What is Stopping Me from Stopping? Barriers to Evidence-Based SUD Treatment.

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The United States houses around 4% of the world's population, but approximately 33% of the world's prisoners (Lee, 2020). Currently, the United States has adopted a punishment model for crime, in hopes that criminalized behavior will become less desirable. This model is associated with various movements such as the Tough on Crime movement and the War on Drugs, both popularized in the 70's after crime surged in the 1960's (Lee, 2020; Murphy, 2013; Tsai & Gu, 2019). While the goal has been to decrease drug dependence, incarceration rates continue to rise and addiction remains a major issue within the general and prison populations and continues to disproportionately affect minority groups (Clement et al., 2019; Murphy, 2013; Tsai & Gu, 2019). After over 50 years of staying 'tough', many are asking if this approach is causing more harm than good. This review seeks to identify barriers to receiving evidence-based treatment for substance use disorders (SUD).

Background

According to the Bureau of Justice statistics, substance use disorder (SUD) is reported in 5% of the United States population; however, 58-63% of those who have been incarcerated reported having a SUD (Tsai & Gu, 2019; Andrade et al., 2018; Bronson et al., 2017). While it is also widely held that substance abuse treatment is effective and evidence-based in treating SUD, it's estimated that only 1 in 5 prisoners actually receive treatment during incarceration, and 80% of them are likely to return after being released (Pickering, 2020).

In the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013), SUD is defined by chronic, continued use despite the negative consequences and potential relapse associated (Pickering, 2020). One of the classifiers for many substance-use disorders is "a persistent desire or unsuccessful efforts to cut down or control [substance] abuse"

(American Psychiatric Association, 2013, p. 223). This definition brings to question whether the continued use of a substance and continual desire for that substance is completely voluntary (Pickering, 2020). While it is widely held that the initial use of any drug is a choice, whether the continued use of the substance is as much of a choice is still a question that is highly debated (Pickering, 2020).

The Present Study

In this systematic review, I aimed to identify various barriers to receiving substance use-treatment by evaluating studies published between 2012-2022. Studies were only accepted if they were peer-reviewed academic articles and had been published within the last 10 years. Advanced search keywords used: substance abuse OR substance use OR drug abuse OR drug addiction OR drug use AND prisoners OR inmates OR criminals OR offenders OR incarcerated people AND rehabilitation OR therapy OR treatment OR intervention AND criminalization. Using the Milligan OneSearch database, 339 results were returned by this search.

Articles chosen for this systematic review contained studies of U.S. adults regarding SUD and barriers to treatment. Articles that were not included mostly focused on women in the prison population, children and youth populations, or included studies from other countries. Forwards and backwards snowballing methods were also used to identify additional supporting sources from source bibliographies and reference lists. After reviewing 24 studies chosen based on the relevance of their titles and abstracts, 13 were chosen as studies and supportive articles for this review. These articles have been annotated and are located in the Appendix.

Among the annotated sources in the present review are interventions and observations of 101,497 total participants in different settings, under various conditions. Some of the studies listed in the table conduct quantitative analyses and surveys of Americans to identify whether

treatments were considered significantly effective or to identify any partiality in participant choices that may indicate stigma in the general population. Others are qualitative, with the purpose of gaining insight of drug users' experiences using personal interviews or to review the overall attitude of the media towards drug users.

Throughout this review, stigma is defined as an attribution of negative beliefs or stereotypes, also known as prejudice and discrimination (Fischer, 2020). Criminalization refers to the phenomena of making something criminal, or illegal; in this instance many substances (opioids, crack cocaine, etc.) are illegal and have minimum criminal charges per the U.S. law (Lee, 2020; Murphy, 2013; Tsai & Gu, 2019). Negative social stigma is considered a consequence of the criminalization of drug-use. This was originally intended to be a mediating consequence and was anticipated to yield reductionistic effects on drug use (Fischer, 2020; Tsai & Gu, 2019). Substance Use Disorder (SUD) will also be defined as above-mentioned, per the DSM-5 standards.

