

Original Paper

Substance Use and Consequent Problems: Types of Drugs Taken, Addiction, and Treatment

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Abstract

This study examined the use of substances, types of substances used, problems associated with substance use, and alcohol and drug treatment. Data were collected from 1,913 adults by way of a quantitative survey. The average age of first use was 15. Nearly nine out ten participants were with other people when they first used. Ten percent of the participants have received professional treatment for alcohol and drug abuse/addiction. Cannabis was the most common first-use substance (44%), with alcohol being second (36%). Alcohol was the substance that has been taken at the highest rates (92%), with cannabis being the second most common (75%). As a group, men had higher rates of having taken substances (e.g., cannabis, cocaine, nicotine), were more likely to report to having problems with substances, and had higher rates of treatment than women. White participants were the most likely to report having used the widest range of substances (e.g., cocaine, amphetamines, opioids, hallucinogens), to have had problems with substances, and to have received treatment for substance abuse and addiction. Respondents generally reported that substance abuse/addiction is a major problem and that the pharmaceutical companies have played a major role in this. The findings from this study may be of use to those working in the professional treatment fields, such as clinical psychology, alcohol and drug counseling, social work, school counseling, and marriage and family therapy.

Keywords

substance use, addiction, drug treatment, substances taken, alcohol, cannabis, opioids, cocaine, amphetamines, hallucinogens

1. Introduction

The use of psychoactive substances goes back thousands of years. Cultures all around the world have long used a wide range of substances. The use of psychoactive substances has long played a central role across many different social events, religious ceremonies, and cultural rituals (e.g., weddings, graduations, birthdays, holidays). With this being the case, the use of substances can also come with a broad range of undesirable consequences and problems. Many that use substances lose control and find themselves spiraling down an unhealthy life course. There are many factors that can lead to the problematic use of alcohol and drugs. There is no one cause of abuse and addiction. One person may try an opioid and never want to use it again. Another person may try an opioid and quickly find themselves craving the drug and becoming dependent on it. Substance abuse and addiction is believed to involve a non-specific (i.e., difficult to quantify) combination of complex genetic/biological, environmental, attitudinal, trait, interpersonal, developmental, and societal/cultural factors. To add to this complex matter, every class of drug has its own unique molecular structure, biological effects, and addictive potential. Each person has their own physiological and genetic makeup. With this, each person will be affected somewhat differently by the use of alcohol and drugs.

Substance abuse and addiction have become a serious global problem. It is estimated that there are nearly 300 million people that use drugs each year, whereby almost 40 million people have a drug use disorder, not including alcohol or nicotine (Mogollon-Canal et al., 2026; Piper et al., 2024). There are many reasons why people may recreationally consume alcohol or take drugs (e.g., parties, concerts, vacations, sporting events). There are also various reasons as to why people may abuse alcohol or drugs (e.g., anxiety, depression, stress, chronic pain, interpersonal problems). The evidence appears to be pretty clear at this point that the younger people are when they begin to use drugs the more likely they are to develop a problem. The evidence is also pretty clear that the more often people use substances, the higher amounts that they take, and if they regularly engage in polysubstance use, the more likely they are to develop a problem (i.e., become dependent, develop a substance use disorder). This study has set out to further explore the use of substances, impact of use, and treatment. Attention is also given to types of drugs used, problems associated with use, and additional related matters. This work has been developed to help better inform educators and those working in the relevant treatment professions (e.g., psychology, alcohol and drug counseling, social work, clinical counseling).

2. Literature Review

The United States has the highest rates of drug addiction and deaths from overdose. Each year in the United States more than 100,000 people die as a direct result from overdose (Gutkind et al., 2024; Pridgen et al., 2025). The most common cause of death from overdose is due to opioids (e.g., heroin, fentanyl). According to Fitzgerald et al. (2025) many of these deaths are due to people taking drugs that have been adulterated with fentanyl. Polysubstance use has also been shown to be directly related to

increased risk of overdose and death (e.g., taking fentanyl with one or more other types of drugs). This appears to be particularly true when it comes to methamphetamine and use of opioids, which notably increases the risk of overdose and mortality (Jones et al., 2022). Harris et al. (2026) explained that opioid use disorder is the third most prevalent substance use disorder worldwide. The researchers noted that around 9.5 million Americans abuse opioids, and this is what often leads to respiratory depression, coma, and death among users. Gutkind et al. (2024) proposed that opioid deaths are likely higher than what is reported due to the ongoing misclassification of “unspecified” drug-related deaths. The researchers put forth that deaths due to opioids may be underestimated by up to 35%.

Most users first experimented with substances when they were in their teen years. According to Berger (2023) the average age at first use was 15, with the most common first-use substances being alcohol and cannabis. The earlier people begin using substances the more likely they are to engage in polysubstance use and to develop dependency and addiction. Hamaoui et al. (2025) found in their research that the earlier that people are when they first use cannabis the more likely they are to use other substances, to have developmental problems, to become addicted, and to have legal problems. They also found that early cannabis use was associated with externalizing behaviors, conduct disorder, and subsequent mental health issues. Their final recommendation was that delaying onset of cannabis use would result in notably minimizing the risks associated with earlier onset. The appeal of using this particular drug appears to be connected to positive representations in the media, increased support for legalization, and cultural (attitudinal) change (Chiu et al., 2022). With this, cannabis use disorder is a real problem and many across the nation seek out treatment specifically for misuse of this substance.

