

**Does active addiction affect performance and productivity in the workplace?**

**Amanda Gavrity**

**Senior Thesis**

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**Nicolais School of Business**

**Wagner College**

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## Substance Use Disorder, Job Performance, and Productivity

### *Abstract*

This analysis of research is to determine if Substance Use Disorder negatively effects job performance and productivity. With today's rising opioid epidemic, we take a look into SUD and what it means to have an SUD, we take a look into the effects of SUD and look into research that looks into poor job performance and productivity and does SUD have any relationship to this. Based on data and research collect little research states that there is no correlation between having an SUD and poor job performance and productivity. Further analysis shows that there is a correlation but there needs to be more current research due to the current status of SUD in the United States. Research also shows that there is a need for more in depth research for this topic due to the opioid epidemic and COVID-19 pandemic to further analyze the effects that these two events have had on the work force when it comes to mental health specifically SUD. This thesis will take a look into addiction, job performance, and productivity and what impact one has on the other.

### *Introduction*

Not many people understand the complexity of addiction and how many different addictions there are in the world. The focus of this thesis is Substance Use Disorder. Substance Use Disorder does not discriminate, it can affect anyone of any race or financial background. Twenty-seven million Americans' reported use of an illegal substance in 2015, and over sixty-six million reported drinking excessively within 30 days. Seventy-eight people die every day in the United States from an opiate overdose number have increased significantly since 1999 (Keane, 2018). The estimated yearly economic impact of Substance Use Disorder is \$249 billion

Substance Use Disorder, Job Performance, and Productivity for alcohol and \$193 for drug use (Keane, 2018). The long-term effects on society can include reduced productivity, higher health care costs, unintended pregnancies, spread of infectious disease, drug-related crime, interpersonal violence, stress within families and many other things (Keane, 2018). The focus of this thesis is on productivity and performance in the workplace.

People try to contemplate SUD and how can we fix the problem? A lot of society's answer for addressing SUD is to incarcerate individuals with SUD. Due to further research on SUD society looking to rehabilitation rather than punishment (Wagner, & Sawyer 2018). There are many new ways to help employees with an SUD such as EAP (employee assistant programs) programs. Research over the years has tried to determine if having an SUD negatively effects job performance and productivity, but what are we doing with the research and are we trying to find a resolve for the issue if there is one present.

### *Literature review*

#### Addiction/Substance Use Disorder

Few people understand what Substance Use Disorder/Addiction is. Addiction is a brain disease(Keane, 2018). Symptoms of this disease are drugs and/or alcohol despite the negative effects of using the substances. Many substances can result in an addiction, and many people do not understand when the use of a mind- or mood-altering substance becomes problematic, which occurs when the life of the person becomes unmanageable due to the negative consequences of their substance use, yet they continue to use (Keane, 2018)

There is a difference between active addiction and recovery. Someone in active addiction is using a substance such as drugs and/or alcohol and continues to use these substances even though their life has become unmanageable and negatively affected by their drug and/or alcohol

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use. Someone in recovery from active addiction has not used a substance for several weeks, months, or years and is working towards improving their life. Recovery is a broad term and requires far greater work than ceasing use of the substance. Recovery entails working on changing old addictive attitudes and behaviors as well as dealing with the negative consequences of their former substance use (Keane, 2018).

Parts of an individual's life affected by Substance Use Disorder are family, employment, social interactions, hygiene, self-care, finances, legal issues, education, and simple everyday tasks. Standard treatment for addiction/Substance Use Disorder are rehabilitation programs, individual and group therapy, self-help groups, and medically assisted treatment combined with therapy (Keane, 2018).

Using a substance recreationally and SUD are two very different situations. Using a substance recreationally is only once in a while it is not every day and there is no physical and/or mental dependence to the drugs. SUD has certain criteria that can be found in the DSM-5. The criteria for an SUD are one hazardous use, social or interpersonal problems related to the use, neglected major roles to use, withdrawal, tolerance, used larger amounts, used longer than intended, repeated attempts to control or quit, much time spent using, physical or psychological problems related to use, activities given up to use, and cravings (American Psychiatric Association, 2017).

### Job performance and productivity

Productivity is quality of work and quantity of work. Job performance consists of attendance at work and tardiness, reliability and accountability, and turnover. If employees have a good work ethic and their job performance meets company standards, then company profits

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and benefits. Job performance is important for employees to enable them to move up in a company and for references for future job opportunities. Productivity is important for a business to be profitably and successful.

