

Available online on 15 Mar, 2024 at <http://www.hjhs.co.in/index.php/hjhs>

Himalayan Journal of Health Sciences

Published by Himalayan Group of Professional Institutions

Associated with Himalayan Institute of Pharmacy

Copyright© 2016-24 HJHS



Review Article



Addiction Management in Vulnerable Populations

Pallav Dave *

Regulatory Compliance Analyst, Louisville, KY, 40223, USA

Abstract

Addiction remains a significant challenge, especially for vulnerable populations. As a way to cope with social determinants of health, life stressors and challenges they are going through, most result in substance abuse. Considering the number of people affected by SUD in the US, there is a need to put effective measures in place that can help address the challenges of dealing with addiction in vulnerable populations. Other than addressing the root causes of addiction in these populations, there is a need to take into account the individual needs of these groups to increase the likelihood of positive outcomes. Some of the needs that clinicians need to consider are lack of medical insurance, the inability to pay insurance, challenges with housing, historical trauma, structural racism, and discrimination. These factors can make it difficult to attain positive outcomes when dealing with vulnerable groups. Therefore, taking them into account is important. Community-based interventions can also help because they bring treatment close to patients. They also provide social support which most people facing vulnerabilities lack.

Keywords: addiction, vulnerable populations, substance use disorder (SUD), social determinants of health, life stressors

Article Info: Received 19 Dec 2023; Review Completed 05 Mar 2024; Accepted 15 Mar 2024



Cite this article as:

Dave P. Addiction Management in Vulnerable Populations. Himalayan J H Sci [Internet]. 2024 Mar 15 [cited 2024 Mar 15]; 9(1):13-18. Available from: <http://www.hjhs.co.in/index.php/hjhs/article/view/160>

DOI: 10.22270/hjhs.v9i1.160

*Corresponding author

1. Introduction

Vulnerable populations are at an increased risk of having drug and substance addiction. In the context of healthcare, vulnerable populations are groups that may require extra consideration and legitimized protection because of their life circumstances. (1) These groups are normally disadvantaged, marginalized, or underserved which increases their risk of substance use disproportionately. When it comes to substance addiction, vulnerable populations are likely to be individuals living with physical and mental impairment, racial and ethnic minorities, individuals who are socially and economically disadvantaged, gender minorities, the homeless, people who have been to prison, unemployed individuals, the elderly, veterans, and foster children. These groups are more vulnerable to substance and drug addiction because of several reasons. Some result in addiction because they are trying to seek alternative means of coping with stressors in their lives. Familial and parental substance use may also put children in a vulnerable position and are likely to become addicts in the future. (2) Other reasons why some groups are more vulnerable and likely to be addicts are being isolated, being in a difficult social position, poverty, unemployment, and accessibility to these substances. (1)

Addiction management is vital. In the US, millions of people use drugs and substances which increases their risk of addiction exponentially. According to the 2022 National Survey on Drug Use and Health, approximately half of the US population (168.7 million) people were using one type of drug or another. (3) The most common substances in use were tobacco products, alcohol, vaped nicotine, and illicit drugs. The number of people affected by substance use disorder (SUD) in the US has also been growing significantly over the years. According to the survey, 48.7 million people who were 12 years and older had SUD in the past year. Alcohol use disorder (AUD) was the most common type of SUD reported with 29.5 million people being affected. (3) Another 27.2 million people had drug use disorder (DUD). (3) Others reported both drug and alcohol disorders. In addition to alcohol and drug use disorder, opioid addiction and abuse have also been increasing. According to the National Survey on Drug Use and Health, 8.9 million people were abusing or misusing opioids while another 6.1 million had opioid use disorder (OUD). (3)

SUD and all other forms of disorders are serious national problems contributing significantly to increasing public health costs and mortality. According to Hernandez et al. an average of 185 deaths related to SUD were reported in the US each day in 2018. (4) Hedegaard

et al. also reported that the number of drug-related overdoses in the US was becoming a serious problem with 91,799 reported in 2020. (5) These numbers were higher than those reported in 2019. With the number of people using illegal drugs growing each year, SUD is likely to continue being a significant issue more so among vulnerable populations that lack adequate access to care. Besides, the total cost of dealing with the drug problem cannot be underestimated. According to Peterson et al. in 2017, the average annual cost attributed to SUD in emergency and inpatient settings was approximately \$13 billion. (6) The high cost demonstrates the burden of the drug problem in the US. Therefore, discussing measures that can be used to address addiction in vulnerable populations is vital. This review will therefore look at measures that can be used to manage substance addiction in vulnerable populations. The paper will look at factors that increase the risk of addiction in these populations before exploring different measures that can be taken to ensure the risk of addiction in these populations is minimized.

