

DRIVERS OF SUBSTANCE MISUSE AND ADDICTION IN INDIANA



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Drivers of Substance Misuse and Addiction in Indiana

Research study conducted for the
Indiana Division of Mental Health & Addiction
By the Center for Health Policy
Indiana University Richard M. Fairbanks School of Public Health

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EXECUTIVE SUMMARY

Substance use continues to be a significant concern in Indiana. Misuse of alcohol and/or illicit drugs can lead to numerous negative consequences, often affecting a person's physical and mental health, relationships with family and friends, and their ability to hold a job. As drug use progresses into dependence and addiction, there is an increased risk that individuals become involved with the justice system. Arrests and incarcerations can occur for using illicit drugs, driving under the influence of a substance, or for engaging in drug-related criminal activities such as dealing. Furthermore, persons addicted to drugs, especially opioids and sedative-hypnotics, are at risk for accidental or intentional overdose, which can be fatal. These consequences not only affect the individual, but also have a considerable impact on their families and the community.

In Indiana's general population, 13% of adults reported using an illicit drug in the past month, mostly marijuana. Furthermore, 8.4% of Hoosiers met the criteria for a substance use disorder (SUD) and 7.8% needed but did not receive SUD treatment in the past year. Mental illness and substance use often co-occur, and nearly 4% of Indiana adults had a past-year diagnosis of both serious mental illness (SMI) and SUD. Mental health problems as well as substance misuse has been linked to suicidal thoughts and behaviors. Nearly 6% of Indiana adults had serious thoughts of suicide and close to 1% have attempted suicide in the past year.

Findings of our in-depth interviews with Hoosiers with a history of addiction indicated that the majority of respondents initiated substance use when they were between 13 and 18 years of age; they most frequently reported experimenting with marijuana, alcohol, and tobacco products. As respondents continued use, 'chasing the high' became one of the primary motivations and led to use of harder drugs, such as methamphetamine and heroin, in the continued attempt to quell unpleasant emotions or past traumatizing experiences. When addiction ensued, participants frequently experienced homelessness, incarceration, unemployment, among other serious consequences. Ongoing substance use also impacted their physical and mental health. Most respondents mentioned a history of mental health conditions, and many stated that drug use exacerbated their mental health. Moreover, three-fourths of respondents indicated having intensified thoughts of suicide resulting from substance use. Nearly all of our participants described impactful life moments which changed their mindset and helped them move toward treatment and recovery. Having reliable social connections was found to be a paramount factor for seeking treatment and being in recovery. However, seeking treatment was not without barriers for this population. Respondents cited lack of insurance coverage as well as stigma and judgement from peers or providers as primary factors for either not seeking or discontinuing treatment.



Participants were asked to provide suggestions on types of services the state should consider implementing or expanding to better meet the needs of Hoosiers who are struggling with substance use. The following recommendations were compiled:

1. Increase the availability of affordable, high quality treatment services for persons who have substance use disorders
 - Funding for peer-related services
 - Access to care in rural communities
 - Vulnerable and underserved populations
 - Harm reduction services
2. Support people involved with the criminal justice system
 - Drug courts
 - Treatment in correctional facilities
 - Caseworkers to connect individuals to community-based recovery services
3. Address social risk factors to help promote and maintain recovery
 - Safe housing, job training, employment services, transportation services, childcare, and family preservation services
4. Widely disseminate information on substance use
 - Dangers and consequences of drug use
 - Types of treatment available
 - How to obtain financial support for services
5. Reduce the stigma
 - Stigma often prevents people from seeking treatment

Addiction is a complex chronic disease. As with other chronic health conditions, treatment and support services should be ongoing to assist recovery.

Our study provided insight in the underlying causes and motivations of substance use among Hoosiers with a history of addiction, describing their experiences and hardships on their way to recovery. Further studies are warranted, specifically to assess disparities in treatment needs and access to services for minoritized and vulnerable populations.

INTRODUCTION

The Indiana Division of Mental Health and Addiction (DMHA) contracted with the Center for Health Policy (CHP) at Indiana University Richard M. Fairbanks School of Public Health to conduct a research study on the drivers of substance and poly-substance use among Indiana residents. The aims of the study were to determine:

- (1) the underlying causes and motivations that drive Hoosiers to use/misuse substances, and
- (2) how suicide-related thoughts manifest during substance use (e. g., are substances used to cope with suicide-related thoughts, how often do Hoosiers think of ending their life when using substances, etc.).

To accomplish this, we conducted key informant interviews with persons who had a history of serious substance misuse and addiction to opioids, sedative-hypnotics, stimulants, alcohol, and/or other drugs.

This report provides (a) a short summary of the literature on the underlying causes and risk factors of why people engage in substance use, (b) a brief data section on the prevalence of substance use in Indiana, and (c) the detailed findings from our key informant interviews, including recommendations derived from these interviews.

BACKGROUND

According to the National Institute on Drug Abuse (NIDA), no one single factor predicts if a person becomes addicted to drugs, but a combination of risk and protective factors can influence a person's likelihood for developing addiction. Risk factors for addiction include a person's biology, environment, and development (NIDA, June 2018; NIDA, July 2020):

- Biology
 - Being genetically predisposed or having a family history of substance use
 - Having a mental disorder
- Environment
 - Family (e.g., being exposed to parental or familial substance use; lack of parental supervision; experiencing problems and conflict at home)
 - Peers (e.g., having drug-using peers; peer pressure to use drugs)
 - Having experienced trauma and abuse
- Development
 - Interaction of genetic and environmental factors at critical developmental stages can affect a person's risk for developing addiction. For example, the earlier substance use is initiated, the higher the risk to become addicted. This is because the brain areas that control decision-making, judgment, and self-control are still developing in teens, making them more prone to engage in risky behaviors, including drug use.

Anyone can experience a behavioral health condition, but certain populations are at a higher risk for developing mental health or substance use disorders. This includes groups who are facing



structural discrimination such as LGBTQ+ communities (Felner et al., 2019). Also at an increased risk are individuals who have lived through intense trauma and abuse, for example, people with adverse childhood events (ACEs) (Leza et al., 2021); people who are or have been incarcerated (NIDA, June 2020); and those who are unemployed (Azagba, et al, 2021). Furthermore, we know that individuals with a mental health disorder are more likely to experience substance misuse and addiction, as these conditions frequently co-occur (co-occurring disorder or dual diagnosis) (NIDA, August 2018; Santucci, 2012).

Youth and adolescent populations are particularly vulnerable to substance use since evidence shows early-life initiation has been linked to use in adulthood, poor health outcomes, unemployment, criminality, and suicidality or mental disorders (Goodman et al., 2011; Rohde et al., 2001).

Russell et al. (2015) surveyed adolescents in active recovery from addiction and found that more than 90% of participants had a family history of substance use. Furthermore, individuals who start using substances at a young age are generally strongly influenced by peer pressure. Although motivators vary across different substances, young adults using marijuana listed conformity as their second highest reason for using, further confirming the gravity peer influence has; the top reason was for enjoyment/fun (Lee et al., 2007; Hides et al., 2008).

