

speed of processing, working memory, and reasoning & problem-solving. Sex- and age-based norms were utilized. The Oral Reading subtest on the Wide Range Achievement Test (WRAT4) indexed pre-morbid IQ at baseline. Latent class mixture models were used to identify distinct trajectories of cognitive performance across two years. One- to 5-class solutions were compared to decide the best solution. This determination depended on goodness-of-fit metrics, interpretability of latent trajectories, and proportion of subgroup membership (>5%).

**Results:** A one-class solution was found for WASI-I Full-Scale IQ, as people at CHR-P predominantly demonstrated an average IQ that increased gradually over time. For individual domains, one-class solutions also best fit the trajectories for speed of processing, verbal learning, and working memory domains. Two distinct subgroups were identified on one of the executive functioning domains, reasoning and problem-solving (NAB Mazes). The sample divided into unimpaired performance with mild improvement over time (Class I, 74%) and persistent performance two standard deviations below average (Class II, 26%). Between these classes, no significant differences were found for biological sex, age, years of education, or likelihood of conversion to psychosis (OR = 1.68, 95% CI 0.86 to 3.14). Individuals assigned to Class II did demonstrate a lower WASI-I IQ at baseline (96.3 vs. 106.3) and a lower premorbid IQ (100.8 vs. 106.2).

**Conclusions:** Youth at CHR-P demonstrate relatively homogeneous trajectories across time in terms of general cognition and most individual domains. In contrast, two distinct subgroups were observed with higher cognitive skills involving planning and foresight, and they notably exist independent of conversion outcome. Overall, these findings replicate and extend results from a recently published latent class analysis that examined 12-month trajectories among CHR-P using a different cognitive battery (Allott et al., 2022). Findings inform which individuals at CHR-P may be most likely to benefit from cognitive remediation and can inform about the substrates of deficits by establishing meaningful subtypes.

**Categories:** Schizophrenia/Psychosis

**Keyword 1:** psychosis

**Keyword 2:** cognitive course

**Keyword 3:** executive functions

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## 74 Construct Validity for the Automated Sequencing Test (AST) in Hispanic/Latino and Bilingual Youth

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**Objective:** Adequate effort by examinees during neurocognitive testing is a prerequisite to valid interpretation of test results. Utilizing performance validity tests (PVTs) is strongly recommended within pediatric mild Traumatic Brain Injury (mTBI) populations. PVTs have historically been created based on majority-white and monolingual groups; investigating their validity in additional patient populations remains essential. The Automated Sequencing Task (AST) was developed as a brief validity measure within mTBI youth (Kirkwood, et.al., 2014). This study aimed to examine the clinical utility of the AST among youth identifying as Hispanic/Latino and/or bilingual within a mTBI clinical sample.

**Participants and Methods:** Participants ages 8-17 (N=103, M age=14.08, SD=2.2, 51.5% male, 42.7% Hispanic/Latino, 23.6% bilingual) were drawn from an outpatient mTBI/concussion program within the past 2.6 years. Median time of evaluation since injury was 3.7 weeks. Eligibility criteria included: 1) evaluated for a mTBI (GCS  $\geq$  13) and 2) 8 through 17 years of age. Language status included English only and English-Spanish bilingual youth. Of the bilingual youth, 95% were considered English dominant. Youth were timed while reciting four well-learned (i.e., automatized) sequences as rapidly as possible: 1) the alphabet, 2) counting from 1-20, 3) the days of the week, and 4) the months of the year. Pass rates for the AST were examined using chi-square tests to compare performance based on ethnic/cultural identity (Hispanic vs Non-Hispanic), language status, age (children 8-12; teens 13-17), and gender.

**Results:** In the clinical sample, 11.7% (n=12) could not complete AST months; 75% of non-completers were Hispanic/Latino. Participants who identified as Hispanic/Latino compared to Non-Hispanic/Latino participants were significantly more likely to fail the 4-item AST,

$\chi^2(1) = 4.3, p < .05$ . The odds of failing the 4-item AST was 2.3 times higher if patients identified as Hispanic/Latino. Further, patients identifying as bilingual were even more likely to fail the 4-item AST,  $\chi^2(1) = 4.5, p < .05$ . The odds of failing the 4-item AST was 3.0 times higher if patients were bilingual. There were no ethnicity or bilingual group differences in AST failure when examining performance on the 3-item AST. Neither age nor gender were a significant predictor of failure on the 3-item or 4-item AST.

**Conclusions:** Results suggest that the month item on the AST does not function consistently across Hispanic/Latino and bilingual youth. It cannot be presumed to be 'automatic' as a significant number of Hispanic/Latino and/or bilingual patients were unable to complete the month item, but with otherwise intact performance on the first three items.

Administering only the first three items on the AST appears to be a more culturally sensitive alternative given the increased odds of 4-item failure in Hispanic/Latino and bilingual youth. Additional research is needed to explore the predictive validity of the AST as a PVT in varying ethnic, culturally, linguistically, and socioeconomically diverse mTBI pediatric populations.

**Categories:** Concussion/Mild TBI (Child)

**Keyword 1:** performance validity

**Keyword 2:** concussion/ mild traumatic brain injury

**Keyword 3:** diversity

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## Coffee Break

10:30 - 10:45am

Saturday, 4th February, 2023

Exhibit Hall - Town & Country Ballroom A

## Symposium 14: Patterns of Learning Performance on List Learning Tasks: Do They Mitigate Gender Differences in Memory?

10:45am - 12:10pm  
Saturday, 4th February, 2023  
Pacific Ballroom A

### Chair

Julie Suhr  
Ohio University, Athens, USA

### Discussant

Dustin Hammers  
Indiana University School of Medicine,  
Indianapolis, USA

### Summary Abstract:

Women tend to perform better than men on episodic verbal memory tests across the age span, which may contribute to gender-related disparities in diagnosis of Mild Cognitive Impairment and dementia. Patterns of learning performance may be better indicators of potential memory problems and address gender differences. The serial position effect, specifically a J-curve (reduced primacy relative to recency), is predictive of dementia, but few studies have examined gender differences in serial position. Learning ratio (LR) is a recently developed calculation for the extent to which an individual benefits from repeated exposure to a word list. LR has shown strong relationships to memory performance and memory impairment. Gender differences on LR have been inconsistently identified. Whether or not men and women show differential relationships of serial position or LR to other memory indicators, however, has not been examined. In the four papers within this symposium, we examine the relationship of serial position and LR to memory outcomes in four samples of older adults, with a focus on whether gender moderates these relationships. We also examine the relationship of memory process variables to cortisol. The first two papers used the RBANS. Alexander et al. found that, within a sample of 203 healthy older adults (133 women) with no diagnosis of MCI or dementia, men and women did not differ on LR and there was no differential prediction for LR by gender with delayed memory variables. Do and colleagues