

# Substance Abuse: A Literature Review of the Implications and Solutions

ABBA MUSA ABDULLAHI, SHAH TAHA SARMAST

## ABSTRACT

Substance or Drug abuse is a serious public health problem affecting usually adolescents and young adults. It affects both males and females and it is the major source of crimes in youth and health related problems in many communities. It harms unborn babies and destroys families. As indicated by the Diagnostic and Statistical Manual of Mental Disorder, Fifth Edition, DSM-5 "The essential feature of substance use disorder is a cluster of cognitive, behavioral and physiological symptoms indicating the individual continues to use the substance despite significant substance related problems". Substances that are abused are many and include alcohol, tobacco/nicotine, caffeine, cannabis, inhalants, opioids, sedatives, anti-anxiety and hypnotics, psychostimulants like cocaine, amphetamine, methamphetamine and hallucinogens.

**KEY WORDS:** Addiction, Withdrawal symptoms, Dependence, Social, Physical, Medical, Psychological

## 1. INTRODUCTION

Substance abuse is a chronic debilitating disease with significant morbidity and mortality which affects individuals and their families. In 2014, about 250 million peoples between the ages 15 and 64 years were estimated to have used an illicit drug (World Drug Report, 2012). One-tenth of people who use illicit drug suffer from drug or substance use disorder like drug dependence. Large number of drug dependents use intravenous drugs and more than 10% of them contract HIV with majority of them suffering from hepatitis C (United Nations Office on Drugs and Crimes, 2018).

Substance or drug can be defined as anything that has the potential of causing addiction, habituation or altered consciousness. It can also be defined as any chemicals that can change the structure or function of the body. Drugs are used for nutritional or medical purposes following Doctors' prescription but become potentially hazardous when used for other purposes (Poss, 1996).

According to the DSM-IV, Substance abuse is the recurrent use of substance that may cause physical or social harm to the user or others but not associated with any symptoms when the substance is stopped. However, Substance addiction (or dependence) is defined as a compulsive pattern of substance use characterized by a loss of control over the use of the substance and continued use despite the significant substance-related problems and the emergence of a state of physiological need such that a physiological signs and symptoms, known as withdrawal symptoms, occur when access to the drug is prevented (United Nations Office on Drugs and Crimes, 2015). Generally, three things are usually associated with addiction: inability to stop, tendency of increasing dosage or behavior and withdrawal symptoms, those symptoms that develop following abstinence of drug (Barrett et al., 2008).

There are basically four stages of drug addiction: 1) Experimentation: voluntary use of the drug without behavioral change; 2) Regular use of the substance: the individual seeks the euphoric effects of the drug, establishes a reliable drug source, etc; 3) Abuse: indulges in daily use of drugs. Here warning signs of addiction will begin to appear such as craving, preoccupation with the drugs, depressive symptoms, etc; 4) Addiction: physical and/or psychological dependence in which there is the compulsive use of the drug despite severe negative consequences with occurrence of withdrawal symptoms (Barangam et al., 2002).

Various factors were implicated in patient with Substance addiction, and these include: Genetic predisposition; Psychological factors such as stress, personality traits like high impulsivity, depression, anxiety, eating disorders, personality and other psychiatric disorders; Age at first exposure; Self-medications; Impairment and Environmental factors like availability of drugs, social status, peer pressure, drug awareness like advertisement, sexual abuse or addiction in the family (Kreek et al., 2005; O'Brien et al., 1998). However, certain factors like Self control, Academic competence, Antidrug information, Strong neighborhood attachments, Some genetics, Parents and Enriched environment were shown to have protective effects against drug abuse (Botvin et al., 1990).

The aim of this review is to give an overview of the effects of substance abuse in many communities and outlines possible solutions. It defines the link between substance abuse and many social, physical, medical and psychiatric/psychological complications.

## 2. REVIEW

### 2.1. IMPLICATIONS OF SUBSTANCE ABUSE

The implications of substance abuse to the life of an individual are enormous and can be categorized as Social, Physical, Medical or Psychiatric/Psychological.