Prevalence of substance use and addiction in Indiana

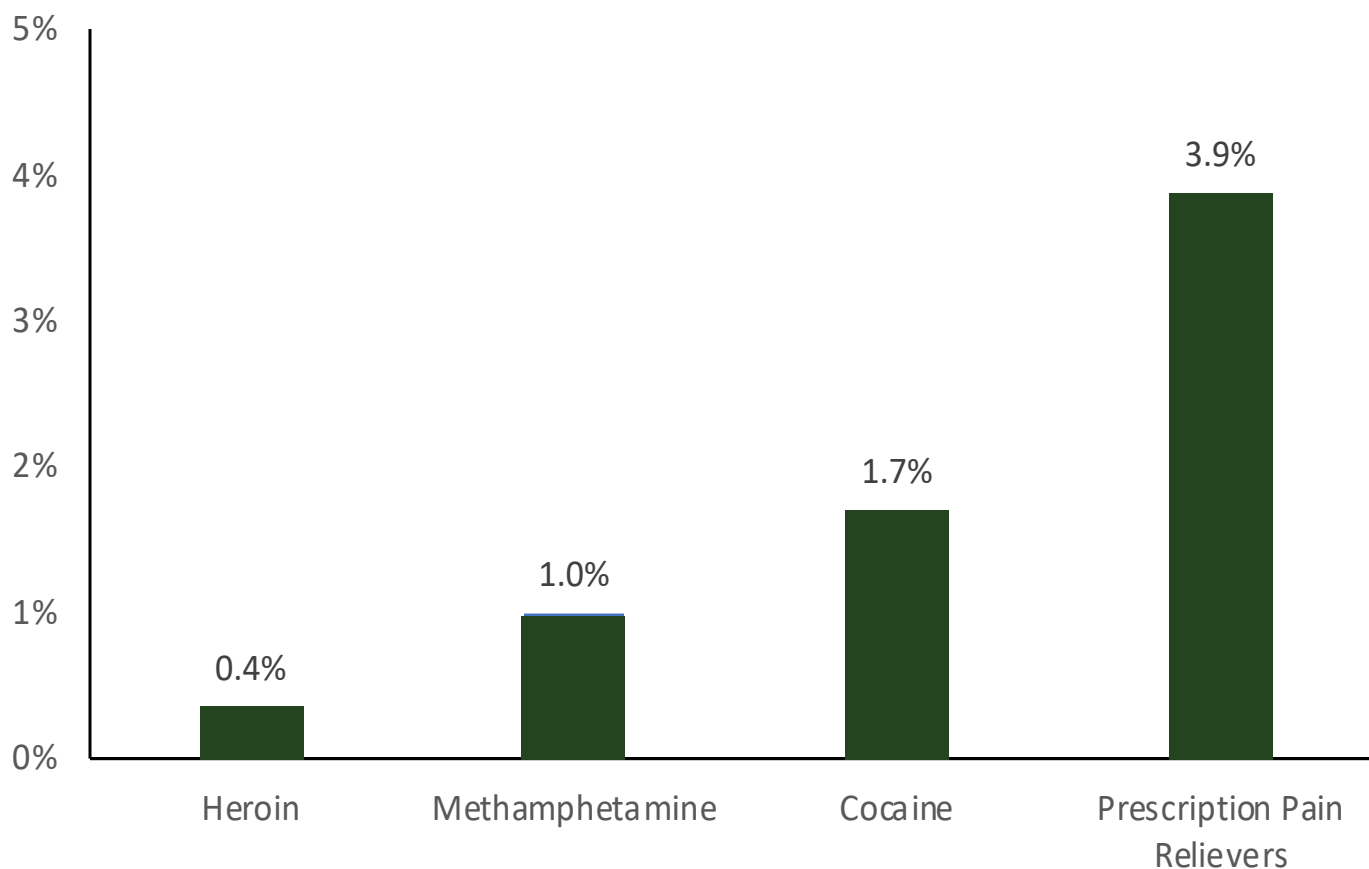
The prime sources for data on substance use and mental illness are the National Survey on Drug Use and Health (NSDUH) and the Treatment Episode Data Set (TEDS); both data systems are overseen by the federal Substance Abuse and Mental Health Services Administration (SAMHSA).

The NSDUH is an annual household survey that collects information on the use of alcohol, tobacco, and illicit drugs, but also gathers data on mental illness, suicidal behaviors, and treatment utilization for substance use or mental health services. The TEDS is a national database that records information on persons admitted to substance use treatment. In Indiana, these data are limited to information on Hoosiers entering treatment who are 200% below the federal poverty level and receive state-funded treatment. The findings presented here in this report are from the most recent year data are available, i.e., pooled 2018-2019 data from the NSDUH and 2020 data from the TEDS.

In the general population, an estimated 13.0% of Indiana adults aged 18 and older reported using an illicit drug, including marijuana, in the past month. When marijuana was not included, the percent of Hoosiers having used an illicit substance in the past month dropped to 3.3%. Overall, use of specific illicit substances (excluding marijuana) was low among the state's population (SAMHSA, 2018-2019). For details, see **Figure 1**.

BACKGROUND

Figure 1. Past-year illicit drug use, by substance type, among Indiana adults aged 18 and older (NSDUH 2018-2019)



Source: Substance Abuse and Mental Health Services Administration, 2018-2019

An estimated 8.4% of Indiana residents aged 18 and older met the criteria for having a substance use disorder (SUD)¹ in the past year. More specifically, 6.0% of adults had an alcohol use disorder and 3.5% had an illicit drug use disorder.² Furthermore, 7.8% of Hoosier adults needed but did not receive SUD treatment at a specialty facility in the past year (SAMHSA, 2018-2019).

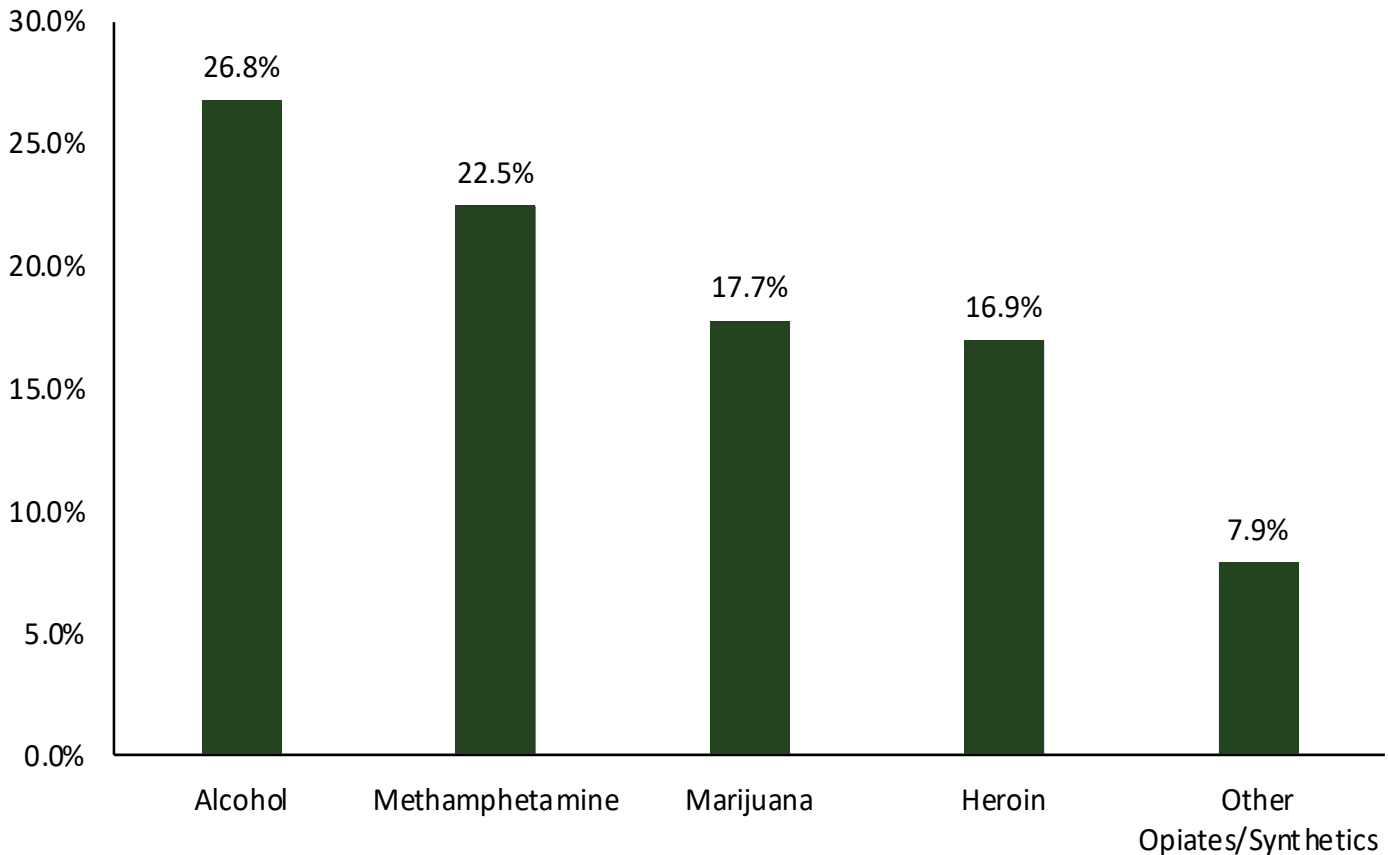
Most individuals entering SUD treatment in Indiana reported alcohol as their primary substance (first drug of choice). The most frequently listed illicit drugs included methamphetamine, marijuana, heroin, and other opiates or synthetics (SAMHSA, 2020). For details, see **Figure 2**.

