

Comprehensive Report on Substance Use Disorders: Prevalence, Severity, and Symptom Endorsement



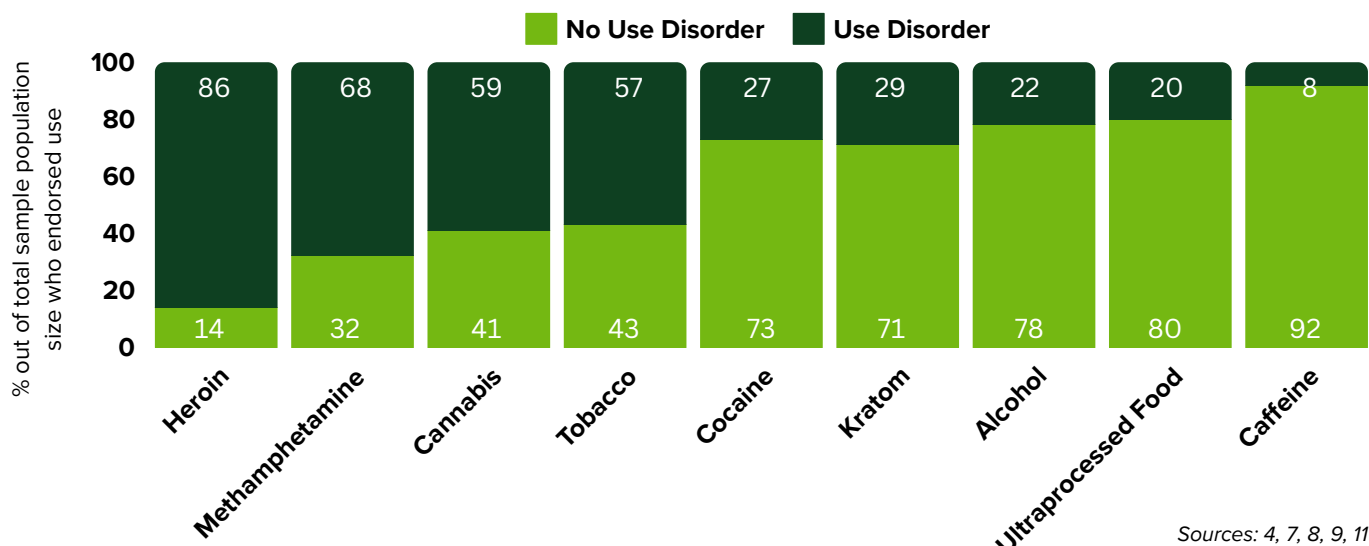
Introduction

Addiction is a term often used broadly, but addiction to a substance exists on a spectrum and is subjective to each individual. This report provides a detailed analysis of relative prevalence and impact of Substance Use Disorders (SUD) across various substances, including heroin, methamphetamine, cocaine, opioids, cannabis, alcohol, tobacco, kratom, caffeine, and ultra-processed food.

By evaluating the nature of substance abuse in the context of a landscape of substances, using various Diagnostic and Statistical Manual Version 5 (DSM-5) studies, we can better understand how different substances impact individuals and society. This analysis also compares the SUD profiles of various substances to provide a clearer picture of their relative impact.

Prevalence of Substance Use Disorders

The prevalence of data shows the percentage of individuals without SUD and with SUD for each substance. This summarizes how widespread SUD is among users of these substances.



