

Attention and executive functions computer training for attention-deficit/hyperactivity disorder (ADHD): results from a randomized, controlled trial

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Abstract

Multicenter randomized clinical superiority single-blind trial investigated the effect of a computer training program targeting multiple cognitive functions. Seventy children with ADHD, aged 6–13, were randomized to intervention or control group. The intervention group used ACTIVATE™ for 8 weeks and both groups received treatment as usual and were assessed in regard to cognitive functions, symptoms, behavioral and functional outcome measures after 8, 12 and 24 weeks. There was no significant effect on the primary outcome, sustained attention ($\beta = -0.047$; CI -0.247 to 0.153) or the secondary outcomes [parent-rated ADHD-RS, $\beta = -0.037$; CI -0.224 to 0.150]; teacher-rated-ADHD-RS, $\beta = 0.093$; CI -0.107 to 0.294]; parent-rated-BRIEF, $\beta = -0.119$; CI -0.307 to 0.069]; and teacher-rated-BRIEF, $\beta = 0.136$; CI -0.048 to 0.322]. This multicenter randomized clinical trial found no significant beneficial effects of cognitive training using the computer program ACTIVATE on the primary or secondary outcome measures in children with ADHD. Nevertheless, our study was likely underpowered to detect small to moderate changes.

Trial registration

ClinicalTrials.gov: NCT01752530, date of registration: December 10, 2012.