¹Substance Use Disorder is defined as meeting criteria for illicit drug or alcohol dependence or abuse. Dependence or abuse is based on definitions found in the 4th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

²People who have an alcohol use disorder and people who have an illicit drug use disorder are not mutually exclusive groups, i.e., some individuals have both. However, based on the publicly available NSDUH data, we cannot identify the percentage of Hoosiers who met criteria for both types of disorders.



Figure 2. The most frequently reported primary substances among Indiana’s SUD treatment population (TEDS, 2020)



Source: Substance Abuse and Mental Health Services Administration, 2020

Within the general population, approximately 22.3% of Indiana adults had some type of diagnosable mental illness and 5.4% experienced a serious mental illness (SMI) such as schizophrenia, bipolar disorder, or major depression. Mental illness and substance use often co-occur and an estimated 3.7% of adult Hoosiers had a past-year diagnosis of both SMI and SUD. Furthermore, individuals experiencing mental illness and/or substance use are at higher risk for suicide. Among Indiana residents 18 years of age or older, 5.6% had serious thoughts of suicide and 0.7% attempted suicide in the past year. Individuals who suffer from mental illness greatly benefit from receiving treatment. Nearly 17% of Indiana adults received mental health services in the past year (SAMHSA, 2018-2019).



KEY INFORMANT INTERVIEWS

KEY INFORMANT INTERVIEWS

The Center for Health Policy (CHP) research team developed a protocol to guide the interview process. The protocol asked study participants to discuss the following topics:

- Initial use

This included questions on their initial experience using substances, such as age at first use, which substances they used first, how they acquired the substances, and what they believed may have been the reasons or motivations for starting substance use.

- Progression from initial use to addiction

This included questions on how their substance use progressed over time, such as using drugs more frequently or at higher doses, using different (“harder”) drugs, and changing routes of administration (for example, injecting drugs).

- Personal impact

This included questions on how they believed drug use had impacted their personal life (social, legal, work or school) and their physical health.

- Mental health and suicidal thoughts and behaviors

This included questions on participants’ mental health status; if they had experienced drug overdoses (accidental or intentional); and if they had engaged in suicidal thoughts or behaviors, and if so, to what extent drug use played a role in these thoughts or behaviors.

- Treatment

This included questions on what type of treatment, if any, they received for their substance use or mental health condition, what barriers they experienced in receiving treatment, and whether they felt the treatment was successful.

- Needed treatment and support services

This included questions on what types of treatment or supportive services participants believed are needed to better help Hoosiers that are struggling with substance use issues.

We also asked a general question at the end of the interview to see if there were any additional comments that participants wished to share.



KEY INFORMANT INTERVIEWS

The study protocol was submitted to the Indiana University Institutional Review Board (IRB) and approved as an exempt study (Protocol #14461).

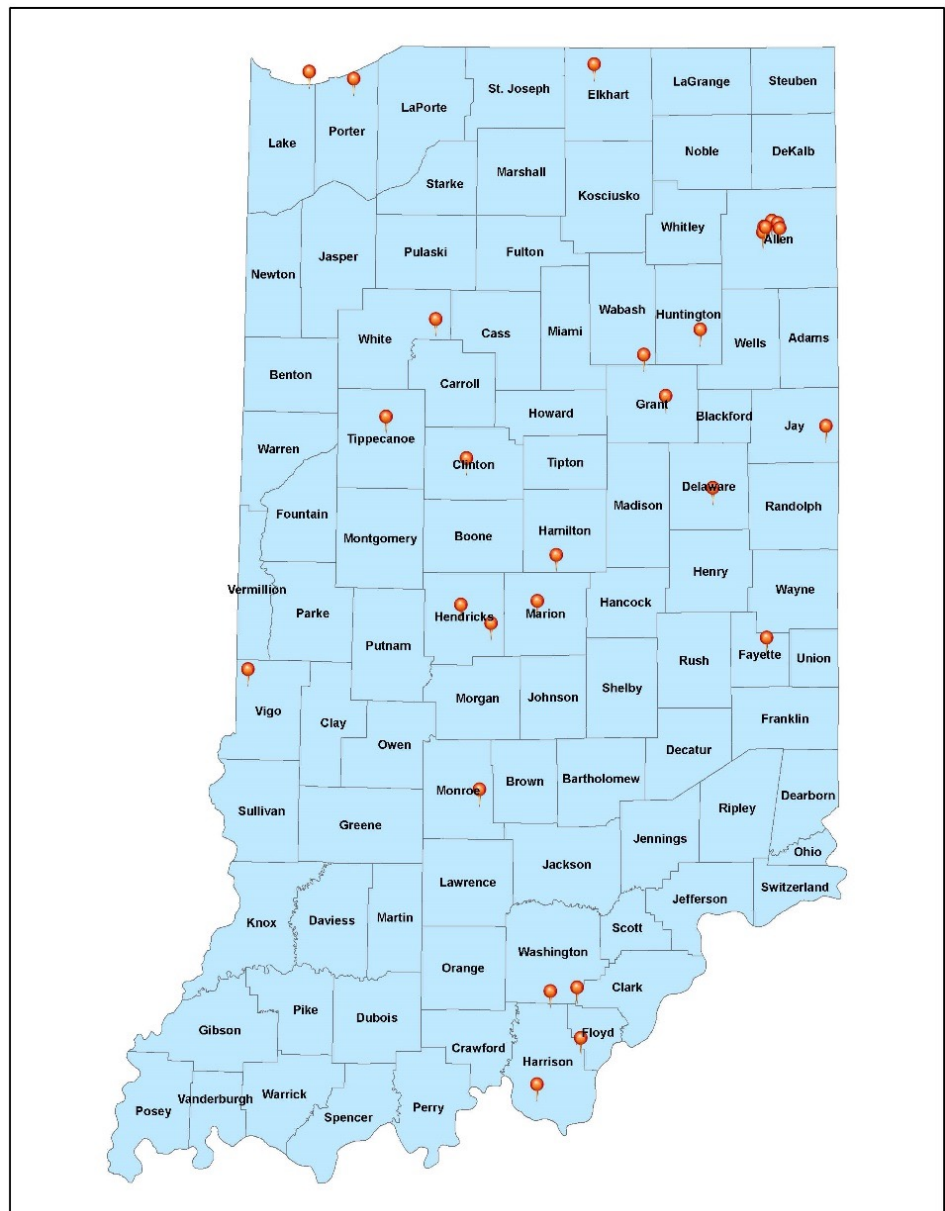
Participant recruitment: The CHP research team created, in collaboration with DMHA staff, a flyer describing the study, the requirements for participation, and how interested individuals can contact a member of the CHP research team to ask questions or schedule an interview. DMHA staff distributed the flyer throughout the state via e-mail to recovery and other organizations involved in providing care to individuals with a substance use disorder.

To be eligible to participate in the study, participants had to be at least 18 years of age, live in Indiana, and be in recovery from addiction.

Participant interviews: All interviews were completed either by telephone or virtually using Zoom, a video-conferencing platform. Interviews were recorded after receiving consent from the participant and took between 20 to 60 minutes to complete. Participants who completed an interview were offered a \$50 gift card for participating in the study.

Results

The CHP research team interviewed a total of 31 participants. About two-thirds of the key informants were female. We attempted to have a broad representation of participants throughout the state of Indiana, though most lived in the northern and central parts of the state (**see Map**). One participant did not provide information on where in the state they were currently living.