2. Factors that Increase the Risk of Addiction in Vulnerable Populations

2.1 Social determinants of health

Social determinants of health are some of the factors that increase the risk of addiction among vulnerable populations. The unequal distribution of social determinants of health can account for an increased risk of addiction among vulnerable populations. (7) Social determinants of health are known to contribute to health disparities. There is research showing that social determinants of health contribute to health disparities and increase the likelihood of poor health outcomes. (8) When it comes to drug addiction, social determinants of health also play a key role. For instance, the physical and social environments that individuals live in shape their behavioral options and are a key determinant of whether they are likely to engage in a behavior or not. (9) One of the reasons why the physical environment is a key determinant in behavior is because it creates a setting and context for social interactions. (9) Therefore, if one lives in a physical environment where drugs and substance abuse are the norm, they are likely to be influenced into taking drugs. People living in such neighborhoods are also likely to face adversity such as repeated exposure to stressors. For instance, neighborhood stressors such as high crime rates, poverty, environmental pollution, overcrowding, inadequate infrastructure, and dilapidated buildings can increase the likelihood of one engaging in substance abuse as a way to cope. (10) Similarly, family stressors such as childhood abuse, living in dysfunctional family units, neglect, domestic violence, sexual abuse, substance abuse in the family, and living with individuals who have mental illness are likely to drive one to substance use as a measure to cope. Such stressors affect vulnerable populations disproportionately. For instance, racial and ethnic minority children are more likely to have dysfunctional family dynamics than the general population. (11) They are also likely to experience neglect and physical and emotional abuse. (12) Such factors increase their vulnerability and they may result in substance abuse as a way to cope.

Other social determinants that make vulnerable populations at greater risk of addiction are unemployment, homelessness, poor healthcare access, and lack of social and community support. Unemployment and homelessness are key stressors and may make an individual more likely to result in substance abuse as a coping mechanism. Various studies have shown that individuals experiencing homelessness are more likely to engage in high rates of substance abuse. (13,14) Similarly, unemployment has been linked to a greater risk of substance abuse. (15,16) Similar to homelessness, unemployment is a key stressor and tends to disproportionately affect vulnerable populations. Lack of a regular income affects stability making it difficult to access even basic needs. As a way to cope with their unemployment status and the inability to meet basic needs, most result in substance use or abuse. Another key social determinant of health that increases the risk of vulnerability to substance abuse is poor health access. Vulnerable populations tend to be disproportionately affected by health inequities. (17) Vulnerable populations are disproportionately affected by poor access to quality care because most lack insurance and the means to pay for this care. (18) Lack of access to quality care makes it difficult for these groups to access treatment for substance abuse. (19) Social and community support are also regarded as key determinants of health with individuals who have good relationships and interactions with people being better placed when it comes to health outcomes. (8) Unlike the general population, vulnerable groups tend to be disproportionately affected when it comes to social and community support. The limited interactions and relationships with family, friends, and community members can result in feelings of loneliness and isolation. As a way to cope, these individuals may result in substance use eventually leading to addiction.

2.2 Life stressors

In addition to social determinants of health, vulnerable populations are at an increased risk of addiction because of life stressors. Vulnerable populations are disproportionately affected by life stressors compared to the general population. Some of these stressors are unemployment, homelessness, trauma, structural racism, hopelessness, poverty, incarceration, discrimination, emotional and physical abuse, violence, isolation, and neglect, among others. (20) Physiological response is what determines how an individual will respond to stress. In most cases, individuals are able to initiate a coping mechanism and deal with the stressor. However, when the exposure to the stressor is chronic, it leads to overactivation of the stress response. Due to the overactivation of this response, individuals may result in substance abuse as a measure to cope. Research has shown that stress increases vulnerability to substance abuse and can increase the development of SUD. (21) Vulnerable populations tend to be highly affected by chronic life stressors. For instance, homeless individuals are at an increased risk of isolation, violence, and neglect in addition to the homelessness that they are already experiencing. Racial and ethnic minorities are also likely to experience structural racism and discrimination and higher rates of incarceration. (22,23) All these are life

stressors that put vulnerable populations at a higher risk of substance abuse and addiction.

