

# Impaired Visuospatial Short-Term Memory in Children with ADHD.

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J Genet Psychol. 2018 Jan 16:1-11.  
doi: 10.1080/00221325.2017.1414028.

## Abstract

Previous studies provide clear evidence that visuospatial memory performance in children with attention-deficit/hyperactivity disorder (ADHD) is significantly lower than in typically developing children. In the present study, we investigated a major cause of their low performance using a spatial span test. Possibly, inattention resulting from lack of motivation or interest causes their low performance so that they do not correctly encode targets to be remembered. On the other hand, a deficit in temporary maintenance per se may cause their low performance; that is, their inefficient use of rehearsal during a retention interval may lead to memory traces' fast decay. Results in this study indicated that children with ADHD could sustain attention during the encoding phase. Furthermore, their performance at delayed recall was significantly lower than immediate recall, but delayed recall did not affect typically developing children's performance. These results provide evidence for the likelihood that a factor causing children with ADHD difficulty in temporarily maintaining visuospatial information is fast decay of memory traces as a result of inefficient use of rehearsal, not inattention in the encoding phase.