KEY INFORMANT INTERVIEWS

The following findings are based on 29 key informant interviews³ of Indiana residents with a history of serious substance misuse and addiction.

Initiation of drug use

Age of first use: The age at which our participants initiated substance use, ranged from 5 to 34 years, with the median age being 14 years. Most participants started using alcohol, tobacco, or drugs during adolescence, i.e., between the ages of 13 and 18.

Age Group	Number (%)
Under 13 years	7 (25%)
13-18 years	14 (50%)
19 years and older	7 (25%)

Note: Out of 29 key informants, 28 reported their age of first use.

Initial drugs used: When asked what substances they started out using, most participants listed marijuana (reported by 17 respondents), alcohol (reported by 13 respondents), tobacco products (reported by 6 respondents), prescription drugs/pain medication (reported by 4 respondents), synthetic marijuana (reported by 1 respondent), methamphetamine (reported by 1 respondent), crack/cocaine (reported by 1 respondent), and ecstasy (reported by 1 respondent). Most participants mentioned initiating use with more than one substance.

Progression from initial use to addiction

Study participants cited various reasons for the progression from initial use to addiction. For the majority, drug use followed the typical stages of addiction; merely **beginning as experimentation, moving through regular use, and ultimately resulting in the development of dependence and addiction** despite the consequences that ensued. A main theme described was the 'chasing of the high', which often led to self-loathing and the inability to stop use.

³Of the 31 interviews conducted, only 29 were usable and included in the findings. One interview had to be discarded because of unintelligible audio; the other interview was discarded because it was conducted with a person who does not have a history of addiction, but works with people who frequently have a substance use disorder.



KEY INFORMANT INTERVIEWS

“...Because, once that feeling that you were trying to escape comes back, you don't want it back. So, you're taking more to stay out of that feeling, which you can never stay out of, you know? So it's just a vicious cycle.”
“I started using marijuana at that time and then it led to alcohol and then it led to harder drugs. Once I switched...to harder drugs, I started using every day, nonstop.”

For many though, 'chasing the high' seemed to be an attempt to cope with past traumas, a loss of loved ones, or simply unpleasant emotions. They described wanting to be happy like the others they “had hung around with” or not wanting to deal with their emotions.

“...I wasn't doing it as much but once I lost my Mom, I started doing it more. I had to have it like everyday, all day to like function. It was real bad. And then, when I start, I don't know how to stop. It is like constantly you've got to have it, yeah, so.”

When the transition to harder drugs, such as heroin, fentanyl, or methamphetamine occurred, participants described instances where they lost everything to continue their use. Drug-seeking and using seemed to be the sole focus, no matter the costs.

“I was living on the street. I was living in motels, ... I was living in what they call “trap houses” or “crack houses”... I did everything and anything to supply my habit: prostitution, stealing from stores, um, pawning my cars to the dope-man for dope. I couldn't live without it. I had to have it at all cost.”

“For two years, I never stopped unless I went to the hospital. I would wake up in the morning, pop a couple of pills and I would drink straight vodka every morning to get rid of my shakes. I always had a bottle with me, a water bottle filled with vodka. I never went anywhere. I drank from sun-up to sun-down...”

“It progressed and progressed and any time that I got into any trouble with the law, I always figured out a way to get bonded out quickly or I got released or something...my main focus was just the drugs. I got really wrapped up into heroin and then eventually meth...”

KEY INFORMANT INTERVIEWS

(continued) "...I started using heroin just a little bit with him [a friend] and, as we all know, it wasn't something that I was just able to stop and it just kept spiraling until I had lost pretty much everything, lost my apartment, somehow escaped ending up in jail, and had to move back home right before the pandemic started and have been living with my parents ever since."

Participants whose addictions began with prescription pain relievers reported facing barriers to accessing these drugs due to a more stringent environment and prescribing guidelines. The higher costs and lack of availability of prescription opioids caused some participants to seek out other means of obtaining drugs via social connections. Furthermore, participants described the prescribed medications as being less effective over time, so they began mixing them with other drugs or switching to other opioids.

“VA said they wouldn't formulate it no more and stopped giving it to me.”

“...And, so it went from that doctor to eventually doctor shopping and get 120 pain pills a month and then going to pain doctors and having heroin, it led me to heroin.”

“I started with the Oxycontin shooting them up and then Opanas and then heroin because it was cheaper.”

Some participants reported **dealing to make money so they could continue to afford using drugs**, or they had family or friends who were dealers, which facilitated further drug use.

“...it got to a point to where I ended up quitting driving and ended up becoming a dealer.”

“...and then the girl that I met who got me the methamphetamine, her family produced methamphetamine. So, I was dealing from there directly. So, naturally, I used a lot more. I always had it on me.”



KEY INFORMANT INTERVIEWS

Motivation to start or continue drug use

Study participants described several factors which they believed were drivers or reasons for their substance use. Based on their responses, we identified the following themes:

- Having peers who engage in substance use
- Parental or familial substance use
- Mood-enhancing effects (e.g., euphoria, energy)
- Prescription of pain relievers (e.g., after accident or injury)
- Trauma and abuse
- Mental health condition and self-medication
- Cope with unpleasant emotions
- Drug cravings and avoidance of withdrawal symptoms

For many participants, **peers** played a central role in their early drug use experiences. Several participants described their social networks as being composed of friends who regularly used alcohol and drugs. For these participants, drugs and alcohol were readily available, using was acceptable, and using helped them fit in and feel like part of the group.

““I went to somebody’s house, and they were all smoking pot and asked me if I wanted to join. I didn’t have any qualms with it, so I joined in and that was the first time [I used it].”

“I inhaled it. It was, you know, it wasn’t necessarily, cocaine was never necessarily a problem for me like that. But, you know, it I used it when my friends did it. I used it to be cool, to be around them, to be a part of the group.”

“I knew that substance use was an escape, but I also knew that it was a place of acceptance. So, skipping school, drinking, and using substances with a select group of kids that accepted me was what we did.”

In many cases, as participants grew older and became more involved with drugs, their social environment continued to facilitate their use.

““And my husband started trapping out my house and, yeah, kind of, it’s kind of harder to not use when you have everybody around you using.”

KEY INFORMANT INTERVIEWS

A few participants believed that alcohol and drug use within their family network played a role in their own substance use. Several participants described growing up in homes with **parents or other family members who used substances**. Participants living under these circumstances had easy access to drugs. Within these families, substance use was viewed as normal and, to a certain extent, expected behavior, with two participants relating that it was a parent who first provided them with drugs, encouraged them to use, and would often use with them.

“*That’s just what I grew up around. My Dad was an alcoholic. My Mom was an alcoholic. It is just like everybody in the family was an alcoholic.*”

“I started smoking weed when I was 10. My Mom started smoking weed with me when I was 12. My Mom used to give me pills when I was probably between 10 and 11. Um, and then, she started smoking, or doing more drugs with me when I was 13.”

The **mood-enhancing effects** associated with drugs was another common factor participants cited as a motivator for continued substance use. Dependent on the substance taken, some participants associated use with euphoric feelings, while others described that the drugs gave them increased energy or other desired sensations.

“*Methamphetamine was like a concentrated version of cocaine but lasted way longer. So, I began using that a lot. I was user of that for about five years. I really enjoyed being motivated and full of energy and feel like I could go forever and not stop.*”

“I mean, the drug is always there, just kind of the happiness. It wasn’t just because other people were using it... But, you know, I enjoyed them, you know? I liked the feeling I got from them.”

In some cases, participants related that **relief of physical pain from injuries** was the initial driver behind their use of drugs, particularly opioids; however, pain relief became less important over time.

KEY INFORMANT INTERVIEWS

“ I went out riding my motorcycle...and I had a bad crash. I broke, or fractured, had a hairline fracture on my pelvis and I got prescribed Oxycodone for that. I had the initial prescription and then I got a refill after that and by the time it was gone, I was hooked to pain killers.”

“Well pain killers when I was younger. I had some trauma to the head, so I was on pain killers and I was young and I didn't understand very much but they made me feel better... but I didn't abuse them. After I was 19, when I started with the marijuana, I started abusing. I would go to the ER, you know, and it turned into drug seeking.”

