neuropsychological evaluation for a 34-year-old Spanish-speaking patient with a past medical history of epilepsy, hydrocephalus, and a subependymal giant cell astrocytoma resection, with subsequent complete blindness. EEG findings demonstrated abnormal left frontal dysfunction. A neuropsychological evaluation was conducted utilizing components from the Neuropsychological Screening Battery for Hispanics (NeSBHIS) as well as additional supplemental Spanish language assessments. Due to the patient's visual impairment, visuospatial measures were unable to be utilized. Hand dynamometer was used in place of the Grooved Pegboard Test.
Results: Results from the evaluation indicated a generally intact cognitive profile with a few observed deficits. Relative and normative weaknesses were identified on tasks of verbal learning. His initial learning of a list of orally presented words was in the Low Average range, where he demonstrated a positive though somewhat flat learning profile. His performances on short- and long-delay free recall tasks were in the Exceptionally Low range. With a recognition format, he performed within normal limits and made no false positive errors. Importantly, during the initial learning of the word list, the patient demonstrated a significant number of repetitions (13) and semantically related intrusions (6). These likely led to downstream difficulties encoding information; however, he displayed a minimal loss of information over a delay. Similarly, his immediate and delayed recall of an orally presented story fell in the Exceptionally Low range. Additional relative weaknesses were observed on tasks of working memory (Low Average range) and on a task of phonemic fluency (Below Average range). This performance was a notable contrast to his performance on tasks of semantic fluency, which ranged from the Low Average to Average range. On a task of motor functioning, grip strength performances were intact bimanually (Low Average to Average range) without a significant asymmetry between his left and right hands. Lastly, formal assessment of emotional functioning on self-report measures revealed minimal depression, minimal anxiety, and no significant quality of life concerns.
Conclusions: Taken together, the weaknesses observed in the domains of verbal learning, working memory, and phonemic fluency, in addition to the learning profile observed during the verbal encoding task, suggest that his overall profile is indicative of dominant frontal systems dysfunction. This finding was concordant with prior EEG and MRI studies. Notably, given the patient's visual impairment, visuospatial measures were unable to be utilized, and lateralization was unable to be fully assessed given the abbreviated battery. The

https://doi.org/10.1017/S1355617723011384 Published online by Cambridge University Press