A preliminary investigation of reaction time variability in relation to social functioning in children evaluated for ADHD

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Abstract

Reaction time variability (RTV) is a ubiquitous phenomenon in Attention-Deficit/Hyperactivity Disorder (ADHD). Few studies have examined RTV in relation to functional outcomes such as social impairment in children with ADHD. In this exploratory study, we investigated whether RTV is associated with social functioning in children at risk for ADHD. Specifically, we explored the association between RTV (tau derived from correct go trials of a Stop-Signal task) and social functioning in 198 children ages 7-12 years referred for an ADHD evaluation. Social functioning measures included child and/or parent ratings of social competence, aggression, social problems, and impairment in relationships. In regression analyses that also included Oppositional Defiant Disorder symptoms and sex, higher RTV was significantly associated with lower ratings of social competence, and higher proactive/reactive aggression ratings on the child self-report measures. RTV was not significantly associated with parent report of social functioning or relationship impairment. This study provides preliminary evidence that RTV may be associated with social functioning in children at risk for ADHD. We propose that lapses of attention affecting cognitive control may also negatively impact social information processing thereby affecting social functioning. Replication is warranted and longitudinal studies are needed to investigate whether RTV predicts social dysfunction in ADHD.