A significant driver of substance use cited, particularly by female participants, was **ongoing trauma and abuse** in their lives. Many women experienced sexual or physical abuse in their childhoods. Others described chaotic home environments characterized by severe neglect, domestic violence, divorce, or parental mental illness. Several women who grew up under such conditions reported that, as adults, their intimate relationships continued to be marked by significant abuse. For these women, substance use provided a sense of wellbeing as well as a means of escape from the recurring unpleasant memories and emotions associated with their adverse experiences.

“ I had trauma from my childhood that really is what caused me to want to escape into substances. Once I tried something, which was either alcohol or marijuana, it was something that made me feel better and I felt better in my skin...”

“...when I had that first drink of alcohol, I think it was the first time that I had felt like a safe, secure feeling inside of my body. I had been molested...before I was even 6 years old and that was just something that I never got to share with my parents because of the fear of being beat by my dad for that.”

“I was used for sex, um, just, you know, guilt. Not guilt, but I just had inside hate...I had to drink to get rid of that pain. The more I drank the more people felt more loving towards me, you know? A lot of it was, you know, I've been raped, I've been beat...I've always been used or treated like crap basically I guess...I drank just so I couldn't feel...”

KEY INFORMANT INTERVIEWS

Other forms of trauma that participants cited as perpetuating their substance use included trauma associated with military service and traumatic experiences tied directly to their use of drugs.

“I didn't know for 20 years later that it was PTSD that I was experiencing...from the military. For years, it [methamphetamine] cured the PTSD or suppressed it or whatever you want to call it...”

“I caused my own trauma while in active use. I never really experienced like egregious childhood trauma, per say. I just like experienced a lot of trauma while I was strung out. So, like that continued to feed my drug stint to go on longer...”

Similarly, participants who suffered from **mental health conditions** such as depression, anxiety, or other psychological symptoms either due to a pre-existing mental illness or as a consequence of substance use, often described using drugs as a way to **self-medicate** and alleviate their symptoms.

“I wanted to feel better. Like I didn't like feeling depressed all the time and I was angry all the time. I felt alone. So, using helped that.”

“Yeah. Marijuana was always was something that I used to try and help me cope. I've struggled with depression and stuff and I always felt or had the belief that it was benefitting, yeah.”

“I used to use drugs to try to help with the suicidal thoughts and my emotions would just get a hold of me most of the time, so. That was part of it. So, when I would get emotional I would want to do drugs, but then, if the drugs didn't work enough and I got emotional it would get to the point where I would just want to do more, and more, and more, so I wouldn't be around.”

For many participants, substance use provided them a way to deal with the **unpleasant emotions** associated with life stressors such as the end of intimate relationships, deaths of family members, financial concerns, involvement with the legal or social services system, or pressures imposed by society.

KEY INFORMANT INTERVIEWS

“About three years ago, going on three years ago, I had lost my mom and my two sisters. I turned to drugs. I started messing with cocaine and I was taking it to try and numb the pain, to try to forget about everything.”

“Um, I went through a divorce. My ex-husband had gotten custody of my kids and somebody had introduced me to crack. I was just snorting cocaine at the time...And, I was using alcohol. It just seemed to take the pain away of just not having my kids.”

“And, I had no other, I didn't know other ways to cope with how you feel or what you can't do in life when you see another group of people being able to do it easily and you're not good enough, and you're not tall enough, and black, and you're too dark, and you're this and you're that. So, that had a lot to do with it [drug use].”

Finally, many participants related that once they began using substances, much of their continued use was driven by **strong cravings for the drug or a desire to avoid withdrawal symptoms** brought on by psychological or physical dependence. For participants, absence of their favored drug was typically associated with an overwhelming and all-consuming need to acquire the drug and to use.

“...it became that I did everything and anything to supply my habit: prostitution, stealing from stores, um, pawning my cars to the dope man for dope. I couldn't live without it. I had to have it at all costs. Whatever that cost was, I was going to do it.”

“Yeah, uh, as previously when I failed to get my hands on Fentanyl for almost a week and I had this type of withdrawal things that are really devastating. To the point that I thought I was going to die.

“[Methamphetamine] just introduced a whole side of darkness that I didn't even think could exist to living. It really progressed. I was dating someone that sold meth and, so, I was very exposed to it. And, although my drug of choice was heroin, say I couldn't get heroin and I was so sick and desperate, I started to self-medicate my withdrawals with methamphetamine. And, then, um, I became this really, like, mentally reliant on meth, you know?”

KEY INFORMANT INTERVIEWS

Drugs of choice and polysubstance use

During the interviews, we asked participants which drugs they had used throughout their lifetime as well as their preferred drug (drug of choice). All participants reported that they had used **multiple drugs**, sometimes concurrently (**polysubstance use**). On average, participants named five different substances which they tried or consistently used throughout their lifetime. The most frequently reported substances were marijuana (n=22; 76%), alcohol (n=20; 69%) and methamphetamine (n=17; 59%).

When participants were asked about their drug of choice (DOC), **methamphetamine** (n=10; 35%) and **heroin** (n=9; 31%) were most frequently reported. **Crack/cocaine** was also often cited as the drug of choice (n=5; 17%).

Though the majority of participants reported only one DOC, some participants (n=6; 21%) mentioned having more than one preferred drug. However, in some instances, these substances were within the same drug category (e.g., various types of opioids; cocaine and crack). Additional DOC combinations included some type of opioid (e.g., heroin or prescription pain relievers) together with a stimulant (e.g., methamphetamine or cocaine). However, one participant listed their drugs of choice as marijuana, acid, and alcohol.

Impact on person's life

Drugs had a tremendous effect on all participants' lives. During periods of heavy use, much of participants' time **revolved around acquiring drugs, using drugs**, and doing whatever they felt necessary to **get money to buy drugs**:

“ I spent all of my time either looking for drugs, getting drugs, taking somebody to get drugs, writing [bad] checks, finding money, all circled around the getting and using, and being involved in drugs.”



KEY INFORMANT INTERVIEWS

This drug-focused lifestyle resulted in many negative consequences that impacted their lives in several ways, including their:

- Social life (relationship with family, losing custody of children)
- Physical health
- Involvement with the legal system
- Ongoing trauma and violence
- Economic hardship (including loss of job or housing, homelessness)

Nearly all participants related that their **relationships with their families** were adversely impacted by their drug use. Participants described relationships that became strained, hostile, marked by mistrust, or which fell apart entirely. Even after entering recovery, participants reported that due to their drug use, some of their relationships had reached a point where they were irreparable.

““They [my relationships] were bad. My Mom would not let me come to her house. She didn't trust me. My sister would not have anything to do with me. My two daughters wanted nothing to do with me. I mean I was just in a very dark and lonely world.”

Participants with minor children described periods when getting 'high' took priority over properly caring for them. In some instances, this neglect became severe enough to require involvement with the Department of Child Services. Participants related that this involvement led to temporarily, or in some cases permanently, **losing custody of their children**.

““I was a terrible parent for the first 10 years of my kids' lives. I just prioritized getting 'high' and being messed up for, you know, for everything else.”

In terms of their **physical health**, many participants related that they suffered numerous health issues during the period they were actively using. In some cases, these health concerns continued into their recovery. Participants described periods where they neglected their self-care which resulted in malnutrition, weight loss, and biochemical imbalances, among others. Some health issues cited by participants were tied to their drug of choice or their method of administration. Those who had used methamphetamine typically complained of dental problems, especially tooth loss, and the need for dentures:

KEY INFORMANT INTERVIEWS

“*[Meth] eats you from the inside out in essence. So, it will destroy, like my skin was super thin when I got clean. My teeth are really bad. You know, things that you don't realize.*”

Among participants who used opioids and injected drugs, one health-related consequence noted by participants was contracting Hepatitis-C. For some of these participants their infection resolved on its own once they entered recovery; however, others required medical intervention to improve.

Participants dependent on alcohol, noted alcohol poisoning, liver damage, and pancreatitis as health problems that developed from their long-term use. One participant, who was a long-term user of inhalants, reported developing permanent brain damage from the high dose of chemicals in the products she inhaled.

