Predictors of Nicotine Dependence in Adolescents: Symptoms of Bipolar Disorder and Attention-Deficit/Hyperactivity Disorder

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ABSTRACT

Objective: Bipolar disorder (BD) and attention-deficit/hyperactivity disorder (ADHD) have been associated with the use of cigarettes, but little is known about the impact of the subthreshold symptoms of BD or ADHD on the course of nicotine dependence. Identifying the links is essential for elucidating the pathway and supporting the development of nicotine prevention strategies for adolescents.

Methods: Participants (n = 3322) aged 15–17 years completed the Chinese version of the ADHD Self-Report Scale and the Mood Disorder Questionnaire. The modified Fagerström Tolerance Questionnaire was completed to measure their nicotine use or dependence. Mediation analyses were performed to explore the relationship of two predictors.

Results: The prevalence rates of cigarette smoking and nicotine dependence in this study were 14.4% and 2.3%, respectively. Male gender (odds ratio [OR] 2.30; 95% confidence interval [CI] 1.60–3.30), subclinical symptoms of ADHD (OR 1.34; 95% CI 1.04–1.71), clinical symptoms of ADHD (OR 1.69; 95% CI 1.08–2.66), and symptoms of BD (OR 1.59; 95% CI 1.09 to 2.32) were associated with nicotine use. Male gender (OR 4.60; 95% CI 1.41–14.98) and symptoms of BD (OR 6.14; 95% CI 3.37–11.18), but not symptoms of ADHD, were associated with nicotine dependence. In mediation analyses, we found that the effect of ADHD symptoms was no longer significant after controlling for symptoms of BD, and the mediation ratio (PM) was 0.39.

Conclusions: Our findings suggest that mood disturbances other than symptoms of ADHD are more likely to be a key predictor of nicotine dependence among adolescents. The conclusions may improve our understanding of the course of nicotine dependence and help to promote potential health policy for nicotine control among youths.