Habitual Intravenous Drug Use and the Connection to Self-Medication in the Missoula County Area

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Recommended Citation
https://scholarworks.umt.edu/utpp/133
HABITUAL INTRavenous DRUG USE AND THE CONNECTION TO SELF-MEDICATION IN THE MISSouLA COUNTY AREA

By

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Undergraduate Thesis
presented in partial fulfillment of the requirements
for the University Scholar distinction

Davidson Honors College
University of Montana
Missoula, MT

May 13th, 2017

Approved By:

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Health and Human Performance
Abstract

Gaul, Meaghan, B.A., May 2017

Health and Human Performance

Community Health and Preventative Sciences

Habitual Intravenous Drug Use and the Connection to Self-Medication in the Missoula Country Area

Faculty Mentor: Annie Sondag

According to the National Alliance on Mental Illness (NAMI) about one-third of people living with mental illness in the US also experience substance abuse. It’s becoming apparent that dual diagnosis is common in our nation. The National Institute on Drug Abuse (NIDA) insists that one doesn’t simply cause the other.

The purpose of this study is twofold. First, to examine the relationship between mental illness and intravenous drug use as self-medication among clients visiting the non-profit, Open AID Alliance (OAA), in Missoula, MT. Second, to explore the barriers to seeking mental health care among intravenous drug users who report mental health issues.

This descriptive study will use a quantitative approach to data collection. Quantitative data will be collected via a Qualtrics survey containing six questions inquiring about drug use and mental health self-medication. Participant recruitment will take place at OAA where individuals visiting the syringe exchange program will be invited to volunteer for the study. Volunteers will be provided an electronic tablet upon which they can link to and complete the survey. Once submitted to the Qualtrics platform, the responses will be anonymous. Quantitative data will be analyzed descriptively and will include frequencies, means and cross-tabulation calculations. Charts and graphs will be used to display data.

The results from this study will provide staff at OAA an estimate of how many intravenous drug users accessing their services suffer from mental illness, diagnosed or undiagnosed. It will allow OAA to evaluate their clients’ barriers to mental health support. Further, it will allow them to address these barriers with their clients and assist them in accessing services. Hopefully, results from this study will encourage some of Missoula’s mental health support systems to enhance their outreach to the intravenous drug community.
Habitual Intravenous Drug Use and the Connection to Self-Medication in the Missoula County Area

**Literature on Drug Abuse as Self-Medication and Comorbidity**

According to the National Alliance on Mental Illness (NAMI), about one-third of people living with mental illness also experience substance abuse. NAMI also reported that when specifically looking at the United States’ drug abuse community, about one-half of those individuals experience mental illness (National Alliance, n.d). The National Institute on Drug Abuse (NIDA) makes it clear that one doesn’t simply cause the other. In some cases, drug use leads to mental illness. In others, it’s mental illness that leads to drug use. The NIDA has found that since mood disorders increase vulnerability to drug abuse and addiction, the treatment of mental illness can result in lowered drug use, especially in the cases of self-medication (National Alliance, n.d). Research in Montana pertaining to the comorbidity (the simultaneous presence of two chronic diseases in the same patient) of drug addiction and mental illness is scarce. Knowledge pertaining to drug abuse and its relationship with mental illness is still in the early processes of discovery.

Nora Volkow did an assessment of various studies on comorbidity in 2001. She highlighted that while the definition of comorbidity is becoming well understood, the mechanisms of mental illness and drug abuse and the influence drugs have on mental illness is still poorly understood (Volkow, 2001). A critical question that remains unanswered is why the abuse of drugs appears to trigger mental illness in users with no previous mental health history (Volkow, 2001). Volkow discussed that stress disorders (PTSD, anxiety, etc) have symptoms that can be momentarily self-medicated by the injection and use of different drugs. However, many drug’s withdrawal periods can interrupt the body’s natural responses to stress based mental illness symptoms, thus reinforcing continued self-medication through injection drugs. Drug abuse and stress disorders also both activate the same stress circuits in the brain, so they affect our body systems synergistically (Volkow, 2001).