2.3 Exposure to trauma

Another factor that increases the risk of addiction in vulnerable populations is exposure to trauma. Research has shown that exposure to traumatic experiences increases the risk of substance abuse more so when these traumatic experiences occur in childhood. (24-26) According to Khoury et al. there were high rates of lifetime dependence on substances in a highly traumatized population. (24) The levels of abuse were higher in individuals who had high levels of abuse in childhood. It was also higher in individuals who reported experiencing PTSD symptoms. The reason why exposure to trauma increases the likelihood of substance abuse is because many individuals dealing with these traumas turn to drugs or alcohol as a mechanism to cope. Dependence on substances is used as a mechanism to cope with the emotional pain, guilt, shame, anxiety, bad memories, and anxiety that these individuals go through. Vulnerable populations experience higher rates of trauma than the general population. (27-30) For instance, individuals who are living with physical and mental impairment are likely to experience traumatic experiences because of their limitations. (27) Individuals with physical impairment and severe mental impairment for example may be predisposed to abuse from their caregivers and may not even be able to obtain the required help due to their limitations. Similarly, racial and ethnic minorities have reported greater levels of PTSD compared to the general population. (28) Vulnerable populations are also likely to experience abuse and victimization. All these factors make these groups more vulnerable than they already are and as a way to cope with their situation, they may result in substance abuse and subsequent addiction.

Addressing factors that increase the risk of addiction in vulnerable populations is vital. However, most of these factors are deeply rooted which makes it difficult to adequately address them. There is a need to have effective measures that can help to manage addictions more so in vulnerable populations. Considering the challenges that these populations face such as limited access to healthcare, using the normal routes of treating SUD can be challenging. Therefore, proper measures need to be put in place to help in managing addictions in these populations.

3. Measures to Address Addiction among Vulnerable Populations

Treating SUD remains a significant challenge despite the advances in treatment interventions over the recent years. The rates of relapse remain significantly high with some studies indicating relapse rates of up to 40 and 60%. (31,32) Some of the reasons attributed to high rates of relapse after treatment for SUD are the episodic treatment models which have been shown to be inadequate in addressing the needs of people seeking treatments.

3.1 Understanding the needs of vulnerable populations

In addition to pharmacological and psychosocial interventions that are available to treat SUD such as cognitive behavioral therapy, motivational interviewing,

contingency management, and brief interventions, clinicians should strive to understand the needs of vulnerable populations to be able to provide appropriate care. (33) Striving to understand the needs of vulnerable populations is important when providing treatment and care for SUD. Unlike the general populations, vulnerable populations have specific needs that ought to be met for treatment to be effective. For instance, they face inadequate access to healthcare because of their economic situation and lack of medical insurance. Without medical insurance and a sustainable income, accessing and maintaining treatment for SUD becomes difficult. Even for individuals who have initiated treatment, maintaining treatment becomes difficult which increases the risk of relapse. Understanding the needs of vulnerable populations can ensure clinicians provide patient-centered care to ensure treatment is more effective. Patient-centered approach ensures that clinicians meet the needs of patients because patients take ownership of their treatment decisions. (34) The fact that decisions are shared and mutual is likely to lead to improved patient outcomes because it increases patient engagement. (35) When it comes to vulnerable populations, patient-centered care can ensure that the particular needs of the population are met. For instance, for the homeless, the SAMHSA advisory recommends helping them find housing during the period of treatment and after to improve outcomes. (36) The advisory also recommends providing social support and addressing the complex problems that the clients face. (36) Also, having treatment programs that are designed with the needs of racial minorities in mind can improve treatment outcomes. Therefore, tailoring treatment to meet the needs of vulnerable populations can improve treatment outcomes.

