

## The impact of childhood trauma on performance-enhancing substance use

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A new study published in the journal *Substance Use and Misuse* has found that adverse childhood experiences, such as physical and sexual abuse and neglect, predict greater performance-enhancing substance use in young adults.

Analyzing a sample of over 14,000 U.S. young adults from the National Longitudinal Study of Adolescent to Adult Health, researchers found that adverse childhood experiences are strongly associated with both legal (e.g., creatine monohydrate) and illegal (e.g., anabolicandrogenic steroids) performance-enhancing substance use. This relationship was especially strong among individuals who experienced sexual abuse during childhood, where the likelihood of using anabolic-androgenic steroids increased nine times among men and six times among women.

"Performance-enhancing substance use is common among young adults, despite many adverse outcomes associated with their use, such as the development of eating disorders, muscle dysmorphia, and <u>substance use disorders</u>. To date, we've known relatively little about what may

lead to the use of these <u>substances</u>," says lead author Kyle T. Ganson, Ph.D., MSW, assistant professor at the University of Toronto's Factor-Inwentash Faculty of Social Work. "While it's been documented that adverse childhood experiences are associated with <u>mental health conditions</u> and other substance use behaviors, this study expands our knowledge by now including performance-enhancing substance use."

Over 25% of both men and women in the study reported physical abuse, while roughly 4% reported sexual abuse in childhood. Over 15% of men reported legal performance-enhancing substance use, while 3% reported anabolic-androgenic steroid use. Among both men and women in the study, experiencing all four of the adverse childhood experiences studied had the strongest effect on use of performance-enhancing substance use.

"Our results continue to confirm that experiencing a greater, cumulative number of adverse childhood experiences is strongly associated with poor outcomes. This was particularly true in our study, as both men and women who reported four adverse childhood experiences were significantly more likely to report performance-enhancing substance use," says Ganson.

Being the first known study to investigate such associations between adverse childhood experiences and performance-enhancing substance use, this article's conclusions add to the growing understanding of risk factors of performance-enhancing substance use, as well as add to the literature on the effects of childhood trauma.

"Experiencing childhood abuse may lead to a desire to develop a large, muscular body to protect against future interpersonal trauma, and young people commonly use performance-enhancing substances to build muscle.," says senior author Jason M. Nagata, MD, MSc, assistant professor at



the University of California, San Francisco's Department of Pediatrics. "In addition to other adverse health outcomes, legal performance-enhancing substance use has been linked to anabolic steroid use, which can lead to irritability, aggression, poor mental health, heart disease, and liver damage."

This study provides further insight into the importance of monitoring for potential performance-enhancing substance use among patients with reported adverse childhood experiences, in addition to providing psychoeducation regarding the consequences associated with performance-enhancing substance use.

"Medical and mental health professionals should be aware of the common use of performance-enhancing substances, particularly among boys and men. Screening for performance-enhancing substance use and adverse childhood experiences should be a regular occurrence," says Ganson. "We also need to ensure that current public policy is informed by research to protect the health and well-being of adolescents and young adults from the adverse outcomes associated with adverse childhood experiences and the dangers of performance-enhancing substance use."

More information: Kyle T. Ganson et al, Associations between Adverse Childhood Experiences and Performance-Enhancing Substance Use among Young Adults, *Substance* Use & Misuse (2021). DOI: 10.1080/10826084.2021.1899230

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