Table

In Table 1, key studies from the literary search are broken down based on sample characteristics, measurable outcomes, the barrier that is being studied, how many individuals were receiving SUD treatment, and the outcome of the study presented. Five studies were chosen for the table because they presented qualitative or quantitative data from an experiment or review. Other sources were not included in the table because they did not include studies themselves, other than in reference to support statistical data, but rather statistical and historical background information that was supportive to this review.

In the final two studies listed in the table, newer treatments for substance abuse are measured for effectiveness or patient satisfaction. In Frank's study (2018), 23 drug users were

interviewed; the interviews were then coded for similar themes. These interviews revealed that participants associated opioid use with danger, involvement with law enforcement, and instability, while they associated Methadone Maintenance Treatment (MMT) with safety, reliability, and an escape from criminalization. In the study by Lyons et al. (2019), mindfulness therapy is tested against the evidence-based practice of cognitive behavioral therapy (CBT). They found no additional significance in relation to CBT; however, both treatments appeared to alleviate symptoms of anxiety, PTSD, and drug cravings (Clement et al., 2019). These new treatment studies show ways that treatment centers, particularly those within the prison systems, can provide more effective treatments that may decrease recidivism, especially in the case of MMT. While treatments for SUD are becoming more specialized and effective, it appears that many individuals with SUD are still not receiving treatment (Clement et al., 2019; Pickering, 2020).

The first study in the table surveys 10,853 U.S. adults with SUD to determine the history of incarceration and SUD treatment. Of the participants, 2,670 had been incarcerated during their lifetime, which the author had concluded was consistent with previous research, as crime and substance use have been found to be strongly correlated. This is a point reiterated in various studies presented within this review. Tsai & Gu report that only 37% of the individuals with a history of incarceration had received alcohol use treatment, while only 18% had received drug-use treatment. The most common characteristics of users were white, male, veteran, low income, and history of homelessness (Tsai & Gu, 2019).

In a study by Clement et al., 144 studies were analyzed with 90,189 participants surveyed to determine correlations between self-stigma and help-seeking, drug and/or alcohol use, and self-stigma of mental health. They identify various types of stigma and how they can be barriers to seeking

and receiving mental health treatment. The study concluded that stigma is a significant barrier to seeking treatment and that self-stigma of help-seeking is directly associated with drug and alcohol use ($r = .64$, $SE = .01$, $p < .001$). (Clement et al., 2015).

The third source of the table by Lindsay & Vuolo (2021) includes a qualitative review of 400 media articles and includes 2 different experiments. In the review, race, treatment approaches, and the attitude of the author were all considered. Ultimately, they found that White individuals were most often humanized despite their usage, while Black individuals were more often criticized. Crack users were also more negatively stigmatized and chosen for harsher rulings than opiate users. This review was also supported by the experiments, which found that participants were significantly more likely to select a Black user for a criminal charge than a White user, while also displaying a more negative stigma towards heroin users in another study where the race of the user was unknown (Lindsay & Vuolo, 2021).

Collectively, these three sources demonstrate some of the many barriers facing those with SUD when it comes to receiving treatment. Whether it is self-stigma, experienced stigma, status, incarceration, drug type, or race, these can all be factors that may inhibit or prevent an individual from receiving or even seeking-out treatment.

Strengths & Weaknesses

Each study measured different barriers in different ways, however, each provides a look at barriers to effective SUD treatment. Many of the studies utilized large sample sizes and had relatively normal to large effect sizes. While the MMT study had a small number of participants that were gathered through snowballing techniques, rather than random sampling, participants relayed similar themes and associations when it came to the benefits of MMT over drug use. Also, it may be noted that, according to presented research, many individuals go without

treatment for SUD, and MMT is a newer treatment, likely with a smaller population in general. In this case, the 23 participants may not be considered a significantly low sample size, especially in the case of individual interviews.

