Waiting impulsivity: a distinctive feature of ADHD neuropsychology?


Abstract

Impulsivity is a core feature of attention-deficit hyperactivity disorder (ADHD). It has been conceptualized in a number of different ways. In the current article, we examine how the new concept of "waiting impulsivity", which refers to premature responding before a scheduled target appears, adds to our understanding of impulsivity in ADHD. Sixty children (8-12 years old; 30 ADHD; 30 typically developing controls) completed the 4-choice serial reaction time task, a measure of waiting impulsivity, alongside tasks measuring inhibitory control and temporal discounting and questionnaires measuring behavioral disorder symptoms, delay aversion, and various aspects of impulsivity. A multiple logistic regression model was used to explore the contribution of the primary task outcomes to predict group membership. Children with ADHD displayed more waiting impulsivity and less inhibitory control; they did not differ in temporal discounting. There was no correlation between waiting impulsivity and inhibitory control. Waiting impulsivity was correlated with parent-reported ratings of hyperactivity/impulsivity, inattention, oppositional defiant disorder (ODD), and conduct disorder (CD) and with self-reported delay aversion ratings. Only waiting impulsivity was a significant predictor of ADHD status. In conclusion, waiting impulsivity is distinct from inhibitory control deficits and predicts ADHD status independently of it. Future research needs to examine the relationship with delay aversion and ODD/CD more thoroughly.