3.2 Providing culturally responsive care

Another measure that can increase access to addiction treatment for vulnerable groups is increasing access to culturally responsive care. Culturally responsive care is vital in ensuring racial and ethnic minority groups have access to proper care. The Substance Abuse and Mental Health Services Administration calls for the need for care providers to be culturally responsive when providing care to improve treatment for substance abuse. (37) Culturally responsive care entails being understanding and responsive to the client's health beliefs, practices, and values. Having culturally responsive skills has been shown to improve care and engagement with services. Clients are also likely to adhere to treatment if their cultural needs are being met. Overall, culturally responsive care improves patient outcomes. Providing culturally responsive care is important more so in addressing the needs of racial and ethnic minorities. For instance, clinicians working with black patients should be aware of structural racism, historical trauma, and discrimination and how they have contributed to the increased risk of substance use and abuse in this group. Acknowledging and empathizing with patients who have grown through these experiences can lead to positive responses to treatment and improve outcomes. (38) Clinicians can also use trauma-informed techniques when dealing with these patients. Burlew et al. recommend culturally adapting substance abuse treatment

interventions to improve treatment outcomes for these groups. (39) When working with Hispanic patients, clinicians should be aware of cultural barriers that may affect positive treatment outcomes. Incorporating cultural concepts into treatment can lead to improved outcomes.

3.3 Community-based interventions

Community-based interventions can also be used as a measure to address addiction in vulnerable populations. Research has shown that community-based SUD interventions have a major advantage more so when dealing with vulnerable populations. (40,41) Community-based interventions are delivered through community facilities meaning that they bring SUD treatment closer to patients in the communities. (40) In this case, they can be delivered in different community settings that provide support to the vulnerable. Community-based interventions are effective because they support collaboration with different stakeholders. This collaboration can lead to positive outcomes such as greater reach, less stigma, and lower costs for the affected population. They are also effective because the settings they are provided in help them to respond to the varying needs of clients. For vulnerable populations, these needs vary from mental needs to psychological, social assistance, peer support, and recovery management among others. Community-based interventions have been proven to be beneficial because they are cost-effective. (42) They also facilitate access to treatment because they are based in community settings. For vulnerable populations, this is a significant advantage because most lack access to SUD treatment. Other advantages that are associated with community-based interventions are affordability, flexibility, lower rates of stigma, and less intrusively.

Community-based interventions can also be used as a prevention measure. (43) According to SAMHSA, community-based engagements are effective measures that can be used to prevent substance use. (37) Community engagement can be used as a preventative measure for substance use because it involves a diverse number of groups that work together to come up with solutions that work for the whole community. Research has shown that community interventions are effective in preventing substance use in adolescents. (44) When it comes to vulnerable populations, community interventions can work as a preventative measure because most of the vulnerable individuals live in the community. Creating awareness about the dangers of substance abuse can lead to positive outcomes. Mobilizing the community to fight against substance abuse can also reduce the risk of addiction.

In addition to providing treatment for SUD among people facing vulnerabilities, there are other measures that need to be put into consideration to attain positive outcomes. Vulnerable populations face a number of challenges that make them more vulnerable to addiction. When addressing their addiction, it is important to take these challenges into consideration and address them to attain positive outcomes. For instance, ensuring their personal needs are met can lead to positive outcomes. For example, when working with racial and ethnic minorities,

it is important to be aware of the historical trauma and how it has impacted them during the journey of addiction. Acknowledging this trauma is important when working with the client. When working with the homeless, it is important to consider their housing challenges and work to ensure they have housing to ensure treatment is effective. Community-based interventions can ensure these needs are met. Other than being cost-effective, community-based interventions involve working with a number of stakeholders who are in touch with vulnerable populations. This makes these interventions effective as both prevention and treatment measures.