Another study, conducted by Drake and Wallach (1989), examined 187 chronic mentally ill individuals and analyzed their success in society. About one-third of those 187
individuals abused street drugs (heroin, meth, cocaine etc). Patients who were diagnosed with the comorbidity of drug abuse and mental illness were, on average, younger and less able to manage their personal lives among their communities. They lacked food resources and adequate finances while also having higher incidences of hostility and suicidal thoughts. If the individuals were utilizing mental health support, they tended to be found as noncompliant with the services.

Grove et al. (1979) analyzed the relationship of drug use and the mental health of young addicts aged 18-29. The study found that many users identified some of their use as a way to temporarily alleviate mental health symptoms and to enable them to function properly. The study found however, that the young addicts viewed their drug use as an overall positive influence on their lives. They tended to over report the benefits of their drug use and under report the costs when asked deliberate questions about their injection habits. It was also found that a large number of those surveyed occasionally used drugs consciously as a coping strategy for depression like symptoms. The perception that drug use can increase one’s mental health status was shown as a strong motivator for young addicts to continue their use (Grove et al., 1979). A final finding of the study was the discovery of a strong positive correlation between increased drug use and decreased mental status. Conclusively, this study found that heavy drug use reflects an attempt to cope with psychological problems. Grove et al. (1979) speculates that the societal and interpersonal stressors are motivating factors for addicts to inject drugs with pharmacological properties that help them cope. This allows a potential cycle to exist, where drugs are injected to alleviate stress, but later the withdrawal symptoms contribute to added stress, leading to more drug injection (Grove et al., 1979).

Research pertaining to the comorbidity of mental illness and illicit drug abuse is limited at the national level, especially for those living with medically undiagnosed mental illnesses. More so, due to a lack of awareness around the issue, and a heightened stigma towards drug use in Montana, state research surrounding this topic is currently inconclusive. “The Behavioral Health Barometer of Montana” report was conducted in 2015 and offers a snapshot of mental illness and drug abuse in Montana. However, there is no cross-referencing of those two variables in this report. For reference, in 2013-2014, 4.7% (36,000) of adults in Montana had been diagnosed with a serious mental illness.
An SMI is defined by the Substance Abuse and Mental Health Services Administration (SAMHSA) as “adults aged 18 or older who currently or at any time in the past year have had a diagnosable mental, behavioral, or emotional disorder (excluding developmental and substance use disorders) of sufficient duration to meet diagnostic criteria specified within the DSM-IV that has resulted in serious functional impairment, which substantially interferes with or limits one or more major life activities” (Substance, 2015). Of those 36,000 people, 52.5% of them had not received mental health support or counseling (Substance, 2015). For illicit drug abuse, 2.1% (18,000) of persons aged 12 or older were dependent on or abusing illicit drugs. Ninety-three percent of those individuals had never received treatment for their drug addiction. ‘Treatment’ is referring to hospital (inpatient), rehabilitation facility (inpatient or outpatient), mental health center, emergency room, private doctor’s office, self-help group, or prison/jail (Substance, 2015).

The NIDA also conducted a couple different studies looking at common barriers to treating the comorbidity of drug abuse and mental illness in the US. There is a lot of background research currently supporting the claim that comorbid conditions need to be treated concurrently (National Institute, n.d). However, mental health care systems and substance abuse treatment and support systems are overall disconnected from each other. Furthermore, different insurance providers don’t cover the same types of treatment, making treatment of both occasionally impossible (National Institute, n.d). Many drug users identify the existence of a stigma against them at mental health focused support centers (National Institute, n.d). Health providers also tend to understand how to treat mental illnesses but don’t have proper training on how to treat substance abuse disorders (National Institute, n.d). When considering solely substance abuse treatment centers, a lot of the workers are biased against using any medications to treat for mental illness, including those proven to be helpful for mood/anxiety disorders. One final barrier to comorbid treatment centers is that many of those who need treatment cannot access it because they are in the criminal justice system (National Institute, n.d).
Purpose of the Study