There are many risk factors for substance use and abuse. The younger people are when they first use drugs the more likely they are to develop a problem. Peer relations, stress, mental illness, and the family environment play major roles in the use and development of addiction. According to De Filippis et al. (2025) Major Depressive Disorder (MDD) is associated with Substance Use Disorder (SUD). Those struggling with major depression often experience emotional blunting, anhedonia, and impaired cognitive functioning. This is also connected to inability to control cravings, functional impairment, and poor adherence to treatment. This leads directly to increases in morbidity and mortality among this particular population. Parental use is one of the strongest risk factors for substance abuse among youth (Rodriguez-Ruiz et al., 2025). Lack of healthy family bonds, isolation from family, neglect, abuse, and parental/intergenerational transmission (i.e., drug use), all contribute to drug use among youth.

Chronic pain is also a major risk factor when it comes to the use of substances. According to Edwards et al. (2025), pain is common pathway for the development and maintenance of comorbid chronic pain and substance use disorder. The authors put forth that up to 75% of people with SUD had chronic pain, with almost 75% using opioids, 72% using sedatives, 59% using alcohol, and nearly 60% using tobacco. They noted that chronic pain increases the risk of developing SUD and eventually overdosing. This risk appears to be particularly concerning among the growing geriatric population. More elderly people are

now entering treatment for substance abuse and addiction (e.g., alcohol, cannabis) than what was seen in the past (now at around 16% of admissions). The major reason for seeking treatment concern the use of alcohol (66.7%), cocaine (14.8%), cannabis (14.1%), opioids (8.6%), methamphetamine (8.5%), and benzodiazepines at around 2.5% (Lin et al, 2023).

Some of the highest rates of alcohol and drug use/abuse can be seen across the college student population. Substance use typically begins in adolescence, peaks in emerging adulthood (18 to 24 years of age), and tends to decline over time (Hang Hai et al., 2024). According to these researchers, 2 out of 5 emerging adults in the United States use illicit drugs. Emerging adulthood is when people are the most likely to be enrolled in college. Substance use is negatively associated with academic achievement. According to Bulfone et al. (2025), almost half of the college student population meets the criteria for a substance use disorder (e.g., vaping, nicotine, cannabis, hallucinogens). The researchers noted that around 31% of college student regularly consume alcohol and that up to 40% binge drink. Polysubstance use is also a major concern among emerging adults and college students (e.g., opioids, alcohol, cannabis, amphetamines, kratom). The use of multiple types of drugs increases risk of health problems, cognitive impairments, overdose, and mortality among adolescents and college students (Govarthnapany et al., 2026).

The need for treatment has increased over the years. Many are not aware of the available resources and programs for alcohol and drug addiction. Many individuals are reluctant to enter treatment due to the stigma associated with addiction (Kitt-Lewis et al., 2025). Many are also not entirely honest about their use of substances (e.g., when they last used, what they used) and do not want to admit things to others (or even to themselves). Bharat et al. (2022) conducted a meta-analysis of 207 studies where they focused on the use of illicit drugs and biological samples. They concluded that false omissions (i.e., person says that they have not used, but biological testing produces positive results) are common in testing situations and that self-reporting of drugs use is not entirely reliable. This was noted as being largely due to poor recall, perceived negative consequences of admitting to use, and the social undesirability of drug use.

Those that seek out treatment for SUD are often dealing with many acute and chronic conditions. This could include things such as metabolic conditions, issues with skeletal muscle mass, infectious disease, cardiovascular problems, pulmonary problems, malnutrition/micronutrient deficiencies (e.g., iron, vitamins A, B, C, D), osteoporosis, brain functioning conditions, etc. (Garcia-Estrada et al., 2025). There is no “one-size fits all” approach to the treatment of alcohol and drug addiction. Each person will require their own specialized treatment plan and approach. Each person has their own unique set of circumstances that lead to, and perpetuate, their addictions (e.g., interpersonal, environmental, familial, genetic, psychological). Berger (2023) found that those that first began using substance by themselves were twice as likely to eventually receive professional treatment services.

Treatment may consist of a broad combination of pharmacological treatments (e.g., naloxone, acamprosate, buprenorphine, bupropion), psychotherapies (e.g., cognitive-behavioral, Gestalt, REBT, psychoanalytic), group work, complementary therapies (e.g., hypnotherapy, pet therapy, biofeedback, EMDR), and other approaches (Edwards et al., 2025; Harris et al., 2026; Hoge et al., 2025). Current research in the area of using certain psychedelic drugs even appears to be showing promise for the treatment of mental illness (e.g., depression, anxiety) and substance use disorders (e.g., alcohol, tobacco, cocaine). Some new therapies that appear to show promise in reducing cravings, relapse, and remission include psilocybin, ibogaine, ketamine, and ayahuasca (Hoge et al., 2025; Piper et al., 2024). The research on the complementary therapies is still ongoing, but there does appear to be momentum growing for certain treatments, clinical trials, and legalization (e.g., ibogaine for the treatment of depression, PTSD, and SUD). Hundreds of millions of people worldwide use and abuse drugs on a regular basis (Hoge et al., 2025; Mogollon-Canal et al., 2025). Over one hundred thousand people die each year in the United States alone as a direct result of drug overdose (Gutkind et al., 2024; Pridgen et al., 2025). Many more are misusing and are addicted to substances. With this being the case, the need for awareness, proper education, and access to effective treatment services cannot be overstated.

