

Errors on a computer task and subclinical symptoms of attention-deficit/hyperactivity disorder (ADHD)

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Abstract

Previous reports have found increased error rate for children with attention-deficit/hyperactivity disorder (ADHD) on response time (RT) computer tasks. Here we attempt the conceptual replication and extension of two studies that examined error rate in a general population of children (N = 203). Study 1 followed Johnstone and Galletta but considered associations between scores on a dimensional measure of ADHD symptoms (rather than comparing those with or without an ADHD diagnosis) and the frequency of commission and omission errors. Study 2 followed Shiels, Tamm & Epstein and examined post-error adjustment in the same group of children as for Study 1. Study 1 did not replicate previous findings of no increase in errors of commission in those with higher ADHD symptoms (Johnstone & Galletta). Instead, we found that younger children with lower ADHD symptoms were more likely to make commission errors, while omission errors did not vary with age. Study 2 replicated the previous finding of less RT slowing in children with more ADHD symptoms, extending this finding to a general population of children. Namely, as ADHD symptoms increase, RT slowing is less likely, putting children with higher ADHD symptoms at risk of additional errors. Overall, we extend previous ADHD research to typically developing children with ADHD symptoms.