The purpose of this study is to examine the relationship between mental illness, diagnosed or undiagnosed, and intravenous drug use as self-medication among people who inject drugs (PWID) in the Missoula area. Nationwide, it is understood that comorbidity is common between mental illness, especially stress disorders, and illicit drug addiction. However, very little consideration has been focused on this topic in the state of Montana. For PWID, the assumption is that many are consciously suffering from mental illness and potentially living their lives undiagnosed without any treatment. This study planned to explore whether or not PWID in the Missoula area are suffering from mental illness based on their own self-reflection. The next goal was to determine whether or not those surveyed, on their own reflection, are injecting drugs to, at least partially, cope with mental illness symptoms. Furthermore, the study sought to determine if PWID in the Missoula area have reached out to obtain mental health care and to determine their barriers to those services.

Importance of the Study

Results from this study will give Open Aid Alliance (OAA), a nonprofit that works closely with PWID in the Missoula area, an idea of how many intravenous drug users utilizing their services suffer from mental illness, diagnosed or undiagnosed. Furthermore, it will shed light on the potential that those suffering with the comorbidity of mental illness and substance addiction are furthering their addiction by injecting drugs to alleviate their symptoms. It will educate those working with PWID in Missoula that there is a possibility that many of them are stuck in the ‘cycle’ referenced by Grove et al (1979). OAA will also get a snapshot of their clients’ barriers to mental health support and will have the opportunity to address those barriers and assist their clients in getting the mental health services they need. OAA will be able to evaluate if their outreach to mental health services in Missoula needs to be improved to help increase the percentage of PWIDs using those services.
Methods and Procedures

This project utilized an electronic survey to collect quantitative data surrounding mental illness and the injection of drugs as self-medication. The survey was created using Qualtrics Survey Software and was designed to gather data about the PWID community of Missoula. This system was chosen because it utilizes high firewall and security scans on a regular basis. Qualtrics also uses Transport Layer Security (TLS) encryption for any data entered into the program. This allowed for the high degree protection of the entered data. This level of security was essential for this study since the data was taken from a vulnerable population that is also commonly associated with paranoia towards data collection.

The study took place at Missoula Open Aid Alliance. Many members of the drug injection community in Missoula use the syringe exchange program (SEP) at OAA on a weekly basis. A SEP is defined by the CDC as

“community-based programs that provide access to sterile needles and syringes free of cost and facilitate safe disposal of used needles and syringes. As described in the CDC and U.S. Department of Health and Human Services (HHS) guidance, SEPs are an effective component of a comprehensive, integrated approach to HIV prevention among PWID. These programs have also been associated with reduced risk for infection with hepatitis C virus. Most SEPs offer other prevention materials (e.g., alcohol swabs, vials of sterile water, condoms) and services, such as education on safer injection practices and wound care; overdose prevention; referral to substance use disorder treatment programs including medication-assisted treatment; and counseling and testing for HIV and Hep C” (Centers, n.d).

The only identifiers taken from the volunteers were age and gender, so HIPPA didn’t play a role in this specific study.
Survey Development

The survey was written to explore whether Missoula’s PWID population was suffering from mental illness, and if symptoms contributed to their injection drug use. Further, the survey sought to determine if this population was reaching out to mental health support and their barriers to that support. (see Appendix A)

The survey consisted of six questions. Several of the questions used a filtering system. If a volunteer identified as having a mental illness for question 3, they proceeded to question 4. If their response was ‘none’ they were directed to question 6. This was to direct survey responses about mental illness and drug injection to only user’s who identified as having a mental illness. However, the filtering still allowed the study to look at their barriers to mental health support in case they’d considered support in the past. A similar process was set for question 4, where a ‘yes’ response continued the survey to question 5, and a ‘no’ directed the volunteer to question 6. This was to improve the survey’s flow while allowing the survey to gather information about mental health barriers for all drug users in Missoula, not just those self-medicating via injection. For Question 5, if a user answered ‘yes’, they were directed to the end of the survey and a ‘no’ directed them to question 6. This was to eliminate users who had successfully used Missoula’s mental health systems from the question pertaining to barriers towards the accessibility of those systems. Question 3 and question 6 allowed participants to check multiple responses.