3. Methodology

This study employed a cross-sectional approach to data collection. All data were collected via a quantitative survey in a nonrandomized manner. Information for this study was obtained through various approaches, such as face-to-face, Internet/social media, and telephone interviews. The instrument used to obtain information was quantitative in nature and was designed to allow for statistical analyses and standardized interpretations. The instrument took respondents no more than 5 minutes to complete. The final sample consisted of 1,913 adult respondents. No minors were included in this study. There was no compensation for participating in the study. Due to the nature of the topic, the purpose of the study was clearly explained to each individual prior to filling out the instrument. If any individual had any questions about the purpose or items in the instrument, those questions were addressed at that point in time. Consent to participate was obtained through the willingness of the respondents to answer the questions in an autonomous manner and to fill out the survey.

The majority of the valid sample were women ($n = 983$, 52.2%), followed by men ($n = 879$, 46.7%) and those that identified as “other” ($n = 22$, 1.2%). Twenty-nine respondents (1.5% of the total sample) did not provide information on their gender. Concerning ethnicity/race, Hispanics made up the majority of the valid sample ($n = 1,103$, 58.6%). The bulk of the data were collected in Southern California (e.g., Los Angeles County), so this is congruent with the current population demographics on this particular variable. The remainder of the valid sample consisted of White respondents ($n = 444$, 23.6%), followed by Black respondents ($n = 131$, 7.0%), Asian/Pacific Island respondents ($n = 100$, 5.3%), “multi” racial respondents ($n = 65$, 3.4%), Middle Eastern respondents ($n = 27$, 1.4%), Native America respondents (n

= 11, 0.6%), and Indian respondents ($n = 2$, 0.1%). Thirty respondents (1.6%) of total sample did not provide information on their ethnicity/race.

The average age of the sample was 29.89 years ($SD = 11.568$), with a median of 26 and a mode of 21. The range went from 18 to 88 years of age. The sample was skewed toward younger respondents, with the those ranging from 18 to 29 making up the bulk of the respondents ($n = 1,256$, 66%). This was followed by those in their 30's ($n = 323$, 16.9%), those in their 40's ($n = 147$, 7.8%), those in their 50's ($n = 117$, 6.1%), those in their 60's ($n = 47$, 2.5%), those in their 70's ($n = 11$, 0.5%), and those in their 80's ($n = 3$, 0.2%). Nine respondents (0.5% of the total study sample) did not provide information on their age. The majority of the valid sample for social class consisted of working-class respondents ($n = 950$, 51.9%). This was followed by middle-class respondents ($n = 603$, 33%), then lower-class respondents ($n = 221$, 12.1%), and finally upper-class respondents ($n = 56$, 3.1%). Eighty-three respondents (4.3% of the total study sample) did not provide information on their social class.

This study employed various statistical techniques and analyses to make sense of the findings. The survey instrument collected data at both the discrete and continuous levels. All questions and items were closed-ended in order to allow for standardized coding and quantitative analyses. The scaled items ranged from 1 ("strongly disagree") to 5 ("strongly agree"). A response of 3 was taken as a neutral position. Participants were asked a series of questions about use of substances, problems associated with substances, treatment, and types of drugs used. Participants were also asked questions about how substances have changed them in any way (e.g., altered their perceptions), how old they were when they first used any substance, whether they use substances alone, how they feel about the drug industry, about larger national problems with substances, etc. Any survey that was not properly filled out (e.g., excessive missing responses) were discarded. All surveys included in the final sample were deemed to have been filled out in a valid and honest manner.

Methods utilized included parametric tests (e.g., ANOVA, independent samples *t*-test, Pearson's, logistic regression), and nonparametric tests (e.g., chi-square, Cramer's, Spearman's). Post hoc tests were conducted to make sense of detected group differences (e.g., Tukey HSD, Bonferroni, Sidak, LSD). All tests of inference conducted for this study were two-tailed. The alpha level set for all tests was 0.05. This is the standard level of significance in the social and behavioral sciences. Any test that produced a probability (*p* value) that was less than or equal to 0.05 was deemed to be significant. Any probability value that was larger than 0.05 was deemed to fall short of statistical significance. Effects sizes were also produced and analyzed to make sense of the findings beyond mere statistical significance and to be able to better assess the relationships between variables (e.g., Cox & Snell *R*, Nagelkerke *R*, η^2 , Hedges' correction, Cohen's *d*).

4. Findings

Study participants were asked how old they were when they first tried any substance. The average age was 15.68 (SD = 3.88). Most of the participants reported that they were with other people when they first used substances (89.1%). Just over 24% of the respondents stated that they have had a problem with substances, with nearly 10% stating that they have received professional treatment. Most of the study participants believed that there is a national problem with drug use ($M = 4.27$, 92%) and many feel that the pharmaceutical companies play a role in this problem ($M = 4.01$, 88%). When asked about which substance they first tried, cannabis (43.6%) and alcohol (35.5%) were easily the top two (making up around 79% of first-time substance use). Tobacco/nicotine accounted for 6.6% of first-time use. At much lower levels, other substances include cocaine (1.4%), LSD (0.9%), Mushrooms (0.9%), and ecstasy/MDMA (0.8%). Some respondents stated that caffeine was their first (6.4%), but this was excluded from any subsequent analyses due to the confusion (lack of awareness) when it comes to how many things actually contain caffeine (e.g., sodas, tea, coffee, energy drinks, chocolate) and how young people actually are when they typically first ingest it. Table 1 breaks down the percentages of how many people in the study have ever tried any particular substance.

