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Use of Eye Movement Tracking in the Differential Diagnosis of Attention Deficit Hyperactivity Disorder (ADHD) and Reading Disability

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ABSTRACT

The present study examined the clinical utility of eye movement tracking in the differential diagnosis of Attention Deficit/Hyperactivity Disorder (ADHD) and Reading Disorder (RD). It was anticipated that eye movement tracking would provide a better understanding of the underlying deficits that potentially contribute to reading difficulties among children with ADHD and RD. Participants included 27 children diagnosed with ADHD, 20 that met criteria for a reading disorder and 30 Control children with no clinical diagnosis. All participants were between the ages of 6 to 12. Consistent with previous research, children in the RD group displayed slower reading time, longer fixation duration and more atypical eye movements as compared to Control children. Children with ADHD also displayed more atypical eye movement as compared to Control children. The only significant difference between the ADHD and RD groups was in total reading time. Results of a discriminant analysis revealed that less than 60% of participants were given the correct diagnostic classification based on total reading time and proportion of left to right saccades indicating limited support for this measure in diagnosis of ADHD versus RD.

KEYWORDS

Differential Diagnosis, Comorbidity, Attention Deficit/Hyperactivity Disorder, Reading Disability, Eye Movement Tracking

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