In the case of the prison study (Lyons et al., 2019), individuals did participate from within prison and were also offered monetary compensation, rather than being selected at random. It was also not feasible to have two experimental groups running simultaneously, so groups were randomized into cohorts over a period. While this cannot completely account for history affects, this process was more feasible for a jail setting. While Lyons et al. did not find any significance in one treatment over the other, it can be said that the mindfulness treatment was effective in reducing symptoms (2019). The authors attributed the lack of significant findings to the short period given to the treatment (once per week for six weeks). This study was also limited, as the effects could not be distinguished from other treatments within the prison and participants could not be studied post-release. While this study did contain possibilities for sampling error, in terms of a prison study, it did have a moderate effect size (0.32-0.67) and produced results that supported MBRP as an effective treatment and feasible to carry out within a jail setting.

Measurements were taken using reputable and evidence-based scales such as the AUDIT, DAST-20, the Friedberg Mindfulness Inventory, the Beck Anxiety Inventory, and various help-seeking scales (SSOMI, SSOHS, and ATSPPH-SF), among others. Through the use of Tsai and Gu's survey and Clement et al.'s review, a large number of participants from 1980-2011 were assessed. However, there is a chance that major studies may not have been found during the literary search that may have also been beneficial to add to this review. Even with the large sample size presented, it is improbable that this research is entirely representative of the SUD

population, as many individuals are likely undiagnosed and/or would prefer to remain unidentified, as some are engaging in illegal activities.

Discussion

Future research on the current treatments for SUD would be beneficial, particularly within the prison system. More research would also be useful in evaluating the accessibility of SUD treatment before incarceration, which was not addressed specifically within this review. It may also be advantageous to seek out individuals with SUD before incarceration to assess potential barriers they have to seeking treatment, and to identify if there are strong effects of stigma, race, or criminalization present before imprisonment occurs.

MBRP can not necessarily be recommended from the study presented, but it cannot be entirely excluded (Lyons et al., 2019). While this treatment had no significance in relation to CBT in the presented study, CBT is considered an evidence-based practice, and MBRP had comparable effects in symptom reduction (Lyons et al., 2019). Additional research may also be present that was not found during my literary search that could attest more conclusive data. In Frank's study, MMT mitigated the effects of criminalization on opioids and SUD, and this was also supported by the common themes coded in the interviews given.

The current sources suggest that race, stigma, and criminalization have statistically significant impacts on substance-users. Due to drug criminalization, users are criticized, rather than supported in seeking out treatment. Addiction is a disease that warrants treatment, but how can we expect substance users to seek out treatment when they are vilified for the very things they are struggling to remedy?

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Lindsay, S. L., & Vuolo, M. (2021). Criminalized or medicalized? Examining the role of race in responses to drug use. *Social Problems, 68*(4), 942–963. https://doi-org /10.1093/socpro/spab027

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Pickering, A. (2020). Substance-Free Probation Conditions for Drug-Addicted Criminals: Reformation or Criminalization? Suffolk University Law Review, 53(1), 21–40.

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Table 1

Barriers to Treatment for Substance Use Disorders in U.S. adults

References	Sample Characteristics	Measurable Outcomes	Suspected Barriers to Treatment	Receiving SUD Treatment	Outcome
Tsai, J. & Gu, X. (2019).	10,853 U.S. adults with SUD, surveyed by the National Epidemiological Survey on Alcohol and Related Conditions-III	History of incarceration; history of treatment for SUD	History of incarceration 22.4% (2,670)	37% (AUD treatment) 18% (Drug Use Treatment)	Those with incarceration history were more likely to have received treatment than those with no history of incarceration (3.1 times for AUD treatment; 1.6 times for drug-use treatment).
Clement, S., et al (2015).	Review of 144 major studies from 1980-2011; surveyed 90,189 participants in total	Correlations between self-stigma and help-seeking, drug and/or alcohol use, and self-stigma of mental health.	Help-seeking towards drug use (β = -.15, SE = .02, p < .01) and alcohol use (β = -.13, SE = .06, p < .01). Self-stigma of mental illness and self-stigma of help-seeking (r = .54, SE = .04, p < .001) and drug and alcohol use (r = .64, SE = .01, p < .001)	1 in 5 adults with SUD; 20% (2015)	Stigma was determined to be the 4th ranked barrier for seeking mental health services. Self-stigma of help-seeking and self-stigma of mental illness were determined to be strong predictors of help-seeking attitudes; negative help-seeking attitudes were also associated with increased drug/alcohol use.