Table 1. Substances Participants Have Ever Used (Tried) at any Point in Life

Substance	%	Substance	%
Alcohol	92.2	Hydrocodone	9.7
Cannabis	74.8	Oxycodone	9.6
Nicotine	54.4	Inhalants	8.5
Cocaine	24.2	Sedative/Hypnotics	7.2
Ecstasy/MDMA	18.5	Heroin	3.7
Mushrooms	18.2	GHB	1.2
LSD	12.5	Ketamine	0.2
Amphetamine	11.4	Other drugs	4.5 (any)
Opioids (other)	9.8	Over the Counter	44.7 (any OTC med)

Gender differences were detected when it came to having a problem with substances and having received treatment services. Those that identified as “other” (40.9%, $Z = 1.6$) were the most likely to report having issues with substances at some point in their lives (women = 20.6%, $Z = -2.2$; men = 27.6%, $Z = 2.1$), which resulted in a significant finding, $X^2(2) = 15.746$, $p < .001$, $V = .092$. Those that identified as “other” (33.3%, $Z = 3.4$) also differed from women (8.0%, -2.0) and men (11.7%, $Z = 1.6$) when it came to having received treatment services for substances, $X^2(2) = 19.855$, $p < .001$, $V = .104$. Frequency differences were also detected in regard to ethnicity/race and having received treatment, $X^2(7) = 15.185$, $p = .034$, $V = .091$. White respondents (14.5%, $Z = 3.0$) were significantly more likely

to have received treatment than any other group. The next highest treatment rates were Asian/Pacific Island (9.1%, $Z = -0.3$) and Hispanic (8.9%, $Z = -1.1$). Significant frequencies differences were also detected for social class concerning having a problem with substances, $X^2(3) = 13.123$, $p = .004$, $V = .085$. Upper-class respondents (38.2%, $Z = 2.1$) were the most likely to state that they have had a problem at some point, followed by lower-class (29.2%, $Z = 1.6$), working-class respondents (24.1%, $Z = 0.1$), and middle-class respondents (20.6%, $Z = -1.7$). Upper-class respondents (21.8%, $Z = 2.8$) also differed when it came to having had received treatment services at any point, $X^2(3) = 12.268$, $p = .007$, $V = .083$. This was followed by lower-class respondents (12.3%, $Z = 1.0$), middle-class respondents (10.5%, $Z = 0.4$), and working-class respondents (8.5%, $Z = -1.5$).

Significant differences were detected between women and men concerning having a problem with substances, $t(1857) = 5.247$, $p < .011$, $g = .244$. Men were more like than women to have had a problem with substances, as well as to state that the use of substances has changed their perceptions, $t(1853) = 3.930$, $p < .011$, $g = .179$. Men were also significantly more likely to first try substances at a younger age, $t(1765) = 3.475$, $p < .001$, $g = .165$. Those that identified as “other” differed significantly from both women and men in regard to having had (at any point in life) a problem with substances, $t(1003) = -3.250$, $p < .001$, $d = -.701$; $t(896) = -1.972$, $p = .049$, $d = -.426$; respectively. Those that identified as “other” were also significantly more likely than women ($t[999] = -3.116$, $p = .002$, $d = -.672$) and men ($t[896] = -2.150$, $p = .032$, $d = -.464$) to believe that substance use has altered their perceptions. This same group was also significantly more likely to believe that the pharmaceutical industry has contributed to the current drug epidemic. In relation to women the test results were, $t(988) = -5.103$, $p < .001$, $d = -.654$. In relation to men the test results were, $t(896) = -5.367$, $p < .001$, $d = -.675$.

Analysis variance tests were run to determine group differences on the scaled items. Group differences were detected when it came to having had a problem with substances at any point in life, as well as having experienced changes in perception due to the use of substances. Concerning problems with substances ($F[7, 1872] = 2.361$, $p = .021$, $\eta^2 = .009$), White respondents were more likely to affirm this ($\eta^2 = .240$, Tukey = .036, LSD = .002) than Hispanic respondents. White respondents were also more likely than Asian/Pacific Island respondents ($\eta^2 = .359$, LSD = .017). Concerning having perception changes due to the use of substances, there were multiple group difference detected ($F[7, 1868] = 2.708$, $p = .009$, $\eta^2 = .010$). Respondents identifying as “multi” ethnic/racial had higher mean scores than Middle Eastern respondents ($\eta^2 = 1.022$, Tukey = .035), Asian/Pacific Island respondents ($\eta^2 = .745$, Tukey = .022), Hispanic respondents ($\eta^2 = .524$, LSD = .004), White respondents ($\eta^2 = .450$, LSD = .017), and Black respondents ($\eta^2 = .600$, LSD = .005). White respondents also had significantly higher scores on this survey item than Middle Eastern respondents ($\eta^2 = .571$, LSD = .042).