4. Conclusion

In summary, vulnerable populations are at an increased risk of having drug and substance addiction. Some of the factors that increase the risk of addiction among these groups are exposure to trauma, life stressors, social determinants of health, abuse, domestic violence, parental substance, isolation, poverty, unemployment, and accessibility to these substances. Addressing the risk factors that contribute to the high risk of abuse can be difficult. These groups face a number of challenges that are intertwined. As a result, addressing one challenge may lead to the emergence of another. However, several measures can be used to address addiction in this population. In addition to psychosocial and pharmacological interventions, it is important for clinicians to take other factors into consideration. For instance, considering the individual needs of those affected can lead to positive outcomes. It is important for clinicians to understand these needs when providing treatment and care for SUD. Unlike the general populations, vulnerable populations have specific needs that ought to be met for treatment to be effective. For example, one of the reasons why this group receive less treatment and care for SUD is because they lack medical insurance. Most do not have stable income which makes it difficult to pay for insurance. Therefore, finding a way that they can access treatment can lead to positive outcomes. Addressing other challenges that vulnerable individuals face such as housing, historical trauma, structural racism, and discrimination can contribute to positive outcomes. Other measures that can be used to address addiction in this population are community-based interventions. Community-based interventions are effective because they bring treatment close to patients. They also provide social support which most of people facing vulnerabilities lack. (45)

Acknowledgements

I will like to express our gratitude to Himalayan Journal of Health Sciences who gave us the opportunity to publish the article.

Financial Disclosure statement: The author received no specific funding for this work.

Conflict of Interest

The author declares that there is no conflict of interest regarding the publication of this article.

