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Increasing Attention Through Working Memory Training for Children with Attention Deficit/Hyperactivity Disorder (ADHD)

Elliot A, Hawkins R, Sandford J

Objective: The purpose of this study was to determine if computer-based working memory training for children with ADHD would lead to increased attention skills on performance-based measures of attention. Method: In this randomized, controlled blind pilot study, 20 children with ADHD ages 6 through 8 were randomly assigned to 40 sessions of computer-based intervention completed over the summer of 2015. The children in the experimental group completed TNT Reading, a working memory training program, whereas the children in the control group completed Read Naturally Live, an evidence-based reading program. To the outside observer, both programs appeared to be reading instructional programs, but the TNT Reading was designed to increase attention in addition to reading skills. Performance-based pretests and posttests of sustained auditory and visual attention, impulsivity, hyperactivity, and reading skills were completed. Results: Children who received working memory training showed significant increases in sustained auditory attention and sustained visual attention on performance-based measures, with reductions in reported symptoms of ADHD. In contrast, all but one child in the control group showed no change in attention, and none of the children in the control group had reductions in reported ADHD symptoms. Children in both groups showed similar outcomes for improvements in reading skills. Conclusion: Computer-based working memory training can increase attention and reduce symptoms of ADHD in children with ADHD. A larger study of the effects of the computer-based working memory training is warranted.