Increased Delay Discounting on a Novel Real-Time Task among Girls, but not Boys, with ADHD.

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Abstract
The aim of this study was to examine delay discounting in girls and boys with ADHD-Combined type (ADHD-C) relative to typically developing (TD) children on two tasks that differ in the extent to which the rewards and delays were experienced by participants. Children ages 8-12 years with ADHD-C (n=65; 19 girls) and TD controls (n=55; 15 girls) completed two delay discounting tasks involving a series of choices between smaller, immediate and larger, delayed rewards. The classic delay discounting task involved choices about money at delays of 1-90 days and only some of the outcomes were actually experienced by the participants. The novel real-time discounting task involved choices about an immediately consumable reward (playing a preferred game) at delays of 25-100 s, all of which were actually experienced by participants. Participants also provided subjective ratings of how much they liked playing the game and waiting to play. Girls with ADHD-C displayed greater delay discounting compared to boys with ADHD-C and TD girls and boys on the real-time discounting task. Diagnostic group differences were not evident on the classic discounting task. In addition, children with ADHD-C reported wanting to play the game more and liking waiting to play the game less than TD children. This novel demonstration of greater delay discounting among girls with ADHD-C on a discounting task in which the rewards are immediately consumable and the delays are experienced in real-time informs our understanding of sex differences and motivational processes in children with ADHD.