The need for acquiring drugs led many participants to engage in criminal activities and become **involved with the legal system**. Participants described stealing from family and friends, writing bad checks, engaging in various scams, stealing prescription pads from doctors' offices, as well as selling and producing drugs. Participants also related that when on drugs, they often engaged in other behaviors that brought them into contact with law enforcement such as driving while intoxicated, resisting arrest, disorderly conduct, or being in locations where drugs were regularly sold and used. Participants further indicated that their involvement with the legal system was often tied to drug-related offenses such as possessing drugs, or the paraphernalia associated with using them.

“*I got possession, paraphernalia charges, I have disorderly conduct charges, I have possession of Spice charges. Pretty much all of my charges are drug related.*”

“So, all of my charges are check deception and fraud of a financial institution and things like that. So, it was writing a lot of bad checks to get products, or whatever it might be. Stealing from my family. I was doing things that I would have never done as a normal, functioning person.”

The most serious consequence experienced by participants related to their involvement with the legal system was **incarceration**. Many participants spent time in a correctional facility, some for many years.



KEY INFORMANT INTERVIEWS

“*I cycled in and out of the system all of my life. So, I've served about 13 years of my life incarcerated. Almost three decades of my life I was in active use, in and out, in and out.*”

Ongoing trauma and violence were additional consequences associated with participants' long-term drug use and the lifestyle that came with it. Participants described physical assaults, stabbings, and experiencing other forms of violence when they were high or in the process of getting drugs. A particularly life-threatening incident was described by one participant:

“*When I went to buy the fentanyl, I got shot nine times in Indianapolis. I got shot three times in the stomach, three times in the left arm, one in my neck, one in my back, and then one ricocheted off my left hip bone.*”

Several female participants put themselves at significant risk for assault and sexual trauma when they turned to prostitution as a means of making money for drugs.

“*So, I went to air dusters and I was so addicted to air duster the day I got sexually assaulted...I was hustling the guy for air duster and after that I told myself, you are not hustling to use any more.*”

Many participants described their **economic hardship** during these times. They reported that because of their ever-increasing need to use, they lost everything of value in their lives such as employment, housing, valuables, and money, among others. Due to these losses some participants found themselves homeless, a situation that most described as being particularly bleak. For many participants homelessness as well as other forms of ongoing trauma made finding help for their drug use difficult and in some cases served to perpetuate their addiction.

“*Like, I had everything on the street stolen from me. My mom wouldn't talk to me. I had nothing. I couldn't even brush my hair, you know, and you expect me to make my mind better under these conditions?*”

KEY INFORMANT INTERVIEWS

Mental health

Most study participants (n=26; 90%) reported having a history of at least one mental health condition, including:

- Depression (n=16; 55%)
- Anxiety (n=11; 38%)
- Attention Deficit/Hyperactivity Disorder (n=5; 17%)
- Methamphetamine-Induced Psychosis (n=4; 14%)
- Bipolar Disorder (n=4; 14%)
- Post-Traumatic Stress Disorder (n=3; 10%)
- Paranoia (n=1; 3%)
- Schizophrenia (n=1; 3%)
- Insomnia (n=1; 3%)
- Panic Disorder (n=1; 3%)
- Obsessive-Compulsive Disorder (n=1; 3%)

Participants agreed that their use of **drugs exacerbated these mental health conditions**. Participants attributed some of this exacerbation to the direct effect of the drugs on their nervous system while other participants said their mental health deteriorated because once they began using, they stopped taking their medication.

“So, definitely something that I still have that I suffer from, I’m pretty sure this is from drugs, is anxiety. I mean my anxiety is so high. And, I mean some of it is probably my years of drug use and, then, of course prison does that. There are so many different dynamics that are going on there. But, at one point, they actually said they thought that I might be bipolar. I come to find out, it was drug-induced.”

A common experience cited by participants was a sense that **drug use somehow changed their brain in adverse ways**. This was particularly true of participants who used methamphetamine, several of which experienced severe **drug-induced psychotic episodes**, something they found to be terrifying. The impact of drug use on one’s mind was eloquently described by one participant:

“Meth is a mental hijacking. Heroin is an emotional hijacking. Heroin makes you numb, it makes you not feel bad if you steal, not feel bad if you lie. But meth, mentally just warps you. You see, hear, and feel things that aren’t even there. But it’s real to the person. It’s very traumatic.”

KEY INFORMANT INTERVIEWS

Another participant described an acute experience resulting from methamphetamine use at the time:

““My mom had to take me to the emergency room one time because I was having such a psychotic episode.”

One participant noted that even in recovery, drugs can continue to affect your mental health in various ways, through the **guilt and shame** brought about by having to cope with and take responsibility for things one did while using:

““When I first got sober, um, I couldn't even put a sentence together. Um, and I was got very depressed because, you know, you have to change everything and, so, I was very lonely and I, yeah, besides that I don't know that you know, just the feelings of worthlessness from all the stuff you do in addiction kind of at first when everything starts rushing back, you really struggle with those things.”

Overdose

Nearly all participants who used opioids experienced at least one overdose. One participant described:

““Then I took heroin, this is the big kicker, I've got 50 trips to the hospital for overdoses, that ain't counting how many times my friends hit me with Narcan and whatnot. I'm still walking and talking; you know what I'm saying?”

Most overdoses were described as unintentional, however, three participants (out of 11) reported intentionally overdosing. As one participant described their experience on Christmas Eve:

““Um, I stopped taking my Adderall in 2013 because I tried to overdose on 30 milligrams Adderall, 50 milligrams Tramadol, and 60 10-milligram Valiums on Christmas Eve.”

KEY INFORMANT INTERVIEWS

Instances where an unintentional overdose occurred, heroin, fentanyl, and/or other opioids were the most frequently cited reasons. At times, the substance given to the participant was unknown to them:

“*And, whatever, yeah, no sleep, three weeks up, smoking crack and drinking liquor and stealing and prostitution, and somebody had given me something and they said it was heroin and it would help bring me down and it ended up being fentanyl. I never had that before and they say I died. Um, I overdosed and they had to literally pour two gallons over my head and get me awake. By the grace of God, I woke up.*”

“There was one time. I was by myself in my room. I injected the fentanyl. I don’t remember much. I remember sitting down on the floor and then probably half hour or 45 minutes later, I woke up and there was puddle of drool on the floor, my face was on the carpet and I sat up and I realized that I had just overdosed. I woke myself back up, I lived through it. It was absolutely terrifying for me because I realized at that point, if I hadn’t woke up, somebody, one of my loved ones was going to find me dead laying there. Um, so it was scary but, yes, it was accidental. If I hadn’t came out of it, I wouldn’t be talking to you today.”

Another participant described getting a car as a catalyst for returning to drug use, leading to an overdose:

“*And, so, then when I came home, I didn’t have a car. And, everyone wanted me to stay clean, but I didn’t want to stay clean. I was miserable. And, then, that February, I think I got my tax money and I got a car and that’s when I started using again and that’s why I overdosed.*”

KEY INFORMANT INTERVIEWS

One participant discussed an encounter with the law after being taken to the hospital from an overdose, suggesting an opportunity to expand trauma-informed responses among criminal justice professionals:

“Um, they ended up putting me in a car taking me to the hospital. They gave me the Narcan, they brought me back. I woke up to a room full of cops and doctors. There were some cops in there and doctors or some nurses. They were asking me all these kinds of questions, who were these people who brought you in, who were these two guys, and I kept saying I don't know. Everything was still, as soon as I opened my eyes, they started asking me all these questions. I didn't even have time to realize where I was. And, I was just, like you know, I kept telling them I don't know, I don't know, and they said well, it's funny because they, you know, they parked, someone drove my car to the hospital, parked it in the parking lot and they had their car across the street because they didn't want the license plate to be read, so they ran back to that car. They were more concerned about catching those two guys than what I had just done or why I had just done it. They were extremely rude. One of the cops said, you know, next time, we won't even care, we won't show up, just do us a favor and finish the job, is what he told me. The nurse got upset that he said that to me.”