References

- Sussman S, Sinclair DL. Substance and behavioral addictions, and their consequences among vulnerable populations. *International Journal of Environmental Research and Public Health*. 2022;19(10):6163. doi:10.3390/ijerph19106163
- Lander L, Howsare J, Byrne M. The impact of substance use disorders on families and children: from theory to practice. *Social Work in Public Health*. 2013;28(3-4):194-205. doi:10.1080/19371918.2013.759005
- Substance Abuse and Mental Health Services Administration. Key Substance Use and Mental Health Indicators in the United States: Results from the 2022 National Survey on Drug Use and Health, NSDUH Series H-58, HHS Publication No. PEP23-07-01-006. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration; 2023
- Hernández A, Lan M, MacKinnon NJ, Branscum AJ, Cuadros DF. "Know your epidemic, know your response": Epidemiological assessment of the substance use disorder crisis in the United States. *PloS One*. 2021;16(5):e0251502. doi:10.1371/journal.pone.0251502
- Hedegaard H, Miniño AM, Spencer MR, Warner M. Drug overdose deaths in the United States, 1999-2020. NCHS Data Brief, no 428. Hyattsville, MD: National Center for Health Statistics. 2021. doi:10.15620/cdc:112340
- Peterson C, Li M, Xu L, Mikosz CA, Luo F. Assessment of annual cost of substance use disorder in US hospitals. *JAMA Network Open*. 2021;4(3):e210242. doi:10.1001/jamanetworkopen.2021.0242
- Galea S, Vlahov D. Social determinants and the health of drug users: socioeconomic status, homelessness, and incarceration. *Public Health Reports*. 2002;117(Suppl 1):S135.
- Braveman P, Gottlieb L. The social determinants of health: it's time to consider the causes of the causes. *Public Health Reports*. 2014;129(1_suppl2):19-31. doi:10.1177/00333549141291S206
- Ewald DR, Strack RW, Orsini MM. Rethinking addiction. *Global Pediatric Health*. 2019. doi:10.1177/2333794X18821943
- Stone AL, Becker LG, Huber AM, Catalano RF. Review of risk and protective factors of substance use and problem use in emerging adulthood. *Addictive Behaviors*. 2012;37(7):747-75. doi:10.1016/j.addbeh.2012.02.014
- Fomby P, Mollborn S, Sennott CA. Race/ethnic differences in effects of family instability on adolescents' risk behavior. *Journal of Marriage and Family*. 2010;72(2):234-53. doi:10.1111/j.1741-3737.2010.00696.x
- Dakil SR, Cox M, Lin H, Flores G. Racial and ethnic disparities in physical abuse reporting and child protective services interventions in the United States. *Journal of the National Medical Association*. 2011;103(9-10):926-31. doi:10.1016/s0027-9684(15)30449-1.
- Milburn NG, Iribarren FJ, Rice E, et al., A family intervention to reduce sexual risk behavior, substance use, and delinquency among newly homeless youth. *Journal of Adolescent Health*. 2012;50(4):358-64. doi:10.1016/j.jadohealth.2011.08.009
- Lightfoot M, Wu N, Hughes S, Desmond K, Tevendale H, Stevens R. Risk factors for substance use among youth experiencing homelessness. *Journal of Child & Adolescent Substance Abuse*. 2018;27(5-6):288-96. doi:10.1080/1067828X.2018.1500964
- Nolte-Troha C, Roser P, Henkel D, Scherbaum N, Koller G, Franke AG. Unemployment and substance use: an updated review of studies from North America and Europe. *Healthcare (Basel)*. 2023;11 (8): 1182. doi:10.3390/healthcare11081182
- Lee JO, Hill KG, Hartigan LA, et al. Unemployment and substance use problems among young adults: Does childhood low socioeconomic status exacerbate the effect?. *Social Science & Medicine*. 2015; 143:36-44. doi:10.1016/j.socscimed.2015.08.016
- Bhatt J, Bathija P. Ensuring access to quality health care in vulnerable communities. *Academic Medicine*. 2018;93(9):1271-5. doi:10.1097/ACM.0000000000002254
- Richard L, Furler J, Densley K, et al. Equity of access to primary healthcare for vulnerable populations: the IMPACT international online survey of innovations. *International Journal for Equity in Health*. 2016; 15:1-20. doi:10.1186/s12939-016-0351-7
- Olfson M, Mauro C, Wall MM, Choi CJ, Barry CL, Mojtabai R. Healthcare coverage and service access for low-income adults with substance use disorders. *Journal of Substance Abuse Treatment*. 2022; 137:108710. doi:10.1016/j.jsat.2021.108710
- Amaro H, Sanchez M, Bautista T, Cox R. Social vulnerabilities for substance use: Stressors, socially toxic environments, and discrimination and racism. *Neuropharmacology*. 2021; 188:108518. doi:10.1016/j.neuropharm.2021.108518
- Sinha R. Chronic stress, drug use, and vulnerability to addiction. *Annals of the New York Academy of Sciences*. 2008;1141(1):105-30. doi:10.1196/annals.1441.030
- Ornelas IJ, Eng E, Pereira KM. Perceived barriers to opportunity and their relation to substance use among Latino immigrant men. *Journal of Behavioral Medicine*. 2011;34:182-91. doi:10.1007/s10865-010-9297-1
- Otiniano Verissimo AD, Grella CE, Amaro H, Gee GC. Discrimination and substance use disorders among Latinos: The role of gender, nativity, and ethnicity. *American Journal of Public Health*. 2014;104(8):1421-8. doi:10.2105/AJPH.2014.302011
- Khouri L, Tang YL, Bradley B, Cubells JF, Ressler KJ. Substance use, childhood traumatic experience, and posttraumatic stress disorder in an urban civilian population. *Depression and Anxiety*. 2010;27(12):1077-86. doi:10.1002/da.20751
- Iacono LL, Catale C, Martini A, et al. From traumatic childhood to cocaine abuse: the critical function of the immune system. *Biological Psychiatry*. 2018;84(12):905-16. doi:10.1016/j.biopsych.2018.05.022.
- Hyman SM, Paliwal P, Chaplin TM, Mazure CM, Rounsaville BJ, Sinha R. Severity of childhood trauma is predictive of cocaine relapse outcomes in women but not men. *Drug and Alcohol Dependence*. 2008;92(1-3):208-16. doi:10.1016/j.drugalcdep.2007.08.006
- Ng LC, Hook K, Hailemariam M, Selamu M, Fekadu A, Hanlon C. Experience of traumatic events in people with severe mental illness in a low-income country: a qualitative study. *International Journal of Mental Health Systems*. 2023;17(1):45. doi:10.1186/s13033-023-00616-4
- Roberts AL, Gilman SE, Breslau J, Breslau N, Koenen KC. Race/ethnic differences in exposure to traumatic events, development of post-traumatic stress disorder, and treatment-seeking for post-traumatic stress disorder in the

