

Neuropsychological profile of adults with a history of ADHD in the absence of neurocognitive disorder.

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Introduction

Attention-Deficit/ Hyperactivity Disorder (ADHD) is a neurodevelopmental condition typically diagnosed in childhood, with symptoms often persisting into adulthood. Adults with a history of ADHD may exhibit deficits in processing speed and sustained attention in the presence of distractors. This study aimed to compare the cognitive performance of adults without neurocognitive disorder, with and without a retrospective history of childhood ADHD.

Methods

We conducted a cross-sectional study using a coded database of neuropsychological assessments from patients aged ≤60 years who consulted for cognitive complaints between January 2017 and December 2019. None of the participants met DSM-5 criteria for neurocognitive disorder. Each report included demographic data, clinical symptoms, medical history, and scores across multiple cognitive domains (memory, attention, executive function, visuospatial abilities, and language), as well as the Beck Depression Inventory-II (BDI-II) and Wender Utah Rating Scale (WURS). A WURS score ≥32 was used to classify individuals with probable childhood ADHD, forming two comparison groups.

Results

Variable	Non-ADHD Group (n= 68) Mean ± SD/ Median [IQR]	ADHD Group (n= 62) Mean ± SD/ Median [IQR]	p-value
Age, mean ± SD (years)	52.22 ± 5.48	51.47 ± 6.34	0.59
Mean years of education ± SD	14.16 ± 3.08	15.02 ± 3.02	0.146
Wender Utah Rating Scale *	13.5 [8.25–21.75]	40.0 [34.0–50.0]	<0.001
Mini Mental State Examination *	29.0 [28.0–30.0]	28.5 [27.0–30.0]	0.131
RAVLT total **	47.69 ± 6.81	45.09 ± 8.75	0.062
RAVLT 6 **	10.03 ± 2.41	8.87 ± 2.96	0.016
RAVLT 7 **	10.05 ± 2.26	8.71 ± 3.10	0.006
RAVLT Recognition trial *	15.0 [14.0–15.0]	14.0 [13.0–15.0]	0.075
LM Immediate Recall *	8.5 [7.5–10.0]	8.75 [7.0–10.0]	0.983
LM Delayed Recall *	8.0 [7.0–9.5]	8.0 [6.4–9.5]	0.994
Dígit-símbol **	67.05 ± 18.08	60.93 ± 14.00	0.032
Digit Span Forward*	6.0 [5.0–7.0]	6.0 [5.0–6.0]	0.138
Digit Span Backward*	4.0 [4.0–5.75]	4.0 [4.0–5.0]	0.111
Trail Making Test A *	33.5 [28.0–42.0]	32.0 [26.8–40.3]	0.891
Trail Making Test B *	75.0 [58.5–91.8]	71.5 [59.0–93.3]	0.981
Phonemic Verbal Fluency (FAS) **	39.65 ± 10.88	38.31 ± 9.56	0.457
Semantic Verbal Fluency *	19.0 [16.0–22.8]	18.5 [15.0–20.0]	0.359
Boston Naming Test **	56.21 ± 4.06	55.92 ± 5.09	0.726
Block Design *	16.0 [12.0–16.0]	16.0 [13.5–16.0]	0.552
Beck Depresión Inventory *	12.0 [5.25–18.0]	16.5 [11.0–23.0]	0.007

Conclusions

Adults with a history of childhood **ADHD**, even in the absence of neurocognitive disorder, **display a distinct cognitive profile** marked by poorer verbal memory and slower processing speed. **Elevated depressive symptoms** in this group highlight the importance of comprehensive emotional assessment. These findings underscore the clinical relevance of lifelong ADHD trajectories and their enduring impact on adult cognitive functioning.

In multivariate regression adjusted for sociodemographic and affective variables, childhood ADHD remained significantly associated with lower verbal memory (RAVLT 7; $p = 0.005$) and slower processing speed (Digit Symbol; $p = 0.024$). Depressive symptoms were independently linked to reduced performance in processing speed tasks ($p = 0.020$).

Table 1. Demographic characteristics, cognitive performance, and depressive symptoms in participants with and without a history of ADHD. RAVLT, Rey Auditory Verbal Learning Test; LM, Logical Memory. *Mann–Whitney U test; *Student's t-test. Bold indicates statistically significant P values ($P < 0.05$).

References

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