

## Article 22: Substance Use Disorders and Drug Education / Substance Use Programs

**Substance use disorders** are complex, chronic conditions requiring a multifaceted public health approach (Pasman et al., 2024; Volkow & Blanco, 2023; Zhang et al., 2024). Following that lead, **drug education programs** primarily function as prevention, aiming to stop substance use before it progresses to a disorder. On the other hand, **substance use programs** offer essential treatment, management, and recovery support for those already affected by substance use disorders (Graves & Fendrich, 2024; Liu et al., 2023; Lize et al., 2016). Together, these education and treatment initiatives form a comprehensive strategy to mitigate the impact of substance misuse in society.

### Causes and Scope of Substance Use Disorders in the United States

Substance use disorders have remained a significant public health crisis in the United States throughout the last decades, affecting over 48 million Americans aged 12 and older. The causes attributed to such disorders constitute a complex interplay of genetic, environmental, and social factors, including a family history of addiction, childhood trauma, and economic instability. The scope of the problem is vast, with synthetic opioids like fentanyl driving a continued, though slightly declining, overdose epidemic, which still accounts for approximately 94,000 deaths annually (Pasman et al., 2024; Volkow & Blanco, 2023; Zhang et al., 2024).

For instance, a study examined how drug use disorders have expanded across the United States from 1990 to 2021 and projected trends through 2035 to better understand their causes and scope. Using data from the Institute for Health Metrics and Evaluation's Global Burden of Disease (GBD) project, the researchers tracked state-level rates of incidence, deaths, and disability-adjusted life years (DALYs). They found that opioid misuse was the dominant cause of drug use disorders across nearly all states, fueled by over-prescription, illicit opioid access, and social and economic hardships such as unemployment and poverty. Secondary drivers included growing stimulant and cannabis use, especially among males aged 15–45. The burden was highest in states with lower socio-demographic index scores, indicating limited healthcare and education. Overall, deaths and disability impacts rose faster than new cases, showing worsening severity. The authors concluded that substance use disorders have become a nationwide crisis requiring urgent, targeted interventions focused on opioids and high-risk populations (Zhang et al., 2024).

Another study looked at the prevalence of and risks associated with substance use disorders across different populations. Hence, the study drew on research from the United States as well as international sources, including national surveys, clinical and treatment studies, and brain research to understand both the causes and consequences of substance use. The authors found that substance use disorders create major health, social, and economic challenges, leading to biological and genetic vulnerabilities, as well as early life trauma. Social factors like poverty and chronic stress were also identified as key drivers. They noted that people who start using substances at a young age or live in disadvantaged areas face much higher risks. Opioid use disorders stood out as especially harmful in recent years, particularly in the U.S., and require long-term, integrated treatment. Overall, the study concluded that substance use disorders are not isolated issues but large-scale public health problems that demand coordinated prevention, medical care, and community-based support—both in the U.S. and worldwide (Volkow & Blanco, 2023).

On that same note, a study examined how many college students in the U.S. experience substance use disorders and the extent to which those affected actually receive treatment. Hence, the researchers used data from the 2021 National Survey on Drug Use and Health (NSDUH), analyzing a nationally representative sample of 6,115 college-aged individuals aged 16 and older and comparing them to non-students. The data were collected through self-report surveys using DSM-5 criteria to identify past-year substance use disorders and record whether participants received any form of treatment. Results showed that about 21.8% of college students met the criteria for a substance use disorder, but only 4.6% of those received treatment. Factors such as age, gender, psychological distress, and recent substance use were significantly related to disorder risk, while treatment rates varied by insurance coverage, education, and enrollment status. Students who did access treatment often had more severe or multiple substance use problems. The researchers concluded that despite the high prevalence, treatment access among college students remains critically low, highlighting the urgent need for better awareness, early screening, and accessible intervention programs tailored for young adults in academic settings (Pasman et al., 2024).

### **Effectiveness and Impact of Drug Education and Substance Use Programs**

Drug education and substance use programs represent a crucial public health strategy with a proven, although varied, record of effectiveness and significant societal impact. Research indicates that while knowledge-only education programs are largely ineffective at changing behavior, evidence-based programs that integrate life skills, social-emotional learning, and family components can effectively delay or prevent substance initiation among youth, thus reducing the long-term risk of developing a substance use disorder. For individuals already struggling with a disorder, treatment programs utilizing approaches such as behavioral therapies and medication-assisted treatment have been shown to reduce drug consumption, criminal behavior, and healthcare costs, with outcomes comparable to the management of other chronic illnesses like asthma or diabetes (Graves & Fendrich, 2024; Liu et al., 2023; Lize et al., 2016).

Following that lead, a study examined how effective community-based treatment and education programs are for U.S. adults reentering society after incarceration. Hence, the researchers analyzed 58 U.S.-based studies published between 2017 and 2021 that evaluated programs supporting recovery outside the criminal justice system. Data were gathered from four academic databases and included peer-reviewed articles describing treatment approaches, participant characteristics, and program outcomes. The most common interventions were medications for opioid use disorder (about 35%) and peer or social-support programs (about 22%). Most studies showed positive effects on reducing substance use and improving recovery-related outcomes, though fewer reported significant impacts on recidivism or justice-related measures. The review also identified research gaps, such as limited evidence on cost-effectiveness, rural settings, and racial or ethnic disparities. The authors concluded that community-based drug education and treatment programs show promising results in improving substance use outcomes, indicating their potential value in supporting recovery among justice-involved adults in the United States (Graves & Fendrich, 2024).

Another study assessed how well education-based prevention programs reduce substance use among adolescents, drawing from studies conducted in the United States and other countries. Particularly, the authors reviewed a set of 32 peer-reviewed studies published between roughly 2017 and 2023, selected via searches of five major databases (Web of Science, PubMed, EBSCO, Scopus, and Google Scholar)

that focused on interventions delivered within schools or other educational settings. The data were extracted from reported outcomes within each included study—such as reductions in alcohol, tobacco, or drug use—and catalogued by intervention type (curriculum with skill-building, exercise-based, peer/family-school cooperation, and electronic/digital interventions). The findings showed that most of the non-digital interventions (for example, cognitive-behavioral skills training in class and peer-led discussions) had measurable positive impacts on reducing adolescents’ substance use or improving their refusal skill. On the other hand, digital or electronic interventions showed more mixed results. The review also noted the strengths of the school environment (peer contact, teacher facilitation, existing infrastructure) in delivering prevention measures and flagged challenges (like coordination with families, stigma, and program implementation fidelity). The authors concluded that educational-setting substance use prevention programs hold clear promise in reducing adolescent substance use and helping young people build protective skills and attitudes (Liu et al., 2023).

Lastly, a study explored the effectiveness of interactive, middle-school-based drug prevention programs in North America, focusing on cannabis use among adolescents. Following that lead, the authors reviewed research published between 1998 and 2014 that evaluated prevention programs for students in grades 6 to 8. The data came from 30 studies that tested how classroom-based, interactive lessons—such as group discussions and skill-building activities—helped reduce drug use compared to standard teaching methods. Overall, the findings showed that these programs led to a small but meaningful reduction in cannabis use among students. The results also suggested that programs led by regular classroom teachers were slightly more effective than those led by outside instructors. While the programs did not show strong effects on changing intentions or attitudes, they still proved useful in lowering actual use rates. The researchers concluded that interactive, education-based prevention programs can have a positive impact and should continue to be used to reduce youth drug use across North America (Lize et al., 2016).

## References

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