

prevalence for women was 9.2% compared to expected prevalence of 9.5% ($\chi^2=.026$, $p=.873$) and for men 10.7% and 11.6%, respectively ($\chi^2=.039$, $p=.844$). There was a significant difference in Line Orientation scores ($Md_{right-handers}=18$, $Md_{left-handers}=17$; $U=5268.0$, $p=.013$) but not Semantic Fluency scores ($Md_{right-handers}=17$, $Md_{left-handers}=18.5$; $U=7568.5$, $p=.315$). Right-handed men had higher scores on Line Orientation but there was no handedness by gender interaction ($F(1)=1.69$, $p=.194$). For Semantic Fluency, left-handed men had higher scores and a gender by handedness interaction was found ($F(1)=7.21$, $p=.008$). Using scores corresponding to <5th percentile, 15% of left-handers and 8% of right-handers had scores <5th percentile on Line Orientation, as opposed to 15% and 14% on Semantic Fluency.

Conclusions: Right-handers had significantly better performance on a test measuring visuospatial function, irrespective of gender. Left-handers had about twice the number of scores in the impaired range (i.e., <5th percentile) compared to right-handers. Left-handed men had better performance on a test of verbal functions, which was unexpected. A recent study reported no right-hand associated advantage on visuospatial tests in people with schizophrenia disorders when measuring handedness on a continuous scale. This suggests that the classification of handedness as either a dichotomous or as a continuous variable is important in studies of handedness and cognitive functions.

Categories: Schizophrenia/Psychosis

Keyword 1: schizophrenia

Keyword 2: laterality

Keyword 3: visuospatial functions

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73 Identification of 24-Month Cognitive Trajectories Among Clinical High Risk for Psychosis (CHR-P) Using Latent Class Mixture Modeling

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Objective: Cohort studies demonstrate that people who later develop schizophrenia, on average, present with mild cognitive deficits in childhood and endure a decline in adolescence and adulthood. Yet, tremendous heterogeneity exists during the course of psychotic disorders, including the prodromal period. Individuals identified to be in this period (known as CHR-P) are at heightened risk for developing psychosis (~35%) and begin to exhibit cognitive deficits. Cognitive impairments in CHR-P (as a singular group) appear to be relatively stable or ameliorate over time. A sizeable proportion has been described to decline on measures related to processing speed or verbal learning. The purpose of this analysis is to use data-driven approaches to identify latent subgroups among CHR-P based on cognitive trajectories. This will yield a clearer understanding of the timing and presentation of both general and domain-specific deficits.

Participants and Methods: Participants included 684 young people at CHR-P (ages 12-35) from the second cohort of the North American Prodromal Longitudinal Study. Performance on the MATRICS Consensus Cognitive Battery (MCCB) and the Wechsler Abbreviated Scale of Intelligence (WASI-I) was assessed at baseline, 12-, and 24-months. Tested MCCB domains include verbal learning,

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,