Concerning social class and having had a problem with substances, ANOVA testing revealed group differences, $F(3, 1823) = 3.473$, $p = .016$, $\eta^2 = .006$. Upper-class respondents were more likely to report having had a problem with substances than middle-class respondents ($\eta^2 = .555$, Bonferroni = .021,

Sidak = .021), as well as when compared to working-class respondents ($\eta^2 = .475$, $LSD = .011$). Social class differences were also detected in regard to believing that substance use/abuse is a major national problem, $F(3, 1822) = 3.589$, $p = .013$, $\eta^2 = .006$. Lower-class respondents were more likely than working-class respondents ($\eta^2 = .155$, $LSD = .044$), middle-class respondents ($\eta^2 = .206$, $LSD = .011$) and upper-class respondents ($\eta^2 = .443$, Sidak = .024, Scheffe .041) to state that the nation is facing a serious problem with substance use/abuse. Working-class respondents were also more likely than upper-class respondents to feel that the nation is currently facing a major problem with substance abuse ($\eta^2 = .288$, $LSD = .042$). Correlational testing demonstrated that age at first use and subsequently having a problem with substances was significant ($r = -.210$, $p < .001$). The findings indicate that the earlier a person begins using substances, the more likely they are to develop a problem. Respondents also felt that the problem with the pharmaceutical companies is associated with the national drug problem ($r = .479$, $p < .001$). The strongest correlation on the scaled items involved having a problem with substances and having changes in perception due to this use ($Sr = .598$, $p < .001$).

Regression techniques were utilized across multiple variables in order to help better understand group differences. Both men ($OR = 1.471$, $p < .001$) and those that identified as “other” ($OR = 2.674$, $p = .026$) had higher odds of having a problem with substances ($R^2_n = .012$). Both men ($OR = 1.529$, $p = .008$) and those that identified as “other” ($OR = 5.780$, $p < .001$) had higher odds of having received treatment for the use of substances ($R^2_n = .018$). Respondents that identified as “other” had higher odds ($OR = 3.770$, $p = .005$) than men when it came to having received treatment for substances. White respondents had higher odds ($OR = 1.524$, $p = .001$) than Hispanic respondents when it came to having a problem with substances ($R^2_n = .010$). White respondents also had higher odds ($OR = 1.745$, $p = .001$) when it came to having received treatment for use of substances ($R^2_n = .018$).

Upper-class respondents had higher odds ($OR = 2.435$, $p = .013$) than working-class respondents when it came to first using substance alone ($R^2_n = .007$). As covered, using substances alone is positively correlated with having a subsequent problem with substances and receiving treatment services at some point. Upper-class respondents had higher odds ($OR = 1.949$, $p = .020$) than both working-class respondents and middle-class respondents ($OR = 2.384$, $p = .003$) when it came to having a problem with substances ($R^2_n = .010$). Lower-class respondents had higher odds ($OR = 1.594$, $p = .010$) than working-class respondents when it came to self-reporting problems with substances. Upper-class respondents had higher odds ($OR = 3.010$, $p = .001$) than working-class respondents. Upper-class respondents also had higher odds ($OR = 2.381$, $p = .014$) than middle-class respondents when it came to having received treatment for substances ($R^2 = .006$, $R^2_n = .012$).

Table 2 breaks down some of the findings involving gender in relation to the use of substances. For each binary comparison, the group on the left had higher odds than the group to its right. Every group comparison that resulted in significant findings revealed that men universally had higher odds of using substances. There was no comparison that revealed women having higher odds of using any substance

(legal or illicit).

Table 2. Gender and the Use of Substances: Men Higher Odds for Each Comparison

Substance	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.
Men-Women							
Nicotine	0.568	0.094	36.213	1	< .001	1.764	1.466–2.123
Cannabis	0.277	0.107	6.642	1	.010	1.319	1.068–1.629
Cocaine	0.635	0.110	33.264	1	< .001	1.887	1.520–2.342
Heroin	0.714	0.265	7.272	1	.007	2.041	1.215–3.436
Oxycodone	0.515	0.160	10.299	1	.001	1.672	1.222–2.288
LSD	0.652	0.144	20.429	1	< .001	1.919	1.447–2.545
Mushrooms	0.630	0.122	26.767	1	< .001	1.880	1.479–2.387
Ecstasy/MDMA	0.359	0.120	8.966	1	.003	1.431	1.133–1.812

Respondents were asked if they have ever consumed alcohol. Social class differences were detected between working-class respondents ($OR = 1.961$, $p = .006$) relative to lower-class respondents ($R^2_n = .012$). Working-class respondents had higher odds for cannabis use ($OR = 1.832$, $p = .039$) than upper-class respondents ($R^2_n = .011$). Upper-class respondents were more likely to report having used amphetamines than all others groups, including lower-class respondents ($OR = 2.111$, $p = .041$), working-class respondents ($OR = 2.898$, $p = .001$), and middle-class respondents ($OR = 2.538$, $p = .005$; $R^2_n = .011$). Concerning cocaine, upper-class respondents ($OR = 1.950$, $p = .038$) were also more likely to report having used this particular drug than lower-class respondents ($R^2_n = .003$). Lower-class respondents had higher odds ($OR = 3.343$, $p < .001$) of using heroin than working-class respondents, as well as higher odds relative to middle-class respondents ($OR = 2.607$, $p = .003$; $R^2_n = .028$). Upper-class respondents had higher odds using having used psilocybin (mushrooms; $OR = 2.123$, $p = .040$) than lower-class respondents ($R^2_n = .004$). Working-class respondents also had higher odds ($OR = 1.592$, $p = .029$) of having used mushrooms than lower-class respondents ($R^2_n = .007$).