Note. PWUD = People who use drugs; MMT = Methadone Maintenance Treatment; MBRP = Mindfulness-Based Relapse Prevention

References	Sample Characteristics	Measurable Outcomes	Suspected Barriers to Treatment	Receiving SUD Treatment	Outcome
Lindsay, S. L., & Vuolo, M. (2021).	Experimental sample: *N* = 308; mostly White (75%), Black (8%), Hispanic (7%), and other (10%); study was adjusted for imperfect randomization. Review of 400 New York Times and Washington Post articles; Qualitative Analyses looked at race, treatment approaches, and overall nature of the article.	1st study examined the effects of drug type stigma; 2nd study examined effects of racial stigma. Participants' selection of whether the individual mentioned in the article should receive treatment vs. criminal charge. Participants were also given a Likert scale to assess both scenarios (1-10) to avoid potential response bias. Qualitative Analyses coded for public health/medicalization, public safety/criminalization, and personal narrative themes among various articles, along with the race of the user or population and the type of drug used.	Heroin – 73.8% drug treatment; 26.3% criminal charge Crack Cocaine – 56.8% drug treatment; 43.2% criminal charge. Black user condition – 40% drug treatment; 60% criminal charge White user condition – 69.4% drug treatment; 30.6% criminal charge Qualitative: racial biases and type of drug used were looked at as possible barriers to treatment in favor of criminal charges.	N/A	Study 1: Participants were more likely to select a heroine user for criminal charges than a crack cocaine user and more likely to select a heroine user for a criminal charge over drug treatment (*OR=3.687; p* < 0.001). Study 2: Participants were more likely to select criminal charges for a Black User over a White User for either drug ($p < 0.001$). Black Users were also more likely to receive a selection of a criminal charge over drug treatment. Qualitative: Found that personal narratives more often humanized White individuals while criticizing Black individuals; crack was considered "untreatable" while opiate use was most often destigmatized.

Note. PWUD = People who use drugs; MMT = Methadone Maintenance Treatment; MBRP = Mindfulness-Based Relapse Prevention

References	Sample Characteristics	Measurable Outcomes	Suspected Barriers to Treatment	Receiving SUD Treatment	Outcome
Frank, D. (2018).	Testimonials of 23 PWUD living and receiving MMT in the Bronx, NY.	Interviews given to PWUD were coded to identify common themes among the PWUDs and to gather testimonials of their experiences with MMT.	Many do not favor the use of MMT and consider it replacing one drug for another.	100% of participants	Participants' interviews coded for common themes in relation to MMT: safety, affordability, reliability, escape from criminalization, relieved dangers associated with law enforcement, a new sense of stability.
Lyons, T., Womack, V. Y., Cantrell, W. D., & Kenemore, T. (2019).	189 men in a large urban jail in the United States; 124 completed. Participants were paid for every 2 sessions via commissary accounts.	Pre- and post-tests for anxiety, PTSD, drug cravings, and mindfulness after a 6-week period of weekly mindfulness meditations or communication skills trainings-depending on the group that the participant was randomly assigned to.	Cognitive Behavioral Intervention is a common treatment in U.S. prisons; evidence suggests that the effects of CBT are short-lived. Many studies show that MBRP may be longer-longing and enhance user awareness to negative effects of drug use in their own lives.	*n*=54 (44% of those who completed intervention)	Anxiety, PTSD, and drug cravings were significantly inversely correlated with mindfulness (-0.156, -0.249, and -0.210, although there were no significant improvements when comparing MBRP and CBT. Anxiety and PTSD symptom declines were greater with MBRP.

