

Do parent reported depression and anxiety symptoms predict memory performance in school-referred children?

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Introduction

- Neuropsychologists often assess children with symptoms of depression and anxiety in the context of neuropsychological assessment.
- Previous studies have found a significant impact of mood on memory in adults (Porter et al., 2003).
- Less research has been conducted on the effects of anxiety on memory, with some studies finding a relationship while others not finding this without the addition of comorbid depressive symptoms (Kizilbash et al., 2002).
- A previous study found no effects of self-reported depression and anxiety on CVLT-C performance in a sample of children recruited through an outpatient psychiatric clinic (O'Jile et al., 2005).
- No previous studies have examined the impact of depression or anxiety symptoms on CVLT-C performance within a school-referred sample.
- The purpose of the present study was to examine the degree to which parent reported depression or anxiety symptoms would predict performance on the CVLT-C.

Methods

- 103 children (78 boys, 25 girls; mean age = 10.742 years, $SD = 1.787$ years) referred for psychological assessment through their school were included in analyses.
- Anxiety and Depression were measured using the Behavior Assessment System for Children, Second Edition – Parent Form (BASC-2).
- Memory performance was assessed using the California Verbal Learning Test, Children's Edition (CVLT-C).
- Anxiety and depression scores were used to predict the following memory variables in separate regression analyses: CVLT-C Total Trials, Trial 1, Trial 5, Short Delay Free Recall (SDFR), Short Delay Cued Recall (SDCR), Long Delay Free Recall (LDFR), Long Delay Cued Recall (LDCR).

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Results

Parent Reported Anxiety

	B	β	t	p	R^2	Adjusted R^2
CVLT-C Total Trials	-.032	-.033	-.331	.742	.001	-.009
List A Trial 1	-.001	-.019	-.188	.851	.000	-.010
List A Trial 5	-.008	-.082	-.822	.413	.007	-.003
Short Delay Free Recall	-.009	-.104	-1.052	.295	.011	.001
Short Delay Cued Recall	-.001	-.014	-.142	.888	.000	-.010
Long Delay Free Recall	-.001	-.005	-.049	.961	.000	-.010
Long Delay Cued Recall	-.004	-.044	-.442	.660	.002	-.008

Parent Reported Depression

	B	β	t	p	R^2	Adjusted R^2
CVLT-C Total Trials	-.149	-.199*	-.2.041	.004	.040	.030
List A Trial 1	-.006	-.094	-.944	.347	.009	-.001
List A Trial 5	-.016	-.195	-2.002	.048	.038	.029
Short Delay Free Recall	-.008	-.109	-1.104	.272	.012	.002
Short Delay Cued Recall	-.013	-.188	-1.925	.057	.035	.026
Long Delay Free Recall	-.009	-.074	-.741	.460	.005	-.004
Long Delay Cued Recall	-.016	-.228*	-2.358	.020	.052	.043

* $p < 0.05$

Mean Scores on the BASC-2 and CVLT-C

BASC-2 Anxiety ^a	56.233 (12.060)
BASC-2 Depression ^a	59.689 (15.551)
CVLT-C Total Trials ^a	44.796 (11.619)
List A Trial 1 ^b	-.432 (.963)
List A Trial 5 ^b	-.359 (1.255)
Short Delay Free Recall ^b	-.466 (1.076)
Short Delay Cued Recall ^b	-.432 (1.073)
Long Delay Free Recall ^b	-.204 (1.852)
Long Delay Cued Recall ^b	-.485 (1.108)

Note. SDs are in parentheses.

^a T-scores

^b z-scores

- Variance predicted by BASC-2 parent reported anxiety ranged from .000 (Trial 1, SDCR, LDGR) to .011 (SDFR).
- Anxiety did not account for a significant portion of the variance in any of the CVLT-C outcome measures.
- Variance predicted by BASC-2 parent reported depression ranged from .005 (LDGR) to .052 (LDCR).
- Depression accounted for a significant portion of the variance in three of the CVLT-C outcome measures (Total Trials, Trial 5, and LDCR).

Discussion & Conclusions

- Anxiety on the BASC-2 was not associated with memory performance on the CVLT-C.
- The relationship between depression and memory was less clear, with depression significantly predicting only 3 of the 7 memory measures.
- These results are similar to previous research (e.g., Kizilbash et al., 2002) which has found that depression may have an influence on memory performance, but anxiety likely does not.
- This study may not have found a strong relationship because the level of symptom severity was not severe. Different results may be found in a sample of children with more severe depression and anxiety problems.
- Understanding the various influences on memory performance is important for making recommendations and implementing appropriate intervention strategies.