Participant Recruitment

The recruitment of volunteers for the survey was straightforward and limited to clients of the syringe exchange program at OAA. When an injection drug user entered the SEP at OAA, they would fully go through the exchange process. Their dirty needles would be disposed of in exchange for clean ones, harm reduction supplies would be offered, referral services would be explained and they would be ready to leave the exchange with all questions answered. Once the formalities of the exchange were complete, the client would be asked if they were interested in participating in an anonymous survey that I, the needle exchanger, was conducting for the University of Montana’s honors college. To gain
consent, the details about the project and their rights as a volunteer were read to them. (see Appendix B)

Upon consent, volunteers read six questions from the survey in the private SEP area at OAA and the volunteer answered each question to the best of their ability. When the survey was complete, each volunteer was asked if they required any other assistance from the SEP and thanked for contributing to the project's research. Each survey submission took approximately 5 minutes. There was no compensation for volunteering, however every volunteer was informed at the end of the survey about how their submission would help further OAA's knowledge base surrounding their clients and in the end help them improve their resources for Missoula's PWID population.

Results

Frequencies and percentages were calculated for each question topic posed by the survey: age, gender, mental illness, the use of injection to cope with symptoms, the use of mental health support systems, and barriers to accessing those systems. Due to the filtering system in place for the survey, a couple of the questions saw a slight drop in the number surveyed depending on specific answers given by volunteers to previous questions.

Participant Demographics

Twenty-four volunteers completed the survey. Eleven (45.83%) were between the age of 31-40 and five (20.83%) were between the age of 41-50. Six (25%) of the surveyed population were aged 18-30. A near even split was found between gender, with 13 (54.17%) respondents identifying as female and 11 (45.83%) identifying as male.

Mental Illness

Nearly two-thirds of the participants reported suffering from depression and nearly half reported suffering from anxiety. Only four of the 24 participants reported no mental illness. The results for mental illnesses listed on the survey, whether self or medically diagnosed, can be found below in Figure 1.
Of the 20 volunteers who identified as suffering from mental illness, nearly three-quarters of them (n=15) said they inject drugs to cope with symptoms of those illnesses. Two-thirds (n=10) of the individuals who reported injecting drugs to cope with mental illnesses also reported previously seeking out mental health support in Missoula.

Most volunteers who had previously reached out to mental health support expressed signs of dissatisfaction with their experiences. To analyze why some volunteers were displeased with mental health support or why they never reached out to any services at all, the survey explored common barriers to seeking mental health services in Missoula.
Due to the filtering process of the survey described in the methods section, only 14 out of the 24 respondents answered the 6th question pertaining to barriers to mental health services in Missoula. Four of the 14 volunteers said they were not currently struggling with mental health issues. Five did not believe their drug use was related to coping with their identified mental illnesses. The other 5 volunteers were suffering from mental illness, injecting to cope with symptoms and had never before successfully reached out to mental health services.

The three most common barriers to mental health support in Missoula were; 1) “believing that mental health staff would not understand them or their drug use” (n=4); 2) “believing they could handle symptoms on their own” (n=3); and 3) “having no health coverage/being unable to afford the cost” (n=3). Figure 2 (see above) shows the breakdown of the barriers identified by 14 volunteers.

Three users identified having successfully used mental health support in the past (21.43%) and, cross tabulation revealed that those three of users also didn’t identify their drug use as a coping mechanism for their mental illnesses.

**Discussion**

The connection between mental illness and substance abuse has been clearly established in the literature. The National Institutes of Drug abuse (NIDA) found that when compared to the general U.S population, those diagnosed with mood or anxiety disorders are twice as likely to also suffer from a drug abuse disorder. Volkow (2001) studied how stress disorders have symptoms that are easily mediated by the injection of different drugs. However, she discovered that withdrawal symptoms also tend to interrupt our bodies natural ability to cope with stress, thus reinforcing drugs as self-medication.

