The origin of the centrality deficit in individuals with attention-deficit/hyperactivity disorder

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Abstract

INTRODUCTION:
Studies have shown that skilled and disabled readers recall central ideas, which are important to the overall comprehension of the text, to a greater extent than peripheral, less important ideas after reading. However, readers with attention-deficit/hyperactivity disorder (ADHD) recall significantly fewer central ideas than skilled readers. The present study was designed to examine whether difficulties in identifying, attending, and/or retrieving central ideas underlie their centrality deficit.

METHOD:
28 adult university students with ADHD and 27 control students read three expository texts (successively) to summarize their central ideas, while their eye-movements were recorded. After reading, the participants recalled, recognized, and estimated the centrality level of all text ideas, which were divided into central and peripheral based on pretest ratings.

RESULTS:
The participants with ADHD recalled fewer central ideas than controls, although they recognized and estimated their centrality to the same extent as controls. Moreover, the participants with ADHD invested more time in rereading central ideas than peripheral ones, to a greater extent than controls.

CONCLUSIONS:
The eye-movement data suggest that our university students with ADHD were aware of the reading task requirements, their difficulties, and the appropriate strategies for coping with them (i.e., rereading central ideas). More importantly, the present findings suggest that readers with ADHD have specific difficulty in retrieving central ideas that are available in their long-term memory. It supports the hypothesis that readers with ADHD establish fewer connections between text ideas during reading, and consequently benefit from a reduced number of retrieval cues after reading.