Substance Use Disorder (SUD) is believed to impact productivity negatively. Individuals with substance use disorder have 50% more absenteeism than other employees (Benham, 2017). This absenteeism affects the employer because often the employer has to pay the replacement employee overtime wages and also pay sick leave for the employee who has taken off due to SUD (Benham, 2017). Types of absences related to substance use include arriving late, leaving early, taking half a day at work, unreliability to follow one's work schedule along with alcohol-related presenteeism which means coming into work impaired such as having a hangover or being intoxicated (Buvik, 2018). SUD can result in absenteeism, accidents, as well as a slew of other issues in the workplace, which in turn can damage the stability of the company (Elliott & Shelley, 2006). In 2001 Atkinson indicated 14 million Americans using substances who are employed are 3.6 times more likely to be involved in an accident and 5 times more likely to file for workers' compensation benefits (Elliott & Shelley, 2005). This has an effect on not only the company as a whole but the coworkers too. Some researchers suggest there is not a relationship between substance use and productivity, however, the research does not state whether or not these individuals suffer from an SUD (Hickman, Finke, & Miller, 1990).

Workers who have SUD also have a higher turnover rate than other workers, however, workers who are in recovery and treating their SUD are least likely to leave their employers. (Benham, 2017). Workers who have been treated for SUD have a better job performance as well as job productivity than those who have an untreated SUD. Workers who are in active addiction

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have shown to have multiple employers within a year. (Benham, 2017). The cost of replacing a worker varies upon the job, and includes costs of recruitment, retraining a new person, and time spent by the company to accomplish this (Benham, 2017).

Research has shown that individuals who have an SUD are usually addicted to more than one substance, however, if alcohol is the primary substance, then they are less likely to be addicted to and/or use another substance. (Benham, 2017). One of 10 American workers has impaired productivity from substance abuse (Conry, 1991). Based on studies between 2000 and 2002 workers who have had intervention on behalf of an EAP (employee assistance program) had a lower rate of recordable incidents at work than the general population group (Elliott, & Shelley, 2005). The research suggests that there is no difference between the number of incidents, which vary, between users and nonusers (Elliott, & Shelley, 2005). Further research suggests employees with positive drug tests had a higher accident rate and post-treatment only data suggests employees with positive drug tests had a substantial decrease in accidents after treatment (Elliott, & Shelley, 2006).

Employees who have an SUD are more likely than employees in recovery and or the general workforce to have anxiety and depression. (Benham, 2017). Anxiety and depression can affect someone's job performance as well as the severity of their SUD. Mental health comes into play when SUD is involved and, in some cases, can be the cause of anxiety and depression. SUD is classified as a mental health disorder according to the DSM-V.

When looking into further research inexperienced users are more likely to have issues at work as well as those who need to increase their use due to tolerance (Frone, 2013). Frone looks at a lot of studies that were conducted and compares results, however he concludes that there is a

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lack of accurate research due to the fact that individuals do not relatively self-disclose out of fear of the stigma attached to using substances. It is not clear whether workers have an SUD or not in these findings as well.

SUD can affect job performance in different ways. Employees with an SUD are more likely to come to work under the influence of a substance therefore they are more likely to perform job tasks (Lehman, & Simpson, 1992). Employees are less likely to attend or concentrate on their job which could lead to daydreaming, putting less effort into job tasks, and distracting other employees with conversations that are irrelevant to the job (Lehman, & Simpson, 1992). Research suggests that another way SUD can affect productivity is that an employee will spend work hours trying to mend a hangover and/or withdrawal symptom from drug use (Lehman, & Simpson, 1992). Researchers believe that SUD is not the only factor that affects productivity and job performance but is a significant variable (Lehman, & Simpson, 1992). In 2001 Atkinson indicated 14 million Americans using substances who are employed are 3.6 times more likely to be involved in an accident and 5 times more likely to file for workers' compensation benefits (Elliott & Shelley, 2005).

A survey conducted of 300 nurses in the United States with an SUD had reported that their SUD had a significant impact on their job performance and resulted in disciplinary action (Sullivan, 1990). The employees reported obvious signs were lack of attendance, poor job performance, example of these in the nursing field are illegible charting, numerous mistakes, behaviors related to dispensing medications and increase in incidents, and frequent bathroom breaks (Sullivan, 1990). The nurses also answered about their time in recovery after treatment 93% of the 300 nurses have reported that they regularly attend self-help groups and the average

Substance Use Disorder, Job Performance, and Productivity time in recovery was 4.3 years (Sullivan, 1990). All of the nurses in this study were deemed successful with their treatment after having disciplinary action.