Note. PWUD = People who use drugs; MMT = Methadone Maintenance Treatment; MBRP = Mindfulness-Based Relapse Prevention

Annotated Bibliography

Clement, S., Schauman, O., Graham, T., Maggioni, F., Evans-Lacko, S., Bezborodovs, N., Morgan, C., Rusch, N., Brown, J., & Thornicroft, G. (2015). What is the impact of mental health-related stigma on help-seeking? A systematic review of quantitative and qualitative studies. *Psychological Medicine, 45*(1), 11-27. http://doi.10.1017/S0033291714000129

This is a review of literature regarding the effects of stigmatization on mental health treatment. This review was published on February 21st of 2014, meaning that it does not necessarily contain the most up-to-date data, but does review the data up to this point. This is beneficial to my review because it weeds out much of the research up to this point (144 studies, surveying 90,189 participants), allowing me to view the data concerning the major studies from 1980-2011 and apply slightly more current research as well. The results of these combined studies determined that the association between stigma and help-seeking was $d = -0.27$. Stigma was determined to be the fourth ranked barrier for seeking mental health services. The results indicate low-medium effect size, meaning that it's not necessarily a strong association. but in terms of the real-world implications that the results have and the large sample used, I would consider this a strong enough effect size to consider this data in my review.

De Andrade, D., Ritchie, J., Rowlands, M., Mann, E., & Hides, L. (2018). Substance use and recidivism outcomes for prison-based drug and alcohol interventions. *Epidemiologic Reviews, 40*(1), 121. https://doi.org/10.1093/epirev/mxy004

In this systemic review, the rates of recidivism and substance-use interventions within the prison system were observed. It looked at studies between 2001 and 2017, allowing me to review data from studies during this period while also being able to include and integrate more recent studies. This will allow me to assess any changes in the time lapsed, as well as allow me to compare data from these studies without having to complete statistical computations and comparisons on my own. This review held that many of the most current studies at the time were weak or moderate, finding only six to be strong studies. The evidence from these studies suggests that therapeutic communities were associated with decreasing substance use after prison release and in reducing recidivism (the rates of prison return or reimprisonment after release). Furthermore, continued care and treatment after release was shown to improve the treatment results after release. This study highlights the importance of quality prison studies, as well as that there are difficulties associated with quality prison research.

Fischer, B. (2020). Some notes on the use, concept and socio-political framing of 'stigma' focusing on an opioid-related public health crisis. *Substance Abuse Treatment, Prevention, and Policy, 15*(1), 1–7. https://doi.org /10.1186/s13011-020-00294-2

This article explains the subjects and definitions of stigma, criminal law, and the process of criminalization. Specifically, the article addresses barriers and obstacles that prevent anti-stigma movements from gaining ground and how historical enactments contribute to stigma today. The author suggests that stigma has many layers that contribute to the complex nature and effects that it imposes, particularly on drug users and criminals. Since this article was published in 2020 and is supported by a large base of information, I feel this will be a beneficial and reliable source for my review.

Frank, D. (2018). “I was not sick and I didn’t need to recover”: Methadone maintenance treatment (MMT) as a refuge from criminalization. *Substance Use & Misuse*, *53*(2), 311–322. https://doi.org/10.1080/10826084.2017.1310247

This is a two-year study that was published in 2018 which included observation and interviews of PWUD (people who use drugs). The interviews took place in MMT (Methadone Treatment Clinics) and those interviewed were currently on MMT. The participants were gathered using snowball and convenience sampling, as the individual leading the study/interviewing was a PWUD and had been on MMT for 11 years. The interviews given were coded to identify common themes among the PWUDs and to gather testimonials of their use of MMT. There was no numerical data assessed, only testimonials of 23 PWUD living and receiving MMT treatment in the Bronx, NY. This is a weakness of the study, as well as the low sample size. However, most participants in this study emphasized the benefits of MMT in contrast to their negative associations of drug use before treatment and common themes of security and improved quality of life were noted in relation to treatment.

