

Role of conduct problems in the relation between Attention-Deficit Hyperactivity disorder, substance use, and gaming

Schoenmacker GH, Groenman AP, Sokolova E, Oosterlaan J, Rommelse N, Roeyers H, Oades RD, Faraone SV, Franke B, Heskes T, Arias Vasquez A, Claassen T, Buitelaar JK.

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Abstract

Known comorbidities for Attention-Deficit Hyperactivity Disorder (ADHD) include conduct problems, substance use disorder and gaming. Comorbidity with conduct problems may increase the risk for substance use disorder and gaming in individuals with ADHD. The aim of the study was to build a causal model of the relationships between ADHD and comorbid conduct problems, and alcohol, nicotine, and other substance use, and gaming habits, while accounting for age and sex. We used a state-of-the-art causal discovery algorithm to analyze a case-only sample of 362 ADHD-diagnosed individuals in the ages 12-24 years. We found that conduct problem severity mediates between ADHD severity and nicotine use, but not with more severe alcohol or substance use. More severe ADHD-inattentive symptoms lead to more severe gaming habits. Furthermore, our model suggests that ADHD severity has no influence on severity of alcohol or other drug use. Our findings suggest that ADHD severity is a risk factor for nicotine use, and that this effect is fully mediated by conduct problem severity. Finally, ADHD-inattentive severity was a risk factor for gaming, suggesting that gaming dependence has a different causal pathway than substance dependence and should be treated differently. By identifying these intervention points, our model can aid both researchers and clinicians.