There are many different ways for the individual to treat their SUD but employers also have options to assist workers with an SUD. Some businesses offer intervention and treatment with the possibility of further employment after treatment (Elliott, & Shelley, 2005). Research suggests that for people living with an SUD effective treatment must involve both them and their work (Milloy, 2019). For example, people can enroll in the C.H.I.P (Curb Heroin in Plants) program, which was designed to create a change by addressing SUD with addressing work and family life (Milloy, 2019). Research suggests that C.H.I.P is an effective method to look at history and reevaluate employee assistant programs and where this program faltered (Milloy, 2019). This research goes into the C.H.I.P program further and tries to look into why the program has failed and what changes could be made to increase the success rate of the future programs(Milloy, 2019). C.H.I.P was meant to help with Medically Assisted Treatment along with therapy for individuals with SUD. This program was desinged to assist employees who were addicted to heroin who worked in plantations.

This thesis paper addresses the issues of Civic engagement and Civic professionalism because of the 3rd United Nations' Sustainable Development Goal, which is Good Health and Well-being as well as the 10th SDG which is Reduce Inequality. The communities affected by my thesis subject are those with people who are suffering from a Substance Use Disorder who have not received treatment, people who have received treatment, and employers. Based on personal experience along with research conducted for this paper, it is evident to me that society can be cruel especially, the people who are uneducated about SUD. Recovery is possible and it



Substance Use Disorder, Job Performance, and Productivity goes hand-in-hand with goal number three (.i.e., Good Health and Well-being). Research has proven that people in recovery have better job performance and productivity in the workplace than people who are not in recovery have. Goal 4 Quality Education is also important because people with SUD are strongly stigmatized. For example, I used to be extremely uneducated in the field of addiction and I stigmatized people who I thought were alcoholics and/or drug addicts. The needs of people who have an SUD are for people to have a better understanding of the disease and to understand that recovery is extremely difficult to accomplish, especially because addiction is frequently accompanied by mental health disorders (Drebing, Fleitas, Moore, Krebs, Ormer, Penk, Rosenheck, 2002).

When I disclose my past to people, it gives people a bad impression of me as an individual, but the person I was when I was using substances is not the person I am in recovery. I am one of the fortunate ones to get past my active addiction and be in recovery for 2 plus years, but not everyone is as fortunate as I am or has a support system like I do. I just hope that my thesis topic and paper can change one person's mind about people in active addiction as well as people in recovery. I would not be here in this class today if someone did not look past the stigma attached to addiction and provided me with an opportunity to dramatically change my life. Recovery does not just benefit the person who has the SUD, but it also benefits people in the recoveree's life whether it be family or employer. We need more people to look past the stigma and try to help people who reach for recovery not try to push their hand away and beat them up any more than they have beaten themselves.

### *Hypotheses*

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Addiction to narcotics and/or alcohol has a negative effect on employees' job performance and productivity.

### *Method*

Subjects: Employees who have an addiction to narcotics and or alcohol.

Measures: Attendance, sick leave, and turnover of employees with and without a SUD.

Procedure: I used the Horroman Library search engine and used the interlibrary loan and document delivery system. I selected the peer reviewed article option and used One Search. The search terms I used to find the materials are the following: Substance Use Disorder; job performance; productivity; addiction; substance abuse; drug use; and workplace. I went on to the OASAS (Office of Addiction Services and Supports) and SAMHSA (Substance Abuse and Mental Health Services) websites and retrieved a document from there.

### *Results*

Addiction to narcotics and/or alcohol has a negative effect on employees' job performance and productivity. Even though some of the data found showed no relation between addiction and job performance and productivity most of the data has shown that it indeed does affect it negatively. Unfortunately, there was less research found on people in active addiction versus those in recovery from addiction and job performance and productivity.

There are significant data charts from the National Survey on Drug Use and Health for the cost of employers for workers who have been treated for an SUD versus those who have not (Benham, 2017). figure 1 shows the workforce participants in the survey, figure 2 shows the employers per capita healthcare costs, table one shows the demographics of workers in figure 1, table 2 shows the industries represented in the NDSUH (National Survey on Drug Use and

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Health), table 3 are the rates of substance use disorders by industry, Table 4 show the workers in recovery have the lowest turnover and absenteeism rates, table 5 shows the health care use of people with specific substance use disorders to a specific substance, table 6 shows the correlation between nicotine and behavioral health, table 7 shows the extra cost of missed work by industry, table 8 shows the turn over costs by industry, table 9 showed the per capita costs to employers for each untreated worker with an SUD, and table 10 shows employer costs avoided for each worker in recovery. All these tables are important to understanding the cost of an employee with an SUD in recovery, an employee in active addiction, versus the general population.