Sources: 4, 7, 8, 9, 11

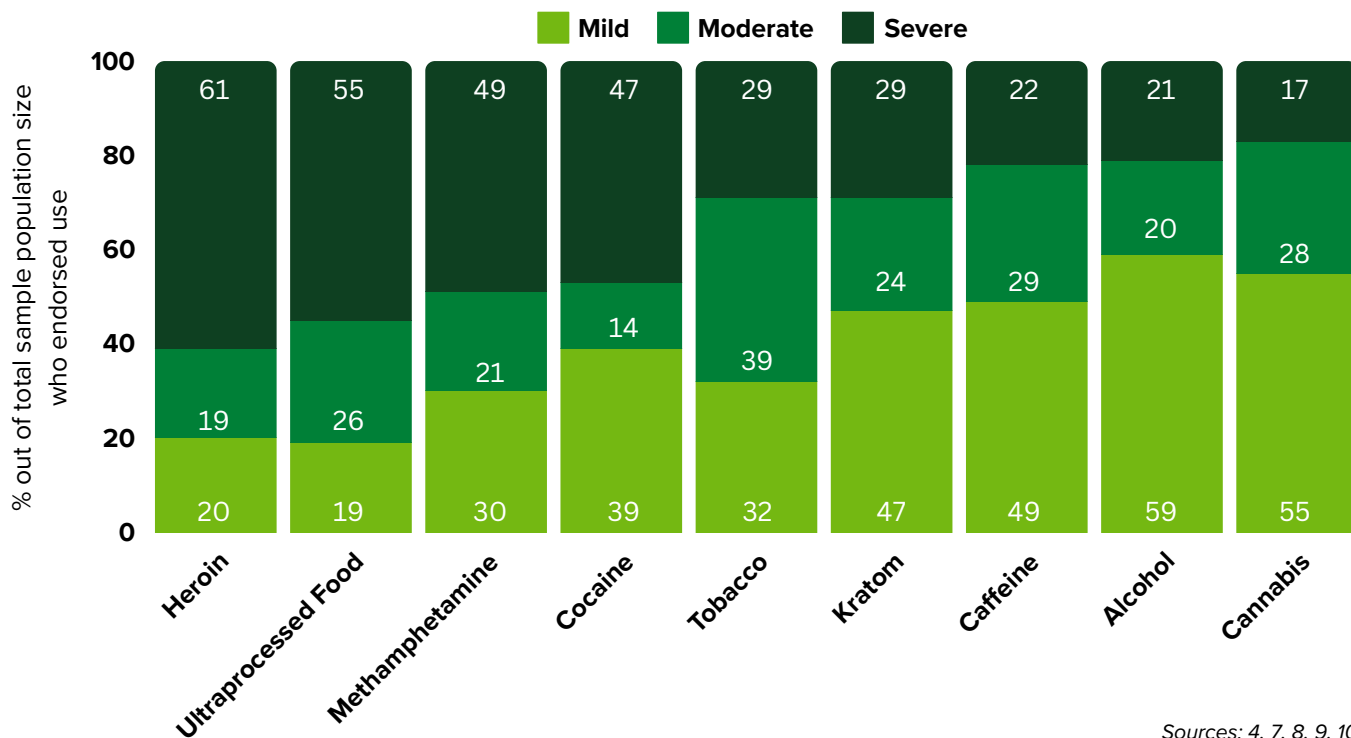
Understanding the prevalence of Substance Use Disorders (SUD) among different substances is crucial for identifying the SUD risk profile of a specific substance. Heroin has the highest prevalence, with 86% of users developing SUD, reflecting its potent addictive properties. Methamphetamine and opioids also show high prevalence rates, with 68% and 69% of users experiencing addiction, respectively, highlighting the need for effective treatment strategies. Cannabis and tobacco have significant prevalence rates of 59% and 57%, respectively, showing that over half of their users develop some level of addiction. Alcohol, while lower at 22%, still affects over one in five users across a large user base, emphasizing the public health impact of its widespread use.

Kratom, with a prevalence of 30%, presents a moderate risk of SUD, which is notably lower than the rates for heroin and opioids of kratom is often compared against. This suggests that while kratom does have some potential for addiction, it has substantially less potential risk for substance use disorder compared to other substances.

This analysis highlights that kratom offers a relatively lower risk of addiction compared to many substances, presenting it as a potentially safer option for consumers who seek its benefit whilst still needing mindful use and monitoring.

