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Association between Attention Deficit Hyperactivity Disorder Medication, Cannabis, and Nicotine Use, Mental Distress, and Other Psychoactive Substances

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Abstract: Across North America, the use and abuse of Attention Deficit Hyperactivity Disorder (ADHD) medication, cannabis, nicotine, and other psychoactive substances across college campuses have become an increasingly prevalent problem. Students frequently use these substances to aid their studying or deal with their mental health issues. However, it is still unknown what psychoactive substances are likely to be abused when college students illicitly use ADHD medication. In addition, it is not clear which psychoactive substance is associated with mental distress. Thus, the purpose of this study is to fill these gaps by assessing the use of different psychoactive substances when illicit ADHD medication is used; and how this association relates to mental stress. A total of 702 undergraduate students from different college campuses in the U.S. completed an anonymous survey distributed online. Data were self-reported on demographics, the use of ADHD medications, cannabis, nicotine, other psychoactive drugs, and mental distress, and feelings and opinions on the use of illicit study drugs were all included in the survey. Mental distress was assessed using the Kessler Psychological Distress 6 Scale. Data were analyzed in SPSS, Version 25.0, using Pearson's Correlation Coefficient. Our results show that use of ADHD medication, cannabis use (non-frequent and very frequent), and nicotine use (non-frequent and very frequent), there were both statistically significant positive and negative correlations to specific psychoactive substances and their corresponding frequencies. Along the same lines, ADHD medication, cannabis use (non-frequent and very frequent), and nicotine use (non-frequent and very frequent) had statistically significant positive and negative correlations to specific mental distress experiences. As these findings are combined, a vicious loop can initiate a cycle where individuals who abuse psychoactive substances may or may not be inclined to use other psychoactive substances. This may later inhibit brain functions in those main areas of the brain stem, amygdala, and prefrontal cortex where this vicious cycle may or may not impact their mental distress. Addressing the impact of study drug abuse and its potential to be associated with further substance abuse may provide an educational framework and support proactive approaches to promote awareness among college students.

Keywords: stimulant, depressant, nicotine, ADHD medication, psychoactive substances, mental health, illicit, ecstasy, adrenochrome

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