### *Discussion*

#### Addiction/Substance Use Disorder

Importance of understanding the difference between active addiction vs recovery, why would this be important. Someone who is in active addiction is not working on this in their life that is falling apart along with working on themselves internally. If someone does not want to change and go into a life of recovery. Knowing the difference is important because former drug users can change their job performance and productivity. Based on the research and the data provided, people in recovery have a better job performance and productivity than those in active addiction.

The importance of understanding addiction, especially for employers, is important from a social standpoint and will help employers and society as a whole address the disease with an effective strategy rather than shunning an individual with SUD. Effect of addiction/ substance use disorder on job performance and productivity. Let's take a look at what parts of life addiction effects for an individual suffering from SUD. According to DSM-V it effects every aspect of an

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individual's life, personal, inter-personal, social aspects, legal issues, employment relationships, financial, etc.

The importance of understanding the difference between a recreation user and someone who is suffering from an SUD is important because there is a different way to address the situations. Someone with an SUD has specific needs that someone who is a recreational user does not have. Treatment is important for someone with an SUD it is the foundation of starting the recovery process, whether it be self-help groups, medically assisted treatment coupled with therapy or private therapy. It is vital for an individual's recovery from SUD.

### Job performance and productivity

Productivity is important for a company to be successful and productivity is different for companies in different industries. The effect of poor job performance is wide spread amongst a company. Poor job performance effects fellow coworkers as they have to pick up the slack and it effects the employers in numerous ways as well. Turnover rates, overtime costs, and paid sick leave are all outcomes of poor job performance as expressed in the research provided along with many other things. Based on the research and the tables provided SUD has a significant effect on job performance and productivity. There is a need for further research on the effects of job performance and productive with regard to employees in active addiction versus those in recovery.

## *Conclusions*

### Implications for practice

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Employers need to find a way to become educated on addiction. Lack of education about SUD has always been a contributing factor to the stigma attached to SUD. The implications for this research are to help show that addiction needs to be treated as more of a health issue rather than believing people with an SUD are bad people. People with an SUD and in recovery are very determined to change their lives and that includes their professional life. When people in recovery have support in all aspects of their lives the success rate goes up tremendously. Based on some of the research founded in during this search it has shown that individuals in recovery do have better job performance.

It would benefit the employer to treat employees with an SUD rather than fire them. Many individuals do not see people with an SUD as people until the issue hits closer to home. Not all but some U.S. Businesses have realized the importance of intervention which is where the employee assistance programs (EAP) come into play. (Elliott, K., & Shelley, K. 2005). There are not enough employers practicing these things. How would you feel if it was your daughter, your son, your brother, etc. who had an SUD? Would you help them succeed or would you turn your back on this person? Unfortunately, due to the stigma attached to addiction it is extremely difficult to ask for help or reach out for it.

Not only is this an important to have a protocol set in place to assist someone who has an SUD rather than dismiss them, but due to the increasing drug epidemic in the United States it would only make sense to have a protocol set in place. With the pandemic COVID-19 during the Opioid Epidemic there is a sever concern for the rise of addiction. Not only addiction from substances but other addictions may come in to play along with additional mental health issues.

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Have you ever thought of the repercussions of isolation? Human beings are meant to be social beings.

There are laws set in place now that help people with SUD when it comes to employment. People who suffer from an SUD normally have an arrest record. While on a job interview the employer is not allowed to ask you if you have been arrested or incarcerated, however, upon hiring they can run a background check so is it better to self-disclose? The problem with this is due to the lack of education on active addiction as well as people in recovery this can be an obstacle for individuals especially if they are working towards changing their lives and participating in a life of recovery. Not only that it is hard to self-disclose with such a stigma attached to drugs addiction and if you're sitting there reading this and do not understand what I mean by stigma let me ask you this one question: When I say drug addict or alcoholic what picture comes to mind? There are so many different names attached to the word addict; junkie, loser, failure, lowlife, trash, criminal, moral deficiency, and so on and so forth.

Companies should to be more progressive especially with the opioid epidemic and now the COVID-19 pandemic, employers need to start thinking about the possible wreckage that it will leave behind not to mention a way to deal with the opioid epidemic. I cannot even express how important it is for employers to implement mental health days and SUD falls into the category of mental health. Drug testing in the work place should not be a tool used to dismiss people but to hold employees accountable and then inform them that the company will help them receive assistance for their SUD and it would be contingent on their future employment. Not to mention that the data presented has shown that it is more cost effective for the company then letting someone go from the company.

