Virtual Remediation Versus Methylphenidate to Improve Distractibility in Children With ADHD: A Controlled Randomized Clinical Trial Study

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Abstract

Objective:
Virtual environments have been used to assess children with ADHD but have never been tested as therapeutic tools. We tested a new virtual classroom cognitive remediation program to improve symptoms in children with ADHD.

Method:
In this randomized clinical trial, 51 children with ADHD (7-11 years) were assigned to a virtual cognitive remediation group, a methylphenidate group, or a psychotherapy group. All children were evaluated before and after therapy with an ADHD Rating Scale, a Continuous Performance Test (CPT), and a virtual classroom task.

Results:
After therapy by virtual remediation, children exhibited significantly higher numbers of correct hits on the virtual classroom and CPT. These improvements were equivalent to those observed with methylphenidate treatment.

Conclusion:
Our study demonstrates for the first time that a cognitive remediation program delivered in a virtual classroom reduces distractibility in children with ADHD and could replace methylphenidate treatment in specific cases.