

Clinician-delivered cognitive training for children with attention problems: effects on cognition and behavior from the ThinkRx randomized controlled trial

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Abstract

PURPOSE:

The impact of attention problems on academic and social functioning coupled with the large number of children failing to respond to stimulant medication or behavioral therapy makes adjunctive therapies such as cognitive training appealing for families and clinicians of children with attention difficulties or childhood attention deficit hyperactivity disorder. However, the results of cognitive training studies have failed to find far transfer effects with this population. This study examined the quantitative cognitive effects and parent-reported behavioral effects of a clinician-delivered cognitive training program with children who have attention problems.

PATIENTS AND METHODS:

Using a randomized controlled study design, we examined the impact of a clinician-delivered cognitive training program on processing speed, fluid reasoning, memory, visual processing, auditory processing, attention, overall intelligence quotient score, and behavior of students (n=13) aged 8-14 years with attention problems. Participants were randomly assigned to either a waitlist control group or a treatment group for 60 hours of cognitive training with ThinkRx, a clinician-delivered intervention that targets multiple cognitive skills with game-like, but rigorous mental tasks in 60-90-minute training sessions at least 3 days per week.

RESULTS:

Results included greater mean pretest to posttest change scores on all variables for the treatment group versus the control group with statistically significant differences noted in working memory, long-term memory, logic and reasoning, auditory processing, and intelligence quotient score. Qualitative outcomes included parent-reported changes in confidence, cooperation, and self-discipline.

CONCLUSION:

Children with attention problems who completed 60 hours of clinician-delivered ThinkRx cognitive training realized both cognitive and behavioral improvements.