When it came to ethnicity/race and substance use comparisons (across every type of drug reported), there were far too many that could be addressed in this report. To provide a sense of group differences, Hispanic respondents were used as the primary reference group due to the fact that this group made up 58.6% of the total sample. Hispanic respondents had higher odds than Black respondents when it came to having consumed alcohol ($OR = 1.850$, $p = .040$), taking mushrooms ($OR = 1.870$, $p = .046$), and having used cocaine ($OR = 2.107$, $p < .001$, $R^2_n = .026$). Hispanic respondents had higher odds ($OR = 2.525$, $p = .002$) than Asian/Pacific Island respondents when it came to having consumed alcohol ($R^2_n = .042$). Asian/Pacific Island respondents had higher odds than Hispanic respondents for both nicotine ($OR = 1.555$, $p = .039$) and having taken mushrooms ($OR = 1.767$, $p = .020$, $R^2_n = .030$). Hispanic

respondents ($OR = 6.023$, $p < .001$) were more likely than Middle Eastern respondents to report having consumed alcohol ($R^2_n = .042$). Respondents that identified as “multi” had higher odds ($OR = 3.289$, $p = .013$) of having used nicotine, having used amphetamines ($OR = 2.475$, $p = .006$), having taken oxycodone ($OR = 5.650$, $p = .003$), having taken LSD ($OR = 4.545$, $p = .003$), having taken mushrooms ($OR = 5.263$, $p < .001$), having taken ecstasy ($OR = 3.344$, $p = .026$), and having used inhalants ($OR = 2.110$, $p = .048$). Table 3 breaks down the binary comparison between Hispanic respondents and White respondents. These two groups made up 82.2% of the total sample, so these comparisons will be highlighted below. For each comparison, White respondents had higher odds for having used every substance that resulted in a statistically significant finding.

Table 3. Ethnicity/Race and the Use of Substances: Whites Had Higher Odds for Each

Substance	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.
White-Hispanic							
Cocaine	0.441	0.125	12.457	1	< .001	1.555	1.217–1.988
Amphetamines	0.716	0.164	19.162	1	< .001	2.045	1.456–2.817
Heroin	0.733	0.217	7.361	1	.007	2.083	1.225–3.534
Oxycodone	0.887	0.180	24.374	1	< .001	2.427	1.707–3.448
Hydrocodone	1.016	0.171	35.373	1	< .001	2.762	1.976–3.861
LSD	0.519	0.160	10.586	1	.001	1.681	1.230–2.299
Mushrooms	0.458	0.140	10.765	1	.001	1.582	1.203–2.079
Ecstasy/MDMA	0.339	0.140	5.876	1	.015	1.404	1.067–1.848
Inhalants	0.659	0.184	12.816	1	< .001	1.934	1.348–2.778
GHB	1.624	0.503	10.417	1	.001	5.076	1.894–13.514
Sedative/Hypn	0.942	0.193	23.846	1	< .001	2.564	1.757–3.746

5. Discussion

This study has set out to better understand the nature of substance use. Data have been collected and analyzed across multiple variables to help make better sense of when people begin using substances, which substances they use, whether they have developed a problem with substances, and whether they have ever received treatment for alcohol and drugs. Multiple comparisons have been examined and presented to shed light on various group differences. This study collected data from 1,913 adults and revealed that most people have used multiple types of substances during their lives. The average age of first use (not including caffeine) was 15.68. The clear majority of participants felt that we are currently dealing with a serious national problem when it comes to substance use and addiction. Most of the study participants also believed that the pharmaceutical companies play a major role in this ongoing problem (e.g., opioid addiction). These findings are in sync with what former research has found on these

matters (e.g., Edwards et al., 2025; Harris et al., 2026; Mogollon-Canal et al., 2026).

By far, the two substances that participants were the most likely to first try are cannabis (43.6%) and alcohol (35.5%). The vast majority of respondents were with other people when they first used substances (89.1%). Almost one out of four participants reported having had a problem with substances at some point in their lives. Those that first tried substances alone were significantly more likely to develop a substance use problem and to receive professional treatment. Around 10% of the participants have received treatment services. The findings of this study coincide with prior research on these matters and issues (e.g., Berger, 2023; Jones et al., 2022; Pridgen et al., 2025). These findings make sense, as the earlier people begin using substances, the more types of substances they use, as well as their environmental/interpersonal situations, all have a major impact on whether people develop substance use disorders and chronic addiction (Bulfone et al., 2025; Hamaoui et al., 2025).

The most commonly use (or tried) substances were alcohol (92.2%), cannabis (74.8%), nicotine (54.5%), and cocaine (24.2%). Seeing that alcohol is so widely available, and generally a culturally accepted practice (e.g., weddings, concerts, bars, parties), it is not at all surprising that this is easily the most widely consumed substance. As cultural attitudes, and laws, have changed more toward acceptance of the use of cannabis, it is also not surprising that this particular drug was the second most popular substance of choice. These findings should not be taken to mean that there are no negative consequences for consuming alcohol or smoking cannabis, as this would go directly against all of the current clinical, medical, and biological data (e.g., Garcia-Estrada et al., 2025; Govarthnapany et al., 2026; Jones et al., 2022). Chronic and excessive use of alcohol and cannabis have been directly shown to cause a wide range of problems and health issues, such as problems with cognition, memory, heart health, brain health, respiratory issues, liver disease, etc.