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Companies could work closely with the treatment facilities and therapist for individuals with an SUD to make sure that they are at a level where they can return to work and be successful in recovery. Recovery is about balancing every aspect of your life along with changing everything you use to do in active addiction. Understanding can help the company and the employee suffering from the SUD. SUD is not something that is fixed overnight it is a constant battle and struggle long term treatment is essential for the success of someone suffering from an SUD and for the success of the company as well.

### Implications for research

There should to be more research based on people who are in active addiction versus those who are in recovery compared to the general population. There was not enough research on before recovery and after recovery during my search for research for this thesis. Doctors need to be more educated as well to the prescribing of medication. I am in recovery for over two years now and when I had gone to get my gallbladder removed I had expressed that I did not want any narcotics and when I was in recovery they had administered narcotics because that was what the doctor ordered and there was nothing else they could give me. Now for me this was not an issue because I had worked on the major things I needed to work on with therapy and SUD treatment but this is not the case for everyone.

Education is key for a lot of issues that need to be resolved when it comes to the issue of SUD. Educating the younger generation for prevention as well as educating older generations to reverse the stigma attached to an individual with SUD. Education is so important especially for prevention right now. There needs to be research conducted for some type of analysis with

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companies and individuals who are educated in addiction versus those who are not educated on SUD.

Another aspect that requires more research is the effects that the current pandemic has had on individuals especially in the workforce. How have people been coping with the loss of work? What about the essential workers? How are they coping with the devastation that some have witness? Are they turning to unhealthy methods to cope with the traumatic experiences from the pandemic? How are we helping as a society?

In conclusion, with all the research found supporting this thesis and then the research that finds that there is no relation between SUD, poor job performance and productive there needs to be more. With all the research and technology available there should be more. I was extremely taken aback when I did not find more current research on SUD and job performance and productivity. Especially with the Opioid epidemic to not have a significant amount of research with this crisis going on is just a little unsettling. A lot of people are dying due to this epidemic that is going on and most people decide to turn a blind eye or blame the family for the person who suffered from an SUD. The worst comment that I have ever seen was someone state that one less lowlife on the streets. The stigma attached to SUD makes individuals who suffer from an SUD have a secret life it is a shameful thing according to society. There are so many different addictions out there. Why is there such a stigma attached to SUD?

Especially with the opioid epidemic being so prevalent in today's world I was surprised at the lack of research on employees in recovery versus those in active addiction along with job performance and productivity. Even with the changes to the Human Resource Administration, People who are on public assistance and have an SUD are required to attend treatment and are



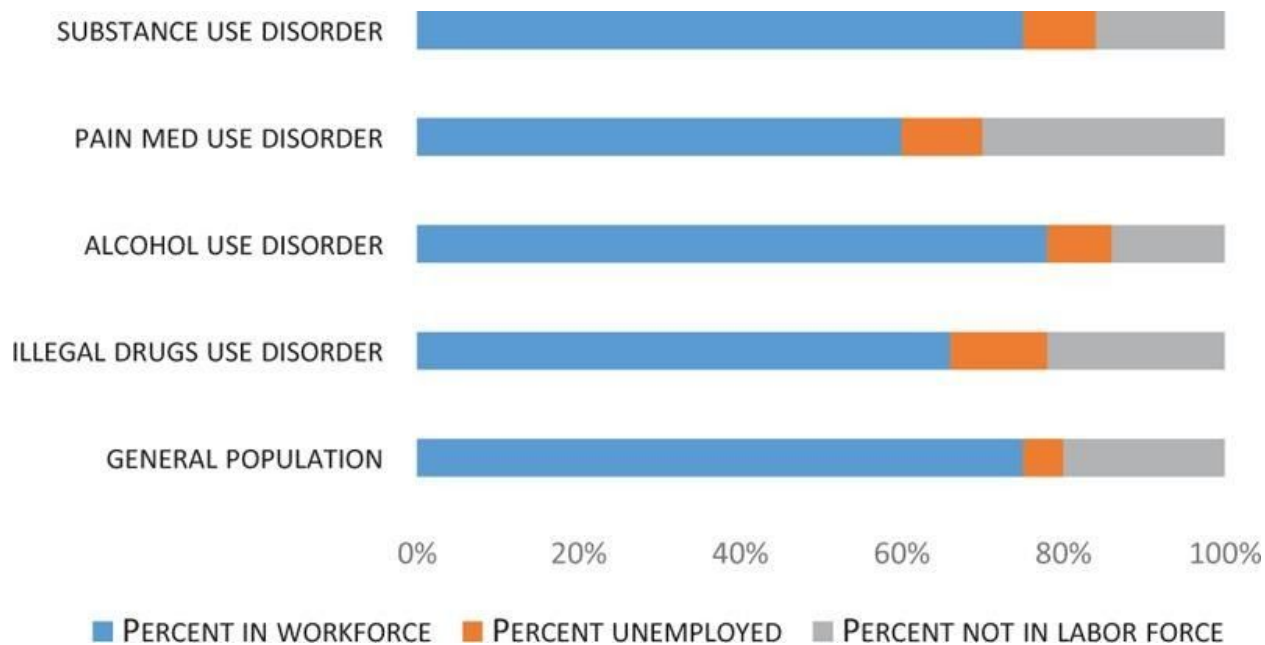
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required to attend their job readiness program along with a whole slew of requirements. It is required to recertify after 90 days on Public assistance in New York and if they do not attempt to get employment their public assistants are terminated unless the treatment center they attend recommends more treatment. There is a data base for this why is it not being utilized in a study. Society is attempting to work towards understanding and determining a more efficient way to help people who suffer from an SUD but are any of these methods effective.

