and to note existing or suspected mental health, neurodevelopmental and neurocognitive disorders. Referrers also completed a post-assessment pathways questionnaires to identify whether the neuropsychological assessment facilitated referral pathways (e.g., for government housing or financial assistance). Clinicians completed a post-assessment diagnosis survey, which was compared to the pre-assessment known or suspected diagnoses. Finally, referrers were asked to complete a satisfaction questionnaire regarding the neuropsychological assessment.
Results: Mean (SD) WAIS-IV indexes were VCI = 81.1 (14.5), PRI = 86.1 (10.9), WMI = 80.5 (13.0), PSI = 81.6 (10.2). Mean WMS-IV Flexible (LMVR) indexes were AMI = 68.3 (19.6), VMI = 77.1 (19.3), IMI = 72.7 (17.2), and DMI = 70.5 (17.6). The majority of participants showed unusual differences between WAIS-IV and TOPF-predicted WAIS-IV scores and between WAIS-IV General Ability and WMS-IV Flexible (LMVR) scores. Demographically corrected scores on tests of executive functioning were mostly one or more standard deviations below the mean. The majority of participants screened positive on screening measures of executive dysfunction, PTSD and ADHD and had elevated self-reported psychological distress scores. At least one new diagnosis was made for nine (47%) participants, established diagnoses were confirmed for two (11%) participants, diagnoses were supported for 15 (79%) participants, tentative diagnoses were made for 16 (84%) participants, and five (26%) participants had at least one diagnosis disconfirmed/unsupported. Referrers indicated that the majority of post-assessment pathways were more accessible following the neuropsychological assessment and that they were very satisfied with the neuropsychological assessments overall.
Conclusions: This is one of the first studies to delineate the neuropsychological profile of people experiencing complex homelessness using robust psychometric approaches, including performance validity tests. This population experiences a high burden of cognitive impairment and associated substance use, neurodevelopmental and mental health comorbidities. Neuropsychological assessment makes referral pathways more accessible and is valued by referrers of people experiencing complex homelessness.

Categories: Other
Keyword 1: assessment
Keyword 2: psychometrics
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90 Association Between Sedentary-To-Light Physical Activity Time Ratio and Cognitive Function in Bariatric Surgery Candidates

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Objective: Class III obesity is associated with increased risk for cognitive impairment. Though hypothesized to be partially attributable to sedentary time (ST), past research examining the association between ST and cognitive function has produced mixed findings. One possible explanation is that studies do not typically account for the highly correlated and almost inverse relationship between ST and light intensity physical activity (LPA), such that ST displaces time engaging in LPA. Therefore, we aimed to evaluate whether: (1) higher ST-to-LPA time ratio associates with poorer performance across multiple cognitive domains in patients with Class III obesity seeking bariatric surgery; and (2) the associations differ by sex.
Participants and Methods: Participants (N = 121, 21-65 years of age, BMI ≥ 40 kg/m^2) scheduled for either Roux-en-Y Gastric Bypass (RYGB) or Sleeve Gastrectomy (SG) completed the NIH Toolbox, a computerized neuropsychological assessment battery and wore a waist-mounted ActiGraph monitor during waking hours for 7 days to measure minutes/day spent in ST, LPA, and moderate-to-vigorous physical activity (MVPA). A ratio of time spent in ST-to-LPA was calculated by dividing the percentage of daily wear time spent in sedentary

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behavior (SB) by the percentage of daily wear time spent in LPA.
Results: On average, participants (mean age = 43.22 years old and BMI = 45.83 kg/m^2) wore the accelerometer for 909±176 minutes/day and spent 642±174 minutes/day in ST, 254±79 minutes/day in LPA, and 14±13 minutes/day in MVPA. Mean daily ST-to-LPA time ratio was 2.81 ± 1.3 (0.73-7.11). Overall, bivariate Pearson correlations found no significant relationships between LPA and cognitive performance on any of the NIH Toolbox subtests (*r* values = -.002 to -.158, all *p* values >.05). Additionally, bivariate Pearson correlations also found no significant relationships between daily ST-to-LPA time ratio and cognitive performance on any of the subtests (*r* values = .003 to .108, all *p* values >.05). However, higher ST-to-LPA was associated with lower scores on the Dimensional Change Card Sort Test in women (*r* = -.26, *p* = .01).
Conclusions: Results showed that participants' mean daily time spent in ST was 2.5 times higher than that spent in LPA and a higher ratio of ST-to-LPA was associated with poorer set-shifting in women with Class III obesity. Future studies should look to clarify underlying mechanisms, particularly studies examining possible sex differences in the cognitive benefits of PA. Similarly, intervention studies are also needed to determine if increasing LPA levels for individuals with Class III obesity would lead to improved cognitive performance by means of reducing ST.

Categories: Other
Keyword 1: cognitive functioning
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91 Investigation of Cognitive Differences in Pre-Symptomatic Known PRNP Mutation Carriers vs. Non-Carriers

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Objective: Prion disease is a rare, invariably fatal neurodegenerative disease characterized by rapid neuronal degeneration; Mutations to PRNP gene cause genetic prion disease (GPD). In animal models, microglial activation, astrocytosis, and release of neurofilament precede the onset of frank symptoms (Sorce & Nuvolone 2020, Minikel 2020). In humans at risk for GPD, prodromal pathology appears to occur in only a brief window prior to symptom onset (Vallabh et al. 2020, Thompson et al. 2021), but some data suggest that known PRNP mutation carriers may exhibit cognitive abnormalities prior to meeting clinical diagnostic criteria (Mole et al., 2021). We aim to examine pre-symptomatic differences in cognitive processing speed (CPS) and executive function (EF) in PRNP mutation carriers and controls.
Participants and Methods: Our sample includes two groups from an ongoing observational study on GPD (Vallabh et al., 2020): known PRNP mutation carriers (N = 32, Age M = 45.77, SD = 14.75) and control group of non-carriers with a family history of GPD and healthy controls with no known history (N = 11, Age M = 42.01, SD = 12.43). All participants completed a full cognitive battery at baseline and on an annual basis. We compared first visit cognitive testing measuring CPS and EF using: National Institute of Health (NIH) Toolbox [Pattern Comparison (NIH-PC), Flanker, Dimensional Card Sorting Task (NIH-DCCS)], Trail Making Test (TMT) A and B, and Delis-Kaplan Executive Function System (D-KEFS) Color-Word Interference Test (CWIT).
Results: Independent t-tests and Mann-Whitney U tests compared cognitive test performance between groups. Across all cognitive test measures assessed, none exhibited significant differences between groups after Bonferroni correction for N=10 tests (corrected P > 0.05). Mean scores for mutation carriers were non-significantly lower than controls on TMT-B (Z-score Mdn = .29, SD = 1.33 vs. Z-score Mdn = .96, SD = .97), NIH-PC (Age-corrected Standard Score [ACSS] M = 100.13, SD = 20.76 vs. ACSS score M = 114.82, SD = 14.61) and NIH-Flanker (ACSS score M = 83.58, SD = 9.72 vs. ACSS score M = 90.64, SD = 10.94), and NIH-DCCS (ACSS M = 101.29, SD = 16.37 vs. ACSS score M = 112.00, SD = 16.28) but not for TMT-A or all four conditions of CWIT.
Conclusions: We did not detect any significant cognitive deficits in known PRNP mutation carriers. This is consistent with the lack of prodromal pathological biomarker changes or

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