Suicide

A particularly distressing consequence of drug use for several participants was experiencing suicidal thoughts, which in some cases resulted in suicide attempts. **Although participants were not clear on whether their drug use was directly responsible for their suicidal thoughts and actions, they were certain their drug use and the lifestyle associated with it intensified these thoughts and feelings.**

“When you're in that type of lifestyle, they say if the drugs don't kill you the lifestyle will. The lifestyle brought me to a very dark and lonely world. Suicide is part of that darkness, suicidal tendencies I should say. The drug had some kind of effect on my mind and just the thoughts were telling me it would be better if you just leave this world.”

“So, after that, eight months is all it was from the time that I had tried meth to the time that I had lost everything and decided that I needed to do something different. I was going to kill myself. I had decided I couldn't get out of this hole I was in.”

KEY INFORMANT INTERVIEWS

Many participants described feelings of **hopelessness, worthlessness**, and/or **coming down from their high and having depression immediately set in**, posing a high risk for suicidal behaviors. Of the 29 participants, 21 (72%) indicated having had suicidal thoughts and/or attempted suicide for various reasons. Two prominent themes emerged as participants were describing their contemplation or attempt of suicide.

The more prominent theme was related to the **lifestyle and consequences emanating from drug use**. For example, they described not having adequate support systems available to help them move away from a life of substance use. Furthermore, they expressed internal disgust of the lifestyle created and assumed there was no way out, aside from suicide.

““The last time I was going to commit suicide was April 15, of 2020. I was just dealing with a lot. I couldn't see my family for five years, didn't know if I was getting my kids back or not, um, it was just rough.”

“I really wanted to kill myself...So I was to the point, nobody loved me, no one cared, so, the only thing that loved me was alcohol. Alcohol was my best friend, my pills, my Oxys, my Dilaudid, Adderall, you know? Those were my best friends.”

“The suicidal thoughts got bad from time-to-time...so, yeah, when you're in that type of [drug-using] lifestyle they say, if the drugs don't kill you the lifestyle will. And, that lifestyle brought me to a very dark and lonely world. And, suicide is part of that darkness...”

The second theme that emerged when speaking with participants was that they had experienced **trauma** and painful **emotions**, and did not know how else to deal with these feelings.

KEY INFORMANT INTERVIEWS

“For years, it [drug use] cured the PTSD or suppressed it or whatever you want to call it and I thought I got to the point where it quit working, period, and I become suicidal. I about killed myself several times, you know, because I couldn't make the PTSD go away, I didn't know what it was. I thought I was losing my mind, for real.”

“Yeah, I had them [suicidal thoughts] all through my time of active use and I still currently have them today. I still speak to a therapist. I regularly see a psychiatrist to make sure my meds are straightened out. Like I said at the beginning, I think a lot of my usage, I think my usage started because of lack of self-esteem, lack of confidence. I've never really been comfortable in my own skin. So, I think that my usage had little to do with my suicidal ideation. I think that my usage might have been a Bandaid for some of those thoughts. I could escape the reality that I lived in, which was, in my opinion, poor and I wanted out of it.”

The means with which participants attempted suicide were also discussed. Several participants mentioned using substances they were already taking or had access to. They used what was available to intentionally **overdose**.

“Yeah, I, so, it was when I was young and my Mom left me, um, she took Xanax and she had left a bottle at the house when she would bring food there and leave or whatever, but she left a bottle there and I took them. Um, and I don't know. No one checked on me for a couple of days or whatever, and I survived and I woke up like three days later and I just in that moment thought well there must be a reason why I'm supposed to be here, you know what I mean? Like I had a lot of thoughts of suicide, you know, later on in life. I never acted on them or made a plan. I mean I would have thoughts like I should just run my car into this telephone pole or whatever, you know what I mean? But, never could do it.”

“Um, and, uh, so I finally, I came home one day and I tried to kill myself in my basement with fentanyl. I was so sick of running. I just couldn't run anymore. I had burrs stuck in my hair from running from the police like a night or two prior, or what I thought was the police. I was probably just having psychosis. There probably wasn't even anything there.”

KEY INFORMANT INTERVIEWS

Treatments

Most participants reported receiving some type of treatment to help with their substance use and/or mental health disorders (n=26; 90%). Some participants were court-ordered to attend these services, but the majority initiated treatment because of friends and family, or because they self-realized the need. Various treatment modalities were mentioned, including:

- Alcoholics/Narcotics Anonymous (n=15; 52%)
- Individual therapy, counseling, or coach (n=12; 41%)
- Intensive Outpatient Therapy (n=10; 34%)
- Medication-assisted treatment (n=7; 24%)
- Rehabilitation (non-specific) (n=6; 21%)
- Drug court (n=6; 21%)
- EMDR Therapy (n=4; 14%)
- Recovery houses (n=3; 10%)
- Self-help methods (n=2; 7%)
- Detox program (n=2; 7%)
- Aftercare program (n=1; 3%)
- Other services such as art therapy, sexual survivors group, VA, etc. (n=7; 24%)

Furthermore, participants provided additional comments on difficulties they encountered while continuing their journey for recovery.

“The rehab I went to, I went to a lot. But, the one that I got sober they did not accept insurance.”

“I stopped going to AA, um, in Indiana when I was 8-years sober because of the judgment from, you know, old timers.”

Additionally, several participants also described their experiences in attending court-mandated treatment programs as a result of encounters with the law.

“I was on this court agreement where, kind of like a pre-trial diversion thing where like I just needed to do IOP and as long as I didn't get trouble then they would drop the charge. It was a very slap-on-the-wrist-kind of thing. But, I was just so unable to do that. And, I never did it. And, then, I tried to go to rehab to try and get the court system off of me. I even went to detox at [location] and stuff like that. It was just to like get, it wasn't because I actually wanted to get better. It was because I wanted to stay out of trouble...”

“...it was court-ordered type stuff and they were absolutely [...] about it so I rebuked it, you know, I fought it, you know?... Whenever I decided to get clean, I got away from people who used and got around clean people and watched what they did and how they did things and, you know, got back to what was normal. This guy I work for now, he got my [job] back, and puts up with all the stuff I've got to do with court, you know? Without him, you know, I'd be a mess still.”

RECOMMENDATIONS

As part of the interview, participants were asked to provide suggestions on what services the state should consider implementing or expanding to better meet the needs of Hoosiers who are struggling with substance use. The following recommendations were compiled:

1. Increase the availability of affordable, high quality treatment services for persons who have substance use disorders
 - Funding for peer-related services
 - Access to care in rural communities
 - Vulnerable and underserved populations
 - Harm reduction services
2. Support people involved with the criminal justice system
 - Drug courts
 - Treatment in correctional facilities
 - Caseworkers to connect individuals to community-based recovery services
3. Address social risk factors to help promote and maintain recovery
 - Safe housing, job training, employment, services, transportation services, childcare, and family preservation services
4. Widely disseminate information on substance use
 - Dangers and consequences of drug use
 - Types of treatment available
 - How to obtain financial support for services
5. Reduce the stigma
 - Stigma often prevents people from seeking treatment

RECOMMENDATIONS

The most frequent suggestion was to **expand the availability of peer recovery coaches**. Many participants believed that receiving help from persons in long-term recovery is essential both for individuals just beginning their recovery journey and for those working to stay in recovery.

“*I think that would have been useful just having someone that had that lived experience piece to just to offer hope because it can feel so bleak, you know, when you are thinking of entering into recovery...*”

Participants expressed that peer counselors should be available in any organization that has frequent contact with persons who may have issues with substance use including hospital emergency departments, jails and prisons, medical offices, shelters for victims of domestic violence, and shelters for persons who are experiencing homelessness. Participants related that the biggest barriers to building the peer workforce was the cost of training and the lack of funding streams available for peer-provided services. Accordingly, participants felt **reducing training costs** would allow a greater number of qualified people to get trained and **increasing funding for peer-related services** would allow organizations to hire and adequately compensate those peers who complete the training.