While it is not possible to establish cause and effect in regard to mental illness and substance abuse, the results from this study clearly support the belief that many people who use injection drugs do so because they perceive that the drugs help them cope with a mental illness. For the majority of people in this study, mental health issues such as depression and anxiety were the most frequently reported, while other less frequently reported mental illnesses included PTSD and bipolar disorder. With anxiety and depression being the top choices of the participants in this study, and all participants
being regular intravenous drug users, the results reinforced the findings of the NIDA that drug abuse is extremely common among those suffering with mood/anxiety disorders. This study contributed evidence to the proposition that the NIDA’s belief about comorbidity also exists in the PWID sub-community of Missoula, MT.

Three-quarters of this study’s participants who identified as suffering from mental illness also consciously identified their injection drug use as a coping strategy for mood/anxiety disorder symptoms. This supports the belief identified by Grove et al. (1979) that drug injection may be regarded as a positive aspect of the user’s life if it helps alleviate mood/anxiety disorder symptoms. This potential positive effect of the drug injection may be affecting the likelihood that one will continue to inject drugs as long as they suffer from mental illness symptoms. To reiterate, the comorbidity cycle, identified by Grove et al, describes external life stressors and the stressors of mental illness inducing increased drug injection to cope. That drug injection then increases one’s external stressors and resets the cycle. The use of injection drugs to cope with mental illness symptoms found in this study confirms that the cycle exists within the Missoula drug injection population as well.

Alleviating mental illness symptoms with injection drugs has been shown to reinforce the desire to inject said drugs, and three-quarters of injection drug users suffering from mental illness in this study inject as a coping mechanism. This study inferred that treating for mental illness with other, more traditional outlets, may decrease the frequency of drug injection among PWID in Missoula. Two-thirds of those injecting drugs to cope with mental illness said they’d reached out previously to mental health support. However only three out of the 14 volunteers who identified barriers to mental health support said they’d successfully used mental health services in Missoula. Many individuals in this study did not seek mental health care because of their inability to pay for services or their fear of being misunderstood by health care providers. The individuals who were able to access services also reported overall negative experiences with healthcare providers in Missoula.

The NIDA found that some of the most common barriers to treatment for mental health and drug abuse in the US were health care providers being untrained at treating those suffering from drug abuse and mental illness, the unlikelihood for insurance
companies to cover comorbid treatments, and substance abuse treatment centers being biased towards not prescribing medications for mental illness. The results of this study suggest that the PWID population in Missoula is struggling with similar barriers identified nationally by the NIDA, including the cost of treatment and a lack of understanding between drug users and health care workers. These conclusions suggest that the Missoula community needs to address these barriers and work towards solutions to help the drug injection population.

Limitations
This study offers insights to the local community regarding the relationship between injection drug abuse and mental health issues, however, the findings should be interpreted in light of the following limitations. First, the sample recruited for this study was not randomly selected. Any individual who entered the syringe exchange at OAA while the researcher was present (usually Tuesdays or Thursdays) was asked to volunteer to participate in this study. Those included were any injection drug users who consented to fill out the survey after utilizing the SEP’s services, so the sample was recruited through convenience for the researcher. Second, this study relied on the volunteers’ self-perceptions of mental illness. There was no requirement for individuals to be medically diagnosed with mental illness to participate, they were just asked to report if they thought they were suffering from mental illness symptoms. Third, there was no clarification regarding whether the volunteers identified their drug use to be solely a coping mechanism for mental illness symptoms or only partially. Fourth, this study had a very small sample size and makes conclusions derived from the survey difficult to generalize to the entire Missoula PWID population.

Recommendations
Given the high percentage of volunteers in this study that reported a connection between their drug abuse and mental health issues, and the many identified barriers to treatment in Missoula, the researcher recommends the following actions:
1.) Open Aid Alliance should address and report to the Missoula City-County Public Health Department the comorbidity prevalence in this sample of PWID population and the high frequency with which PWID use injection drugs as self-medication for mental illnesses. Hopefully by bringing these issues to the Health Department’s attention, funding and planning for improving the Missoula PWID sub-community’s access to mental health support systems would become a focus.