Lindsay, S. L., & Vuolo, M. (2021). Criminalized or medicalized? Examining the role of race in responses to drug use. *Social Problems, 68*(4), 942–963. https://doi-org /10.1093/socpro/spab027

This is a review of 400 different New York Times and Washington Post articles. Since the article was published in 2021, it has very relevant and up to date statistics surrounding criminalization, stigmatization, and minority groups. This particular review looked at the shift from criminalization towards treatment and decarceration in the crack

cocaine and opiate crises. They also conducted 2 studies to assess the differences in participant opinions regarding the type of drug and whether the user was black or white. In looking at criminal charges or drug treatment, race was a significant factor when it came to severity of the punishment chosen ($p < 0.001$). Since this review does look at media, it is likely unrepresentative of the opioid crisis itself during this period. Essentially, the study shows public perception of various drugs and types of drug users and how this may impact the treatment an individual receives. Because of this, I believe this study would be beneficial to be review because it allows me to look at stigma in treatment across public media.

Lee, K. (2020). Pandemic, protests, and prison reform? Why 2020 is a catalyst to rethink drug policy. *St. Thomas Law Review*, *33*(1). https://link.gale.com/apps/doc/A674841383/ITBC?u=tel_a_welshimer&sid=ebsco&xid=86617325

In this article, Lee provides evidence as to why there has been a call for reformation of drug policy in America during the pandemic. This article is beneficial for my review because it provides background to the importance of this issue and why current practice is not evidence-based. Lee cites statistical and survey data that would be beneficial to the background of my review. Lee uses evidence that compares the medical model and the current model, the 'punishment' model, and explains the history and events surrounding the current model and how research has shown it to be ineffective and costly. Lee discusses the 'tough on crime" movement and how minority groups have been disproportionately affected by it, adding to the importance of my topic.

Lyons, T., Womack, V. Y., Cantrell, W. D., & Kenemore, T. (2019). Mindfulness-based relapse prevention in a jail drug treatment program. *Substance Use & Misuse, 54*(1), 57–64. https://doi.org/10.1080/10826084.2018.1491054

This study observed the effects of mindfulness-based relapse prevention (MBRP) on prison inmates diagnosed with SUD. The sample included 189 men in a large urban jail who completed either weekly mindfulness meditation or communication skill training sessions for six weeks. Pre- and post-tests revealed that anxiety, PTSD, and drug cravings were significantly inversely correlated with mindfulness (-0.156, -0.249, and -0.210). This study points to the effectiveness and feasibility of mindfulness training and treatment within a prison setting. This is a beneficial study to my research because it shows the effectiveness of mindfulness in substance use disorder treatment, specifically within the prison population.

Murphy, E. R. (2013). Paved with good intentions: Sentencing alternatives from neuroscience and the policy of problem-solving courts. *Law and Psychology Review*, *37*, 83.

This excerpt describes the neuroscience of addiction and the various evidence-based treatments and pharmacological therapies currently used to treat substance use disorders, as well as how they work. I utilize studies on various treatments covered within this excerpt, so it will be beneficial in providing background and additional understanding to these treatments and their effectiveness. Murphy also provides cost-benefit analyses into substance use charges, relapse prevention programs, and community resources to analyze the benefits of various treatments, laws, and programs. This will

help me in identifying different plans for future research and implementations of treatment based on my review data and results.

Tsai, J. & Gu, X. (2019). Utilization of addiction treatment among U.S. adults with history of incarceration and substance use disorders. *Addiction Science & Clinical Practice*, *14*(1), 1–9. https://doi.org/10.1186/s13722-019-0138-4

In this study, a population sample was used to address incarceration times for those diagnosed with SUD (n = 36,121), the rate of individuals diagnosed with SUD who have criminal history, and personal characteristics correlated with seeking out treatment for SUD. The study found a positive correlation between diagnoses of SUD and incarceration history, but a negative correlation between SUD diagnoses and SUD treatment history. They found those with SUD and incarceration history more likely to be male, veteran, low-income, and have a history of homelessness than those with SUD and no history of incarceration. The wide array of data gathered in this study will be beneficial in addressing how many individuals with SUD are actually receiving or have received treatment. This can also help me to make predictions on what barriers they may be facing based upon commonly reported demographics.