The findings also revealed that men were more likely than women to have used every type of drug (e.g., cocaine, heroin, amphetamines). Men were also found to be more likely to have developed a problem with substances and to have developed an addiction that required treatment. Males are more likely to engage in risky/dangerous behaviors and to also die from overdose. This is something that could be further addressed in prevention and treatment for young males and at-risk adolescents. Further data could be collected from individuals that identify their gender as something other than man or woman due to the relatively high percentages in this study that reported having used substances, having had problems with drug use, and having received treatment services for addiction. These issues may be directly connected to family, environmental, and mental health issues (Hang Hia et al., 2024; Rodriguez-Ruiz et al., 2025; Mogollon-Canal et al., 2026).

Additional group differences stood out in the final analysis. White respondents were the most likely to have tried almost every type of substance (e.g., cocaine, hallucinogens, sedative-hypnotics, opioids), to have develop a problem with substances, and to have received professional treatment. Black respondents and respondents that identified as “multi” racial also revealed higher than average rates of

use and addiction problems. Further studies could try to better discern why these group differences exist. A focus could be placed on issues pertaining to religious beliefs, poverty, lack of education, family bonds, social connectedness, general health issues, and so forth. Prior studies have addressed these matters and have found that these factors can (and do) act as significant moderators and intervening variables (e.g., De Filippis et al., 2025; Rodriguez-Ruiz et al., 2025). Upper-class participants were interestingly the most likely to report having first use substances alone, to have developed a problem with substances (legal and illicit), and to having received professional treatment services for addiction. There may be certain reasons for this that may have to do with having the money to pay for treatment, to feeling less stigmatized about their addictions/problems, and to having access to resources that those from other social classes do not have. This would be in correspondence with other research findings (e.g., Hoge et al., 2025; Kitt-Lewis et al., 2025; Lin et al., 2023). Lower-class respondents were more likely than working-class and middle-class respondents to have used certain drugs and to have problems with various substances (e.g., heroin, amphetamines). This is something that could be furthered studied in relation to lack of resources, poverty, lack of education, stigma, and so forth.

This study has taken a close look at the use of substances. Respondents were given the opportunity to disclose any information that they wanted concerning the use of any type of substance. Although this study focused primarily on the more common types of substances (e.g., alcohol, cannabis, cocaine, oxycodone), a number of respondents did report taking less-known drugs or drugs that get less attention in research and treatment (e.g., PCP, steroids, mescaline, DMT). Some drugs that were not specially addressed were noted at higher rates than most others not directly covered. As an example, 26 respondents specifically reported taking Xanax, even though they were not directly asked about this particular drug. Future studies could give direct attention to a more focused classification of drugs (e.g., benzodiazepines), such as Xanax. The findings from this study are relevant to professional fields such as clinical psychology, school psychology, marriage and family therapy, social work, and alcohol and drug counseling. Professionals in these areas need to stay current and informed on the evident prevailing realities of substance use and addiction. This is fundamentally due to how culturally prevalent it has become and to how much of an impact all of this has on the lives of individuals, families, and to society at large.

References

- Berger, R. (2023). An inquiry into people's use of substances, views on substances, and how substances have affected them. *Research in Health Science*, 8(3), 55-17. <https://doi.org/10.22158/rhs.v8n3p55>
- Bharat, C., Webb, P., Wilkinson, Z., McKetin, R., Grebely, J., Farrell, M., Holland, A., Hickman M., Thi Tran, L., Clark, B., Peacock, A., Darke, S., Li, J. H., & Degenhardt, L. (2023). Agreement between self-reported illicit drug use and biological samples: A systematic review and