2.) Open Aid Alliance should expand their community outreach efforts to Missoula health care centers like walk-in clinics (CostCare etc) or Partnership Health Center and educate them on the importance of recognizing and treating for the comorbidity of drug abuse and mental illness. This will hopefully decrease the existing stigmas towards drug users that create barriers to them accessing mental health support.

3.) Ultimately, OAA and other organizations that serve PWID should seek policy/legislation that would increase access to mental health services.

Conclusions
Clearly, a majority of individuals who are using injection drugs also suffer from mental illness. Furthermore, a substantial number of injection drug users report using drugs to self-medicate against the negative effects of their mental illness. The presence of comorbidity of drug abuse and mental illness nationwide has been established as common knowledge and now, this study provides evidence that comorbidity is a serious issue effecting the PWID population of Missoula as well. Rather than treating people who abuse substances as criminals, the Missoula community, and the nation as a whole, needs to start evaluating substance abuse as a disease that is potentially being reinforced by the suffering caused by underlying mental illness. We need to understand that many users are injecting to cope with mental health symptoms that could be treated in different ways. We need to analyze if treating drug users mental health illnesses through clinics and support systems could help them rely less on injection drugs. If these conclusions are valid, treatment could potentially lower the overall frequency of injection drugs in the Missoula population.
To help the PWID population access that treatment, health care professionals need to be trained to help treat substance abuse as well as mental illness so the negative stigma felt by drug users can be reduced. We also need to continue to evaluate our insurance and health care programs and address why this population has a hard time affording mental health care support. When we start viewing drug addiction as an illness and not a flaw, and care for the healing of others instead of the proliferation of stigmas, we can begin to see a population that really needs the support of their communities. The Missoula community could make a huge difference in the lives of those struggling with mental illness and drug abuse if we could just take some small steps to improve their access to mental health support.
Bibliography


Appendix A: Survey

1.) Age:
   - 18-25
   - 26-30
   - 31-40
   - 41-50
   - 51-60
   - 61+

2.) Gender:
   - Male
   - Female

3.) By your own self-reflection, are you suffering from any of the following mental illnesses?
   - Depression
   - Anxiety
   - PTSD
   - Bipolar Disorder
   - Panic Disorder
   - Other Mental Health Struggles (please specify) _________________________________
   - None

4.) By your own self-reflection, are you injecting to cope with any mental illness symptoms?
   - Yes
   - No

5.) If yes to self-medicating (using drugs to cope with symptoms), have you ever sought out mental health support?
   - Yes
   - No

6.) If you've considered mental health support but never reached out, why not?
   - No health coverage/can't afford the cost
   - Unaware of options of where to go for support
   - Believe that support will not understand them or their use
   - Afraid that treatment will cause members of community/family to have a negative opinion
   - Handling symptoms on own
   - No transportation/inconvenient
   - I've successfully used mental health support
   - Other barriers to reaching out for help (please specify) __________________________
   - Non applicable
## Appendix B: Consent Script

### Verbal Script for In-Person Consent

- Would you be willing to take some time today to volunteer and participate in a research project for my honors thesis at the University of Montana?
- If you agree to participate, the survey will only take about 5 minutes, and consists of 6 questions.
- The survey is completely anonymous, only for persons aged 18 or older, and no personal identifiers will be recorded.
- The data will be entered into a survey system called Qualtrics where all data is greatly protected.
- The analyzed data will be presented to the University of Montana at an undergraduate research conference, but individual answers to questions will be kept completely private and anonymous.

- The survey is completely voluntary, and you can skip any questions you don’t want to answer.
- You can also quit taking the survey at any time, and leave with no consequences.
- Hopefully this research project will help expand Open Aid Alliance’s knowledge about drug use and self-medication for mental illness to further help the drug community of Missoula.
- If you have any further questions about this survey, please ask me, Meaghan Gaul, at any time or call Open Aid Alliance at (406-543-4770)