Participants believed that Indiana would do well to **increase the availability of affordable, high quality treatment services for persons who have substance use disorders**. Participants believed that while a need exists across the state for more detoxification services, rehabilitation services, counseling services, and sites that offer methadone and other forms of medication-assisted treatment (MAT) this **need was greatest within rural and impoverished communities**. Participants felt additional effort needed to be placed in increasing transitional housing and other forms of community-based residential programs so that individuals who are leaving inpatient programs or correctional facilities can live in a safe, stable, drug-free environment while they continue to work on their recovery. However, participants cautioned that for persons entering these programs to be successful, they must be placed in areas of the city that are safe and relatively free of drug-related and other types of crime, something that they saw as rarely happening. Participants further voiced a need for the state to make **more services available to typically underserved populations** including women experiencing homelessness or domestic violence, families, veterans, persons who have a co-occurring diagnosis of mental illness and substance use disorder, and persons who have been convicted of sex-related offenses. Lastly, a need for **harm reduction services** such as needle exchanges, improved naloxone distribution, mobile MAT clinics, and street-based outreach were noted by several participants.

Many participants whose use of substances had led them to become involved in the **criminal justice system** felt more had to be done to address the needs of this population. While they realized it was unlikely that Indiana would stop criminalizing people who use drugs, they did believe that all types of correctional facilities should at minimum provide access to medically supervised and safe detoxification, medication-assisted treatment, peer counselors, and therapy,



RECOMMENDATIONS

even if it is for a short period of time. Participants advocated for **broader use of drug courts** over incarceration to more effectively address the needs of people who use substances. To prevent individuals from jeopardizing their recovery upon re-entry into the community, participants proposed that correctional facilities employ **caseworkers who could help get people connected** to community-based recovery services well in advance of their release.

Participants related that individuals who have substance use disorders often struggle with maintaining their recovery due to not having their **basic needs met**. Participants believed that individuals in recovery would benefit if the state would **address specific social risk factors**. For example, finance programs that provided **safe housing** that would allow individuals to leave dangerous or drug-use-promoting environments, **job training** and **employment services** that could help individuals to get and maintain a source of income, and **transportation services** so that individuals could get to and from treatment services. Participants indicated that these types of services are especially crucial for persons who are struggling with homelessness and for those who are leaving correctional facilities. Other related services suggested by participants included **childcare** and **family preservation services** that would help keep parents connected to their children, community centers and recovery cafes that would afford individuals the opportunity to develop positive social relationships, and reduced or free memberships to organizations that offer **recreational activities**, such as the YMCA, so individuals could fill their free time with positive activities.

Participants suggested that **information on substance use needs to be more widely disseminated**. Participants reported that such information should include basic information on the consequences of substance use, the link between adverse childhood experiences and other mental illnesses and substance use, the **various kinds of treatments available** to address substance use, and the various approaches people can take to enter and stay in recovery. Participants added that when they needed help, they often did not know what services were available in their area, what they needed to do to access those services, who they could contact for help in navigating the service system, or how they could **get financial support** to help cover the cost of services. Participants believed such information would be extremely beneficial for persons who wanted to quit using substance and should be made much more available both to the public at large and particularly within organizations that serve persons who may struggle with substance dependence. Participants further proposed having **first responders receive more and better education on how to work with persons who use substances** so that they treat them in a sensitive and professional manner. As one participant who served as a peer coach explained:

““I think more education...like with police officers, mental health, first aid. I know they feel like it's redundant, but I think it needs to be done non-stop. I've had two to three hundred hours of training just to sit and talk with people and I don't wield a gun...”

CONCLUSION

Lastly, participants felt that the state needed to find ways to **reduce the stigma** surrounding those who have substance use disorders. Participants expressed that stigma is a significant barrier which prevents people who may need and want treatment from seeking treatment and often limits the level of funding directed towards services that are necessary for addressing substance use within the state.

CONCLUSION

Addiction is a complex chronic disease. Heavy and repeated use of alcohol and other drugs can lead to changes in the brain, interfering with a person's ability to resist the strong urge to use, despite experiencing negative consequences. Relapse, even after periods of sobriety, is not uncommon; however, that does not mean that treatment is ineffective. As with other chronic health conditions, treatment and support services should be ongoing to assist in the recovery process (NIDA, June 2018).

Our study provided insight in the underlying causes and motivations of substance use among Hoosiers with a history of addiction, describing their experiences and hardships on their way to recovery. These accounts may not be representative of all people with a substance use disorder but are aligned with much of the literature on this topic. Further studies are warranted, specifically to assess disparities in treatment needs and access to services for minoritized and vulnerable populations.



REFERENCES

- Azagba, S., Shan, L., Qeadan, F., & Wolfson, M. (2021). Unemployment rate, opioids misuse and other substance abuse: quasi-experimental evidence from treatment admissions data. *BMC Psychiatry*.
- Centers for Disease Control and Prevention. (2022). Overdose death rates increased significantly for Black, American Indian/Alaska Native people in 2020. Retrieved January 8, 2023, from <https://www.cdc.gov/media/releases/2022/s0719-overdose-rates-vs.html>
- Felner, J., Wisdom, J., Williams, T., Katuska, L., Haley, S., Jun, H.-J., & Corliss, H. (2019). Stress, coping, and context: Examining substance use among LGBTQ young adults with probable substance use disorders. *Psychiatric Services*, 112-120.
- Goodman, I., Peterson-Badali, M., & Henderson, J. (2011). Understanding motivation for substance use treatment: The role of social pressure during the transition to adulthood. *Addictive Behaviors*, 660-668.
- Hides, L., Lubman, D., Cosgrave, E., Buckby, J., Killackey, E., & Yung, A. (2008). Motives for substance use among young people seeing mental health treatment. *Early Intervention in Psychiatry*, 188-194.
- Lee, C., Neighbors, C., & Woods, B. (2007). Marijuana motives: Young adults' reasons for using marijuana. *Addictive Behaviors*, 1384-94.
- Leza, L., Siria, S., Lopez-Goni, J., & Fernandez-Montalvo, J. (2021). Adverse childhood experiences (ACEs) and substance use disorder (SUD): A scoping review. *Drug and Alcohol Dependence*.
- National Institute on Drug Abuse. (2020, July). Drugs, brains, and behavior: The science of addiction drug misuse and addiction. Retrieved January 3, 2023, from <https://nida.nih.gov/publications/drugs-brains-behavior-science-addiction/drug-misuse-addiction>
- National Institute on Drug Abuse. (2020, June). DrugFacts: Criminal Justice. Retrieved January 8, 2023, from <https://nida.nih.gov/publications/drugfacts/criminal-justice>
- National Institute on Drug Abuse. (2018, August). Comorbidity: Substance use and other mental disorders. Retrieved January 8, 2023, from <https://nida.nih.gov/research-topics/trends-statistics/infographics/comorbidity-substance-use-other-mental-disorders>
- National Institute on Drug Abuse. (2018, June). DrugFacts: Understanding drug use and addiction. Retrieved January 3, 2023, from <https://nida.nih.gov/publications/drugfacts/understanding-drug-use-addiction>
- Rohde, P., Lewinsohn, P., Kahler, C., Seeley, J., & Brown, R. (2001). Natural course of alcohol use disorders from adolescence to young adulthood. *Journal of the American Academy of Child & Adolescent Psychiatry*, 83-90.
- Russell, B., Trudeau, J., & Leland, A. (2015). Social Influence on Adolescent Polysubstance Use: The Escalation to Opioid Use. *Substance Use Misuse*, 1325-31.

REFERENCES

- Santucci, K. (2012). Psychiatric disease and drug abuse. *Current Opinion in Pediatrics*, 24(2), 233-237.
- Substance Abuse and Mental Health Services Administration. (2020). Treatment Episode Data Set: Admissions (TEDS-A). Retrieved January 9, 2023, from <https://www.datafiles.samhsa.gov/dataset/treatment-episode-data-set-admissions-2020-teds-2020-ds0001>
- Substance Abuse and Mental Health Services Administration. (2018-2019). 2018-2019 National Survey on Drug Use and Health: Model-Based Prevalence Estimates (50 States and The District of Columbia). Retrieved January 6, 2023, from <https://www.samhsa.gov/data/report/2018-2019-nsduh-state-prevalence-estimates>

