

THE DYNAMICS OF ATTENTIONAL AND INHIBITORY FUNCTIONS IN THE PRESENCE OF DISTRACTING STIMULI IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER, HIGH-FUNCTIONING AUTISM AND OPPOSITIONAL DEFIANT DISORDER

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SYNOPSIS

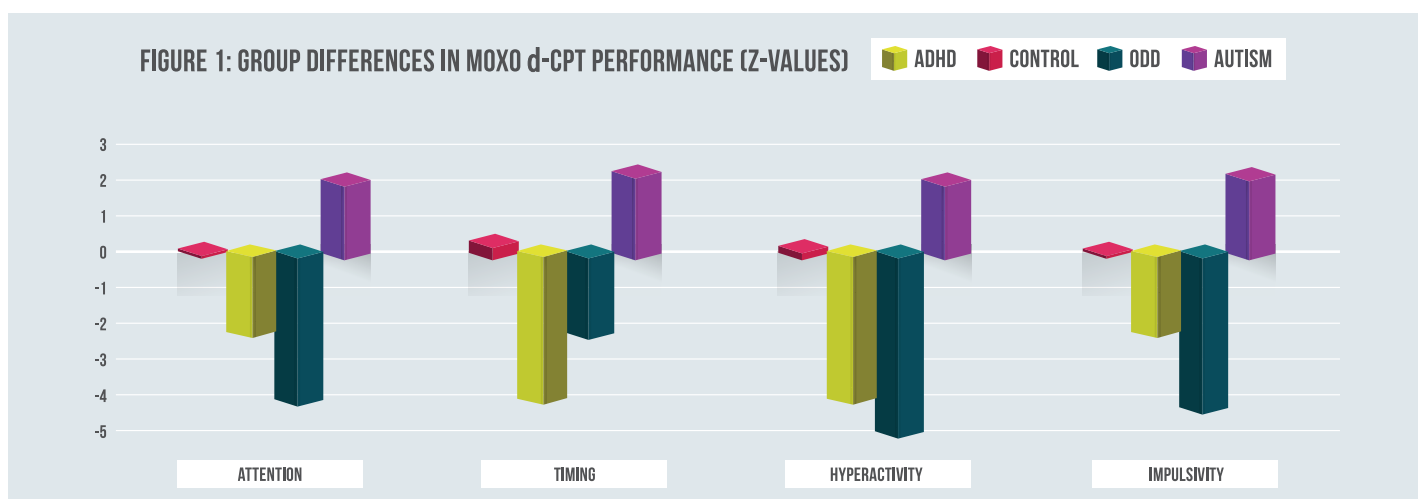
The study used the MOXO d-CPT in order to evaluate attention and inhibition functions among three clinical groups of children: ADHD, high-functioning autism and oppositional defiant disorder. In contrast to controls, the three clinical groups are characterized by specific dysfunction of attention and inhibition as a function of time and distracting stimuli.

STUDY SUMMARY

- Population: A total of 108 children aged 7-12 years. Of them 21 diagnosed with oppositional defiant disorder, 21 with high-functioning autism, 19 with attention-deficit/hyperactivity disorder; and 47 controls.
- Measures:
 - MOXO d-CPT performance was compared on four indices of the test: Attention, Timing, Hyperactivity and Impulsiveness.

RESULTS

- Compared to controls, ODD and ADHD children showed significantly worse performance in all MOXO d-CPT indices. No differences in MOXO d-CPT performance were found between controls and children with high-functioning autism (Figure 1).
- A detailed evaluation of test performance dynamics in its eight levels was performed in order to draw distinctive attention profiles of the four groups. Results showed that children in clinical groups do not differ in their Attention and Timing indices. Impulsive responses (Impulsiveness index) were noted only in children with ODD. Hyperactive responses decreased over time in the ADHD group, varied over time and seemed dependent on the presence of distractor in the group of children with autism, and was quite stable in the ODD group, which means it was comparable to control group performance, and only slightly worse as far as quantitative indices are concerned.



DISCUSSION

- While the control group did not exhibit difficulties in cognitive task performance over longer periods of time and in the presence of distractors, various clinical groups show specific dysfunction on attention and inhibition as a function of time and distracting stimuli.
- Unlike the analysis of the test's major indices, a detailed evaluation of test performance dynamics in its eight levels yields more valuable results and allows the specificity of the studied clinical groups to be discerned.
- The MOXO d-CPT allows for simultaneous evaluation of several aspects of attention, including sustained attention, inhibition, and resistance to distracting stimuli and is proved to be useful in clinical diagnosis of children.