Data

## **FIGURE 1**

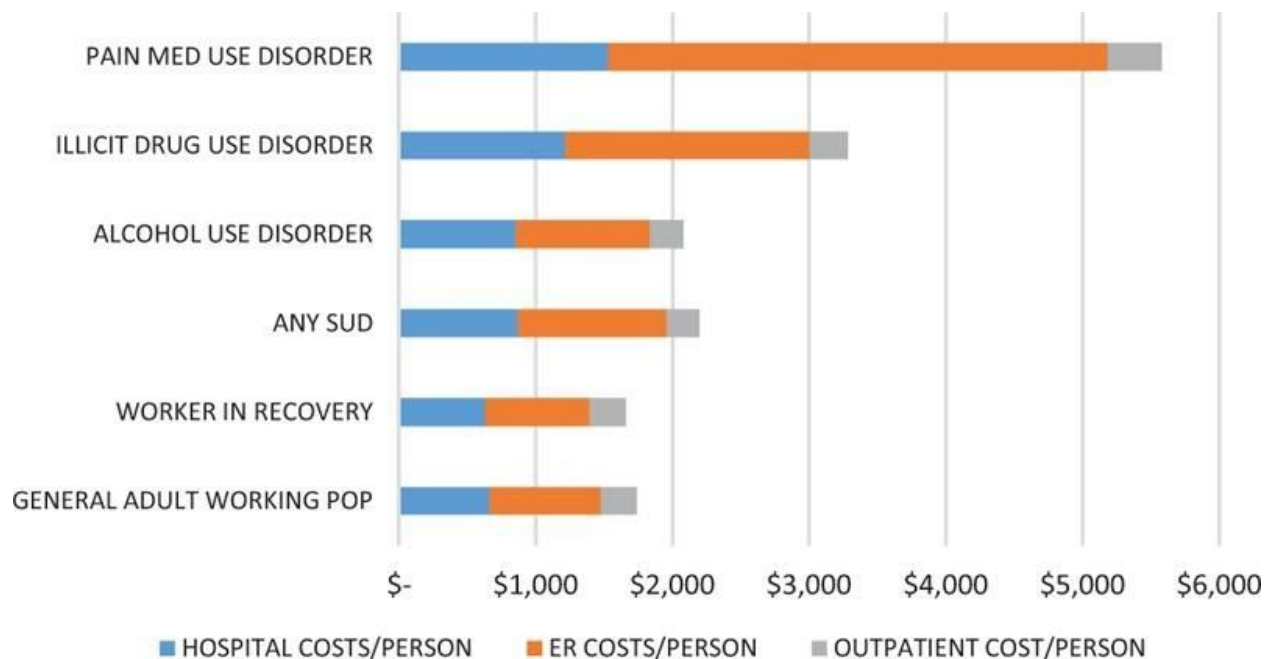
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Workforce participation.

(Benham, 2017)

**FIGURE 2**



Employers' per capita health care costs. (Benham, 2017)

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**TABLE 1**

## Demographics of Workers

	Overall US Workforce	Pain Med Use Disorder	Any Substance Use Disorder
Male	53%	61%	67%
Married	54%	28%	33%
Between 18 and 34 years	34%	66%	55%
Family income below \$20K	12%	24%	18%

(Benham, 2017)

**TABLE 2**

## Industry Representation in the NDSUH

	BLS 2014 (%)	NSDUH (%)	Number in NSDUH
Agriculture, forestry, fishing, and hunting	1.4	1.4	1,254
Mining	0.6	0.6	605
Construction	4.1	7.5	15,357
Manufacturing	8.1	10.5	7,380
Utilities and transportation	3.5	5.0	3,032
Information	1.8	2.3	1,386
Wholesale trade	3.9	2.5	1,697
Retail trade	10.2	10.5	10,452
Financial activities	5.3	6.5	4,022

