The neurocognitive nature of children with ADHD comorbid Sluggish Cognitive Tempo: Might SCT be a disorder of vigilance?

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Abstract

Sluggish Cognitive Tempo (SCT) refers to a clinical construct including several symptoms such as sluggishness, absentmindedness, low energy. In the present study, we compared neurocognitive laboratory outcomes of ADHD children with or without SCT. Method: The CNS Vital Signs Battery was utilized to measure neurocognitive measure of the participants. The SCT+ADHD group comprised of 42 subjects, ADHD group was 41 subjects and control group was 24 subjects. Results: The cognitive flexibility score was found to be more severely impaired in ADHD children with SCT in comparison to the ADHD-only. Additionally, greater deficits in the Shifting Attention Test (p=0.014) and the Continuous Performance Test (reaction time score, p<0.01) were found in the SCT+ADHD group relative to ADHD group. Processing speed, visual/auditory memory, psychomotor speed and reaction time were not found to more impaired in those comorbid with SCT. Conclusion: Impairments in the cognitive flexibility and more specifically shifting attention and continuous performance may be indicative of vigilance and orientation problems rather than executive functions for the SCT construct.