Keyword 3: attention deficit hyperactivity disorder
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13 Verbal Memory and Learning Strategies in an Autistic Sample Using the CVLT

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Objective: The present study aims to better understand learning strategies and difficulties in autistic youth. Previous studies have found that autistic youth have difficulties with executive function skills and poorer performance in memory and learning tasks, especially those that require spontaneous retrieval of information compared to memory tasks that provide external retrieval cues. Additionally, it has been theorized that autistic youth employ a serial approach rather than a semantic approach to learning. The current study hypothesized that the autistic sample will have (a) significant difficulties in learning and memory, (b) employ a serial approach more frequently and a semantic approach less frequently than the CVLT normative sample, and (c) will benefit significantly when provided with external retrieval cues.
Participants and Methods: Archival data from a mixed clinical and research database were examined for this study. Participants include 740 autistic individuals between the ages of 5.50 and 24.3 (M = 10.90, SD = 2.98). The sample consisted of 22.2% girls and 34.0% Black, Indigenous, and people of color (BIPOC). All individuals had a FSIQ ≥ 70 (M = 99.91, SD = 16.09) and were clinically diagnosed with autism using DSM-IV-TR or DSM-V criteria by a clinician at an autism diagnostic center. Participants completed the age-appropriate California Verbal Learning Test (CVLT, Delis et al. 1987) which is a neuropsychological measure that examines verbal memory and learning. One-sample t-tests were used to examine the sample's verbal memory abilities and their learning strategies. A paired sample t-test was used to evaluate the sample's performance before and after an external retrieval cue was given.
Results: Results from the one-sample t-tests indicate that the autistic sample performed worse than the CVLT normative data with a large effect size ($t(739) = -9.440$, $p < .001$, Cohen's $d = 1.292$). Secondly, the autistic sample was less likely to use a semantic learning approach ($t(739) = -1.841$, $p = .033$, Cohen's $d = 1.234$), but not more likely to use a serial approach ($t(739) = -.040$, $p = .484$) compared to the normative sample. Lastly, the paired sample t-test results show that the sample performed significantly better after receiving the external retrieval cue ($t(739) = -2.570$, $p = .005$, Cohen's $d = .770$).
Conclusions: The data supported the first hypothesis; autistic individuals have increased difficulties with learning and verbal memory. However, the data only partially support the second hypothesis. The sample was less likely to use a semantic approach to learning but was not more likely to use serial learning. This finding is opposed to the Weak Central Coherence (WCC) theory, which suggests that autistic individuals are more likely to have detail-oriented, bottom-up cognitive thinking styles, consistent with a serial learning strategy. Lastly, data showed improvement when autistic individuals received a retrieval cue. This result supports the Task Support Hypothesis (TSH) and indicates that autistic individuals benefit from cues for memory recall, particularly those that capitalize on their areas of strength. This study did not use a control group and is limited in ethno-racial diversity; therefore, these are preliminarily findings that require further replication.

Categories: Autism Spectrum Disorders/Developmental Disorders/Intellectual Disability
Keyword 1: learning
Keyword 2: autism spectrum disorder
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14 Changes in Service Delivery Models for Children with Neurodevelopmental Disorders During the Covid-19 Pandemic

https://doi.org/10.1017/S1355617723007889 Published online by Cambridge University Press