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Professional and business services	12.7	11.9	8,214
Educational services, health	14.3	22.3	17,294
Leisure and hospitality	9.8	9.3	11,125
Government, public administration	14	4.6	3,118
Other services	4.2	5.6	4,193

(Benham, 2017)

**TABLE 3**

## Rates of Substance Use Disorders by Industry

	Any SUD	Alcohol Use Disorder	Illicit Drug Use Disorder	Pain Med and Opioid Use Disorder	Marijuana Use Disorder
Entertainment, recreation, food	15.3	12.1	5.7	1.6	3.5
Construction	15.0	12.4	4.4	1.3	2.3
Wholesale, nondurable	10.6	9.4	2.4	0.7	1.2
Professional, mgmt., admin	10.3	8.6	2.7	0.9	1.6
Mining	10.3	9.6	1.0	1.0	0.1
Retail	9.8	7.9	3.3	0.9	2.1
Information, communications	9.7	8.2	2.3	0.6	1.4
Finance, insurance real estate	9.1	8.1	1.5	0.3	1.0
Wholesale, durable	8.7	8.1	1.3	0.4	0.9

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Other services except publ. admin	8.7	7.1	2.5	1.0	1.6
Agriculture	8.6	7.5	1.7	0.4	1.2
Manufacturing, durable	8.4	7.5	1.5	0.8	0.6
Manufacturing, nondurable	8.0	6.7	2.1	0.6	1.1
Transportation, utilities	7.5	6.6	1.7	0.6	0.9
Education, health, social services	6.4	5.4	1.5	0.5	1.0
Public administration	5.7	5.0	0.9	0.5	0.5
Overall average all industries	9.4	7.9	2.5	0.8	1.5

(Benham, 2017)

**TABLE 4**

## Workers in Recovery Have the Lowest Turnover and Absenteeism Rates

	General Work Force	Any SUD	Alcohol Use Disorder	Illicit Drug Use Disorder	Pain Med Use Disorder	Marijuana Use Disorder	In Recovery
Missed work days for injury, illness past year	8.4	10.2	9.4	13.0	22.2	10.6	8.3
Missed work days for other reasons past year	2.1	4.7	4.7	5.4	6.8	4.8	1.2
Total missed work days past year	10.5	14.8	14.1	18.4	29.0	15.4	9.5

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Worked for more than one employer in last year (%)	25	36	36	42	42	45	23
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(Benham, 2017)

**TABLE 5**

## Health Care Use is Highest for People with a Pain Medication Use Disorder

	General Work Force	Any SUD	Alcohol Use Disorder	Illicit Drug Use Disorder	Pain Med Use Disorder	Marijuana Use Disorder	In Recovery
Hospitalized overnight last year (%)	7.4	7.9	7.9	9.5	17.0	8.1	7.3
Hospital nights per person last year	0.3	0.3	0.3	0.5	0.6	0.5	0.2
Emergency room visits last year	0.4	0.6	0.5	1.0	2.0	0.8	0.4
Outpatient visits last year	2.6	2.3	2.4	2.7	3.9	2.5	2.6

(Benham, 2017)

**TABLE 6**

## Behavioral Health and Nicotine

	General Work Force	Any SUD	Alcohol Use Disorder	Illicit Drug Use Disorder	Pain Med Use Disorder	In Recovery
Serious psychological distress past year (%)	4	12	11	20	28	3
Anxiety disorder past year (%)	5	11	11	14	20	6
Depression past year (%)	6	11	11	15	22	7
Percent cigarette use - past 30 days use (%)	23	49	44	66	68	19
Percent nicotine dependence past year (%)	12	25	22	47	48	10

(Benham, 2017).

**TABLE 7**

## Extra Costs of Missed Work by Industry

	Per Capita Annual Extra Cost of a with an SUD, \$	Per Capita Annual Extra Cost for a Worker with a Pain Medication Use Disorder, \$	Per Capita Annual Costs Avoided for Each Worker in Recovery (\$)
Agriculture	\$187	\$1,668	\$90

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Mining	\$881	\$(764)	\$422
Construction	\$1,040	\$455	\$499
Manufacturing: Durable goods	\$1,399	\$14,830	\$671
Manufacturing nondurable goods	\$1,692	\$1,677	\$812
Transportation and warehousing	\$383	\$3,125	\$184
Information, communications	\$3,941	\$27,173	\$1,891
Wholesale durable	\$(893)	\$2,468	\$(428)
Wholesale nondurable	\$886	\$2,463	\$425
Retail trade	\$1,284	\$225	\$616
Finance, insurance, real estate	\$1,169	\$2,373	\$561
Professional, mgmt., admin	\$2,604	\$6,057	\$1,250
Education, health, social services	\$887	\$5,062	\$425
Entertainment, recreation, food	\$795	\$2,490	\$381
Public administration	\$1,406	\$(162)	\$674
Other services	\$945	\$2,417	\$453

