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Abstract

TITLE: Deficient Delayed Memory on the CVLT-II in Individuals with Agenesis of the Corpus Callosum

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ABSTRACT BODY:

Objective : Recent confirmatory factor analysis of the California Verbal Learning Test—Second Edition (CVLT-II) in the normative sample has yielded a four-factor model of Attention Span (AS), Learning Efficiency (LE), Delayed Memory (DM), and Inaccurate Memory (IM) (Donders, 2008). The purpose of the present study was to compare, using this more robust and parsimonious model of interpretation, aspects of verbal learning and memory in individuals with Agenesis of the Corpus Callosum (ACC).

Participants and Methods: Twenty-six adults with complete and partial ACC (FSIQ > 80; age 16-52) and 27 age, education, and FSIQ-matched controls were administered the California Verbal Learning Test-Second Edition (CVLT-II). It was hypothesized that individuals with ACC would exhibit significantly deficient performance on all of Donder's four factors.

Results : A one-way MANOVA was utilized to determine the effect of Group (ACC versus Controls) on four dependent variables (AS, LE, DM, and IM factors). There was not a significant overall effect of group on the dependent variables, $F(4, 48) = 1.55$, $p = .20$, $\eta p2 = 0.11$. Post-hoc one way ANOVAs revealed that individuals with ACC performed significantly worse from controls on the DM factor, $F(1, 51) = 4.75$, $p = .03$, $\eta 2 = .56$.

Conclusions : Intact performance by the ACC group on the AS, LE, and IM factor, and deficient performance on the DM factor, suggests a deficit only in the consolidation or retrieval of previously learned verbal information. Specifically, deficient performance by the ACC group on Donder's DM factor could have been the result of their having encoded the verbal information in a less elaborate form, or the result of decreased access to and retrieval of information encoded within the right hemisphere.