Severity of Substance Use Disorders

The severity of SUD is categorized as mild, moderate, and severe based on the number of symptoms individuals endorse, helping to understand the intensity of the disorders.



Sources: 4, 7, 8, 9, 10

The severity of Substance Use Disorders (SUD) varies significantly across different substances, highlighting their diverse impacts on users. Heroin shows the highest severity, with 61% of users experiencing severe SUD, followed closely by methamphetamine and cocaine, with 49% and 47% of users experiencing severe addiction, respectively. In contrast, kratom presents a more favorable severity profile, with only 29% of users experiencing severe SUD. The majority of kratom users fall into the mild category (47%), indicating that while kratom use can lead to SUD, it is often less intense than addiction associated with hard drugs and even ultra processed food, and is more akin to caffeine in its severity profile.

Substances like cannabis and alcohol primarily cause mild SUD, with 63%, 55%, and 59% of users, respectively, experiencing mild cases. Kratom shows a similar, or even better profile, with a high proportion of mild cases and fewer severe cases. Compared to tobacco, which has a balanced distribution of severity levels, kratom users experience fewer severe cases and more mild ones. Ultra-processed food and caffeine, while having notable severe and moderate cases, also indicate that kratom generally presents a lower risk.

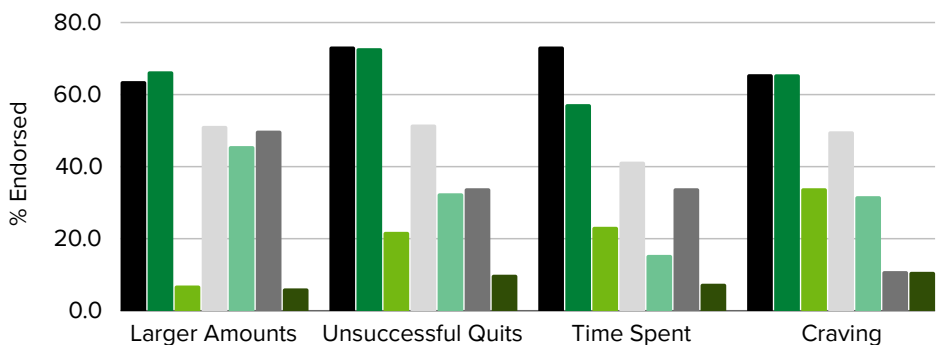
Overall, some people using kratom will develop severe SUD. However, the percentage of people with severe SUD is similar to that of caffeine, alcohol, and cannabis and less than more dangerous substances such as heroin, methamphetamine, cocaine, and tobacco.

Symptom Endorsement

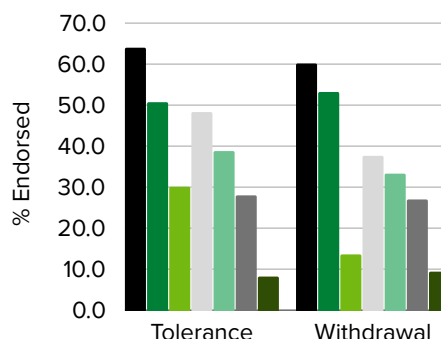
Symptom endorsement data highlight the specific DSM-5 symptoms endorsed by individuals for each substance. These symptoms are grouped into categories, such as impaired control, social impairment, risky use, and physical dependence.