- meta-analysis. *Addiction*, 118, 1624-1648. <https://doi.org/10.1111/add.16200>
- Bulfone, D., Ingravalle, F., Scerbo, F., Mazotta, R., Simonelli, L., Pancaldi, A., Ungaro, S., Cocco, M., Vellone, E., Alvaro, R., Vinci, A., & Maurici, M. (2025). Substance use and academic performance among university students: Systematic review and meta-analysis. *BMC Medical Education*, 25(1), 959. <https://doi.org/10.1186/s12909-025-07530-y>
- Chiu, V., Hall, W., Chan, G., Hides, L., & Leung, J. (2022). A systematic review of trends in US attitudes toward cannabis legalization. *Substance Use and Misuse*, 57(7), 1052-1061. <https://doi.org/10.1080/10826084.2022.2063893>
- De Filippis, S., Martinotti, G., Nicoletti, F., Mastrostefano, A., Trovini, G., Pugliese, A., & Di Nicola, M. (2025). Major depression in comorbidity with substance use disorders: Patients' features and clinical-neurobiological rationale of antidepressant treatments. *Current Neuropharmacology*, 23(3), 256-275. <https://doi.org/10.2174/1570159X22666240827165327>
- Edwards, K. A., Buonora, M. J., Merlin, J. S., & Liebschutz, J. M. (2025). Recent advances in the treatment of chronic pain and substance use disorders. *Current Opinion in Psychology*, 62, 101977. <https://doi.org/10.1016/j.copsyc.2024.101977>
- Fitzgerald, N. D., Palamar, J. J., & Cottler, L. B. (2025). Use of illegally manufactured fentanyl in the United States: Current trends. *Current Addiction Reports*, 12(6), 108259. <https://doi.org/10.1016/j.addbeh.2025.108259>
- Garcia-Estrada, G., Luquin, S., Pesqueda-Cendejas, K., Ruiz-Ballesteros, A. I., Campos-Lopez, B., Meza-Meza, M. R., Parra-Rosas, I., Gonzales-Castaneda, R., Romos-Lopez, R., & Cruz-Mosso, U. (2025). Malnutrition in substance use disorders: A critical issue in their treatment and recovery. *Healthcare*, 13, 868. <https://doi.org/10.3390/healthcare13080868>
- Govarthnapany, N., Dekany, L., Gabrhelik, R., & Singh, D. (2026). Kratom use in adolescents and college students: A systematic review of prevalence, patterns, and risk factors across community and rehabilitation settings. *The American Journal of Drug and Alcohol Abuse*, 52(1), 5-17. <https://doi.org/10.1080/00952990.2025.2609965>
- Gutkind, S., Maziali, M. E., Bruzelius, E., Mannes, Z. L., Martins, S. S., Hasin, D. S., & Mauro, P. M. (2025). Misclassification of opioid-involvement in drug-related overdose deaths in the United States: A scoping review. *Annals of Epidemiology*, 102, 8-22. <https://doi.org/10.1016/j.annepidem.2024.12.010>
- Hamaoui, J., Pocuca, N., Ditoma, M., Heguy, C., Simard, C., Aubin, R., Lucic, A., Castellanos-Ryan, N. (2025). Age of onset and cannabis use and substance use problems: A systematic review of prospective studies. *Addictive Behaviors*, 163, 1-13. <https://doi.org/10.1016/j.addbeh.2025.108259>
- Hang Hai, A., Curran, L., Simons, J. N., Carey, K. B., & Bordnick, P. S. (2024). Technology-based substance use interventions for emerging adults and college students: A systematic review and meta-analysis. *International Journal of Mental Health and Addiction*, 24, 603-622.

- <https://doi.org/10.1007/s11469-024-01433-7>
- Harris, M. T., Weinstein, Z. M., & Walley, A. Y. (2026). Medications for opioid use disorder, opioid withdrawal, and opioid overdose: A Review. *JAMA*, 335(11), 988-998. <https://doi.org/10.1001/jama.2025.26348>
- Hogea, L., Tabugan, D. C., Costea, I., Albai, O., Nussbaum, L., Cojocaru, A., Corsaro, L., & Anghel, T. (2025). The therapeutic potential of psychedelics in treating substance use disorders: A review of clinical trials. *Medicina*, 61, 278. <https://doi.org/10.3390/medicina61020278>
- Jones, C. M., Houry, D., Han, B., Baldwin, G., Vivolo-Kantor, A., & Compton, W. M. (2022). Methamphetamine use in the United States Epidemiological update and implications for prevention, treatment, and harm reduction. *Annals of the New York Academy of Sciences*, 1508, 3-22. <https://doi.org/10.1111/nyas.14688>
- Kitt-Lewis, E., Adam, M., & Phillips, K. (2025). Stigma surrounding people with substance use disorder: A scoping review examining educational programs. *Substance Use & Misuse*, 60(12), 1839-1873. <https://doi.org/10.1080/10826084.2025.2519408>
- Lin, J., Arnovitz, M., Kotbi, N., & Francois, D. (2023). Substance use disorders in the geriatric population: A review and synthesis of the literature of a growing problem in a growing population. *Current Treatment Options in Psychiatry*, 10, 313-332. <https://doi.org/10.1007/s40501-023-00291-9>
- Mogollon-Canal, O. M., Villamizar-Carrillo, D. J., Padilla-Sarmiento, S. L., Carillo-Sierra, S. M., Villamizar-Carrillo, A. P., Fernandez-Montalvo, J., Rozo-Perez, J. O., Cepeda-Pineda, D., & Rivera-Porras, D. (2026). Early Adverse experiences and the likely of substance use disorders and non-fatal overdose in clinical and community settings: A systematic review and meta-analysis. *Behavioral Sciences*, 16, 589. <http://doi.org/10.3390/bs16040589>
- Piper, T., Small, F., Brown, S., Kelleher, M., Mitchesen, L., Rucker, J., Young, A. H., & Marsden, J. (2024). Psychedelic-assisted treatment for substance use disorder: A narrative systematic review. *Addiction*, 1-24. <https://doi.org/10.1111/add.16762>
- Pridgen, B. E., Bontemps, A., Lloyd, A. R., Wagner, W. P., Kay, E. S., Eaton, E. F., & Cropsey, K. L. (2025). U.S. substance use harm reduction efforts: A review of the current state of policy, policy barriers, and recommendations. *Harm Reduction Journal*, 22, 101. <https://doi.org/10.1186/s12954-025-01238-4>
- Rodriguez-Ruiz, J., Kaakinen, M., Oksanen, A., & Espejo-Siles, R. (2025). The influence of parental substance use on adolescent substance use: A systematic review of moderators. *Journal of Family Theory and Review*, 17, 721-741. <https://doi.org/10.1111/jftr.12620>