

USEFULNESS AND VALIDITY OF CPT IN THE DIAGNOSIS OF ADHD CHILDREN

Berger, I., Slobodin, O., & Cassuto, H. (2016). Archives of Clinical Neuropsychology

SYNOPSIS

In all MOXO-CPT indices, ADHD children demonstrated worse performance than their unaffected peers.

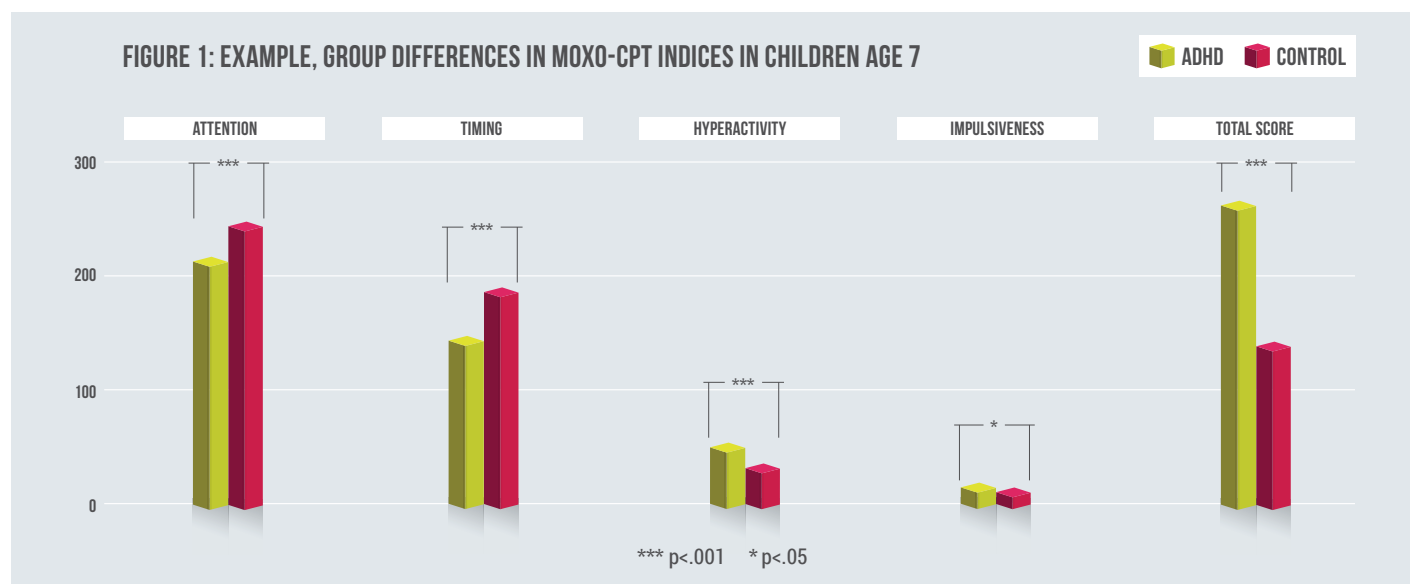
In addition, all four CPT indices, especially when considered as a whole, showed fair to excellent sensitivity and specificity in ADHD diagnosis.

STUDY SUMMARY

- Population: A total of 798 children aged 7 to 12 years (493 boys and 305 girls), of them 339 with ADHD.
- Measures:
 1. MOXO-CPT - Performance was compared on four indices of the test: Attention, Timing, Hyperactivity and Impulsiveness.

RESULTS

- Compared to their unaffected peers, children with ADHD received significantly lower scores in all four CPT indices: attention, timing, hyperactivity, and impulsivity (for example see figure 1).
- ROC analysis revealed fair to excellent diagnostic ability of the Attention, Timing and Hyperactivity indices.
- Impulsivity, showed a lesser ability to distinguish ADHD children from controls and therefore should be considered with at least one more index showing negative abnormality.
- The best diagnostic performance was attributed to failure in all 4 indices.



Sensitivity and specificity analyses results show that the test's validity in diagnosis of ADHD is a function of the number of indices that were taken into account. That is, considering more indices improves the test's sensitivity and specificity. Abnormality in all four indices at the same time is associated with excellent sensitivity and specificity rates of 89.9% and 86.1%, respectively.

DISCUSSION

- MOXO-CPT consistently distinguished between children with ADHD and their unaffected peers, so that children with ADHD performed worse than controls in all study indices. Specifically, ADHD children were less attended to the stimuli and performed fewer reactions on accurate timing. Furthermore, children with ADHD performed significantly more impulsive and hyperactive responses than controls.
- Integration of CPT indices improves the diagnostic capacity of ADHD and may better reflect the complexity and heterogeneity of ADHD.