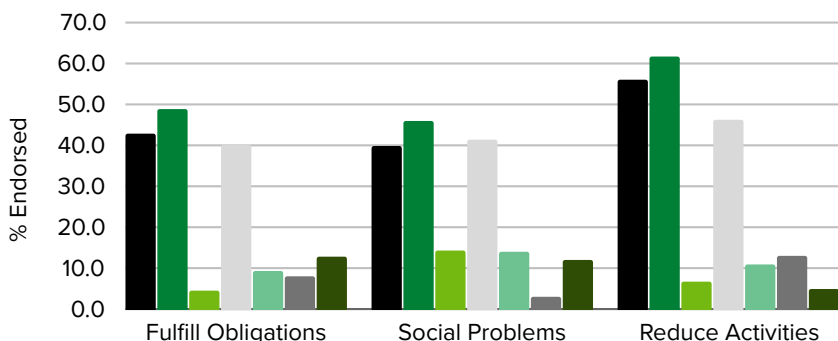
Impaired Control



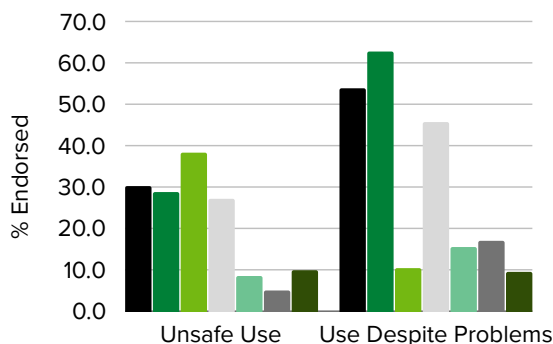
Physical Dependence



Social Impairment



Risky Use



Sources: 1, 2, 4, 5, 8

Symptom endorsement categories are crucial in understanding the full impact of Substance Use Disorders (SUD) because they reveal how different substances affect users across various aspects of their lives. These categories—impaired control, social impairment, risky use, and physical dependence—provide a comprehensive view of the addiction's multifaceted nature. Impaired control, for instance, involves using larger amounts or for longer durations than intended, repeated unsuccessful attempts to quit, and significant time spent on substance use. Social impairment highlights the negative consequences on personal relationships and responsibilities, while risky use emphasizes the dangers of consuming substances in hazardous situations.

Physical dependence, characterized by tolerance and withdrawal symptoms, underscores the physiological impacts of a use disorder. By categorizing symptoms, researchers and healthcare providers can better understand and address the specific challenges associated with each substance.

While kratom can lead to SUD, the symptoms that are typically endorsed are skewed toward physical symptoms related to impaired control and physical dependence. Risky use and social impairment symptoms that are expressed for substances that have a high negative social impact like heroin, cocaine and alcohol are not highly expressed in individuals with a kratom use disorder.

Understanding kratom's symptoms aids in public health education and consumer education, providing clear information on the relative risks of kratom use compared to more dangerous substances and enabling informed decision-making for individuals and policymakers alike.

Conclusion

By examining the prevalence, severity, and symptom endorsement of SUD across various substances, we gain a deeper understanding of the complex nature of addiction. Kratom, in particular, stands out as a substance with a comparatively lower risk profile. Its prevalence and severity of SUD are notably less than those associated with highly addictive substances like heroin and opioids upon which it is often compared.

This suggests that while kratom use can lead to SUD, it often results in mild to moderate SUD that is skewed towards physical dependence rather than deleterious social impact. The analysis reinforces the need for personalized and targeted understanding of the nature of each substance a person consumes in order for them to make an informed choice as to their relative risk appetite.

The high prevalence of SUD among substances like heroin, methamphetamine, and opioids underscores the urgent need for comprehensive strategies to address these disorders. Meanwhile, kratom's lower prevalence and milder symptom profile suggest that it could play a role in harm reduction strategies and can be a tool that is used to be more productive in life.

Ultimately, leveraging the insights from this data, particularly regarding kratom, can help develop more balanced and informed public health policies and consumer choices, contributing to a healthier and more informed society.

Sources

Data is sourced from the U.S. Department of Health and Human Services, the National Survey on Drug Use and Health (NSDUH), and various academic studies on specific substances.