- United States. Psychological Medicine. 2011;41(1):71-83. doi:10.1017/S0033291710000401
29. Assari S. Family socioeconomic status and exposure to childhood trauma: Racial differences. *Children*. 2020;7(6):57. doi:10.3390/children7060057
 30. Gilmoor A, Vallath S, Regeer B, Bunders J. "If somebody could just understand what I am going through, it would make all the difference": conceptualizations of trauma in homeless populations experiencing severe mental illness. *Transcultural Psychiatry*. 2020;57(3):455-67. doi:10.1177/1363461520909613
 31. Pallav Dave, Recommendations for Pain Management in Cancer Patients *Asian Journal of Pharmaceutical Research and Development*. 2024; 12(2):7-12. doi: <https://doi.org/10.22270/ajprd.v12i2.1339>
 32. Andersson HW, Wenaas M, Nordfjærn T. Relapse after inpatient substance use treatment: A prospective cohort study among users of illicit substances. *Addictive Behaviors*. 2019; 90:222-8. doi:10.1016/j.addbeh.2018.11.008
 33. Jhanjee S. Evidence based psychosocial interventions in substance use. *Indian Journal of Psychological Medicine*. 2014;36(2):112-8. doi:10.4103/0253-7176.130960
 34. Marchand K, Beaumont S, Westfall J, et al. Conceptualizing patient-centered care for substance use disorder treatment: findings from a systematic scoping review. *Substance Abuse Treatment, Prevention, and Policy*. 2019; 14:1-5. doi:10.1186/s13011-019-0227-0
 35. Park SE, Mosley JE, Grogan CM, Pollack HA, Humphreys K, D'Aunno T, Friedmann PD. Patient-centered care's relationship with substance use disorder treatment utilization. *Journal of Substance Abuse Treatment*. 2020; 118:108125. doi:10.1016/j.jsat.2020.108125
 36. Substance Abuse and Mental Health Services Administration. Behavioral Health Services for People Who Are Homeless. Advisory.2021.
 37. Substance Abuse and Mental Health Services Administration. Community Engagement: An Essential Component of an Effective and Equitable Substance Use Prevention System. SAMHSA Publication No. PEP22-06-01-005. Rockville, MD: National Mental Health and Substance Use Policy Laboratory. Substance Abuse and Mental Health Services Administration, 2022.
 38. Komaromy M, Mendez-Escobar E, Madden E. Addressing racial trauma in the treatment of substance use disorders. *Pediatrics*. 2021;147(Supplement 2):S268-70. doi:10.1542/peds.2020-023523L.
 39. Burlew AK, Copeland VC, Ahuama-Jonas C, Calsyn DA. Does cultural adaptation have a role in substance abuse treatment?. *Social Work in Public Health*. 2013;28(3-4):440-60. doi:10.1080/19371918.2013.774811
 40. Rao R, Dhawan A, Parmar A, Yadav D, Bhad R. Improving treatment of substance use disorders through community drug treatment clinics: an experiential account. *Indian Journal of Community Medicine*. 2021;46(3):370-3. doi:10.4103/ijcm.IJCM_998_20
 41. Heijdra Suasnabar JM, Hipple Walters B. Community-based psychosocial substance use disorder interventions in low-and-middle-income countries: a narrative literature review. *International Journal of Mental Health Systems*. 2020; 14:1-35. doi:10.1186/s13033-020-00405-3
 42. United Nations Office on Drugs and Crime (UNODC). Community Based Treatment and Care for Drug Use and Dependence [Internet]. 2014. [cited 2024 Dec 13]. Available from: https://www.unodc.org/roseap/uploads/archive/documents/cbt/cbt_brief_EN.pdf
 43. Malick R. Prevention of substance use disorders in the community and workplace. *Indian Journal of Psychiatry*. 2018;60(Suppl 4): S559-63. doi:10.4103/psychiatry.IndianJPsychiatry_24_18
 44. Das JK, Salam RA, Arshad A, Finkelstein Y, Bhutta ZA. Interventions for adolescent substance abuse: An overview of systematic reviews. *Journal of Adolescent Health*. 2016;59(4): S61-75. doi:10.1016/j.jadohealth.2016.06.021
 45. Dave P, The Role of Pharmacists in Opioid Addiction Management. *Asian Journal of Dental and Health Sciences*. 2024.4(1):51-56. <https://doi.org/10.22270/ajdhs.v4i1.71>