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Negative numbers are likely associated with small numbers of workers in some categories. Mining represents 0.6% of the NSDUH employed respondents, so a small number of workers with an SUD in that sector with unusually high or low absenteeism may skew responses. (Benham, 2017)

**TABLE 8**

## Turnover Costs

	Average Sector Turnover rate (%)	Turnover Rate for Workers with SUDs (%)	Workers in Recovery (%)	Per Capita Turnover Cost <sup>a</sup> (\$)	Per Capita Turnover Cost if Any SUD	Per Capita Excess Turnover Cost if SUD	Per Capita Savings of Worker in Recovery
Agriculture	20	27	20	\$1,535	\$2,046	\$512	\$537
Mining	27	41	27	\$5,044	\$7,597	\$2,553	\$2,491
Construction	27	32	26	\$4,440	\$5,317	\$877	\$987
Manufacturing, nondurable	19	32	19	\$3,085	\$5,052	\$1,968	\$2,074
Manufacturing, durable	19	28	18	\$2,601	\$3,947	\$1,347	\$1,393
Transportation, utilities	21	31	21	\$2,871	\$4,284	\$1,413	\$1,413
Information, communications	24	43	23	\$5,068	\$9,137	\$4,069	\$4,140
Wholesale, durable	21	34	21	\$3,681	\$5,924	\$2,243	\$2,301
Wholesale, nondurable	20	26	21	\$2,125	\$2,682	\$557	\$488
Retail	26	39	26	\$2,682	\$4,075	\$1,393	\$1,393
Finance, insurance real estate	21	28	20	\$3,974	\$5,299	\$1,325	\$1,451

## Substance Use Disorder, Job Performance, and Productivity

Professional, mgmt., admin	25	32	25	\$4,506	\$5,767	\$1,262	\$1,322
Education, health, social services	25	36	25	\$3,762	\$5,417	\$1,655	\$1,655
Entertainment, recreation, food	36	49	36	\$3,167	\$4,271	\$1,104	\$1,133
Public administration	18	25	18	\$2,759	\$3,711	\$953	\$953
Other services except publ. admin	26	44	27	\$3,490	\$5,862	\$2,372	\$2,282

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\*Average turnover, recruitment, replacement, and training costs estimated at 21.4% of annual salary. (Benham, 2017)

**TABLE 9**

## Per Capita Costs to Employers for Each Untreated Worker with an SUD

	Prevalence of SUD (%)	Excess Cost for Each Employee With an SUD (\$)
Agriculture	8.6	\$2,689
Mining	10.3	\$8,934
Construction	15.0	\$6,813
Manufacturing, nondurable	8.0	\$6,907
Manufacturing, durable	8.4	\$6,096
Transportation, utilities	7.5	\$5,123
Information, communications	9.7	\$13,534

## Substance Use Disorder, Job Performance, and Productivity

Wholesale, durable	7.4	\$5,487
Wholesale, nondurable	10.6	\$4,024
Retail	9.8	\$5,815
Finance, insurance real estate	9.1	\$6,925
Professional, mgmt., admin	10.3	\$8,827
Education, health, social services	6.4	\$6,760
Entertainment, recreation, food	15.3	\$5,523
Public administration	5.7	\$5,573
Other services except publ. admin	8.7	\$7,264
Overall average	9.4	\$6,643

(Benham, 2017)

**TABLE 10**

## Employer Costs Avoided for Each Worker in Recovery

Industry Sector	Savings Per Worker in Recovery
Agriculture	\$1,155
Mining	\$3,890
Construction	\$2,373
Manufacturing, nondurable	\$3,823
Manufacturing, durable	\$3,495
Transportation, utilities	\$2,252

## Substance Use Disorder, Job Performance, and Productivity

Information, communications	\$8,466
Wholesale, durable	\$1,806
Wholesale, nondurable	\$1,900
Retail	\$3,134
Finance, insurance real estate	\$2,950
Professional, mgmt., admin	\$4,322
Education, health, social services	\$2,998
Entertainment, recreation, food	\$2,356
Public administration	\$2,815
Other services except publ. admin	\$3,773
Overall average all occupations	\$3,219

(Benham, 2017)

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