1. Hasin DS, Fenton MC, Beseler C, Park JY, Wall MM. Analyses related to the development of DSM-5 criteria for substance use related disorders: 2. Proposed DSM-5 criteria for alcohol, cannabis, cocaine and heroin disorders in 663 substance abuse patients. *Drug Alcohol Depend.* 2012 Apr 1;122(1-2):28-37. doi: 10.1016/j.drugalcdep.2011.09.005. Epub 2011 Oct 2. PMID: 21963333; PMCID: PMC3755770.
2. Leung, C.W., Parnarouskis, L., Slotnick, M.J., and Gearhardt, A.N. 2023. Food Insecurity and Food Addiction in a Large, National Sample of Lower-Income Adults. *Current Developments in Nutrition* 7(12): 102036. doi:<https://doi.org/10.1016/j.cdnut.2023.102036>.
3. Nutrasource independent review of FAERS, database 2019 to 2022
4. Praxedes, D. R. S.; Silva-Júnior, A. E.; Macena, M. L.; Oliveira, A. D.; Cardoso, K. S.; Nunes, L. O.; Monteiro, M. B.; Melo, I. S. V.; Gearhardt, A. N.; Bueno, N. B., Prevalence of food addiction determined by the Yale Food Addiction Scale and associated factors: A systematic review with meta-analysis. *European eating disorders review : the journal of the Eating Disorders Association* 2022, 30 (2), 85-95.
5. Rubin-Kahana, D.S., Hassan, A.N., Sanches, M., and Le Foll, B. 2022. Medical Cannabis and Past-Year Cannabis Use Disorder Among Adult Recreational Users in the United States: Results From a Nationally Representative Sample [Original Research]. *Frontiers in Psychiatry* 13. doi:10.3389/fpsy.2022.836908.
6. Shmulewitz D, Stohl M, Greenstein E, Roncone S, Walsh C, Aharonovich E, Wall MM, Hasin DS. Validity of the DSM-5 craving criterion for alcohol, tobacco, cannabis, cocaine, heroin, and non-prescription use of prescription painkillers (opioids). *Psychol Med.* 2023 Apr;53(5):1955-1969. doi: 10.1017/S0033291721003652. Epub 2021 Nov 1. PMID: 35506791; PMCID: PMC9096712.
7. Smith KE, Dunn KE, Rogers JM, Garcia-Romeu A, Strickland JC, Epstein DH. Assessment of Kratom Use Disorder and Withdrawal Among an Online Convenience Sample of US Adults. *J Addict Med.* 2022 Nov-Dec 01;16(6):666-670. doi: 10.1097/ADM.0000000000000986. PMID: 35220331; PMCID: PMC9402806.
8. Sweeney MM, Weaver DC, Vincent KB, Arria AM, Griffiths RR. Prevalence and Correlates of Caffeine Use Disorder Symptoms Among a United States Sample. *J Caffeine Adenosine Res.* 2020 Mar 1;10(1):4-11. doi: 10.1089/caff.2019.0020. Epub 2020 Mar 4. PMID: 32181442; PMCID: PMC7071067.
9. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. (2022). National Survey on Drug Use and Health 2022. Retrieved from <https://datafiles.samhsa.gov/>
10. Wiedemann AA, Carr MM, Ivezaj V, Barnes RD. Examining the construct validity of food addiction severity specifiers. *Eat Weight Disord.* 2021 Jun;26(5):1503-1509. doi: 10.1007/s40519-020-00957-w. Epub 2020 Jul 28. PMID: 32725535; PMCID: PMC7855002.
11. Wu LT, McNeely J, Subramaniam GA, Brady KT, Sharma G, VanVeldhuisen P, Zhu H, Schwartz RP. DSM-5 substance use disorders among adult primary care patients: Results from a multisite study. *Drug Alcohol Depend.* 2017 Oct 1;179:42-46. doi: 10.1016/j.drugalcdep.2017.05.048. Epub 2017 Jul 13. PMID: 28753480; PMCID: PMC5599360.