#### 2.1.1 SOCIAL IMPLICATIONS:

There are many social implications of substance abuse ranging from loss of employment, break up of interpersonal relationship, truancy and drop out from schools, suicidal ideation, road traffic accidents and unprotected sex (Baker, George, & Sandle, 1996). Many researches have demonstrated a significant relationship between abuse and unemployment which lead to serious mental problems in the addicts which was thought to be as a result of behavioral changes caused by pre-existing psychopathology (Johnson, Reynolds, & Fisher, 2001). Family disruption and decrease or absence of parenting capacity has been established in individuals with substance abuse that results into child abuse, child neglect and abandonment with significant and serious impairment of parent-child interaction (Bornstein, n.d.). A significant link between consumption of illicit drugs and increase crime rate among abusers has been shown to exist by many literatures which is more pronounced in alcohol abusers. This was proposed to be a result of impairment of cognitive functions of the addicts that facilitate criminal activity and increases an individual's aggressive behavior, and this was said to be related with the financial constraints of the addicts and the high black market prices of the drugs (Pernanen, 2001). The form and pattern of the crimes is usually determined by the kind of the substance. For example, stimulants specifically amphetamine were associated with general crimes, opiates mostly heroin were linked with theft and fraud, but cannabis on the other hand has little link with crimes (Fridell, Hesse, Meier, & Kühllhorn, 2008).

Truancy is another aspect of social implications of substance misuse in which a reciprocal relationship was demonstrated. That is, truancy increases the risk of substance abuse and on the other hand substance abuse increases truancy rate (Chou, Ho, Chen, & Chen, 2006). Also, many studies have illustrated the association between use of illicit drugs and school drop out in which high rate of drop out was found in drug abusers (Rumberger & Lim, 2008). Driving under the influence of drugs was associated with increased risk of road traffic accidents by many epidemiological studies which were said to be due to impairment of cognitive and psychomotor functions of the addicts and in this regard, benzodiazepines were shown to have the greatest risk (Drug use, impaired driving and traffic accidents, n.d.; Orriols et al., 2009). A significantly statistical association was found between consumption of illicit drugs and suicidal attempt as well as other self-injurious behavior which was more common among uneducated, unemployed young adults (Mohammed,

2012). Furthermore, a significant correlates between drug abuse and unprotected and unplanned sexual intercourse was fully established especially among higher college students (Hingson et al., 2003). Drinking, for example, is strongly related to the risk of dangerous sex behavior with multiple sexual partners and therefore increased risk of serious sexually transmitted diseases (Thacher et al., 2014).

#### 2.1.2 PHYSICAL IMPLICATIONS:

In America, more than 1 million children experience some forms of physical or sexual abuse each year mainly due to parental alcohol abuse. Physical abuse means all forms of maltreatment that may result into physical injuries like bruises, lacerations, fractures or burns. Neglect such as failure to provide food, shelter, clothing or medical concern to children can be considered as a form of physical abuse. Furthermore, sexually abusive behavior like raping, touching, kissing or even caressing may be considered as physical abuse (Widom, 1993). Substance abuse was shown to be related with self afflicted physical injuries like cutting, bruising or even burns (Jr Califor et al., n.d.). According to Blose et al, injury-related hospital admissions among addicts are by far higher than injury-related hospital admissions in non-addicts. This implies that injury rate among addicts is higher than in non-addicts (Blose & Holder, 1979). There is a large body of evidence that relate physical symptoms like agitation, tremors, confusion and restlessness with substance abuse which are regarded as part of withdrawal symptoms due to stimulation of central nervous system (Hodding, Angeles, Jann, Ackerman, & Angeles, 1980).

#### 2.1.3 MEDICAL IMPLICATIONS:

In Switzerland, between 1980 to 1986 about 269 hospitalized patients were found to have history of drug abuse. About 47% of the patients have infectious complications with pulmonary infections as the most commonly identified infections largely due large percentage of heroin abusers accounting for about 95%. About 16.4% of the patients have viral hepatitis, 11.1% have human immunodeficiency virus infection, 9.3% have minor genital infections and about 2.6% have bone and joint infections and sepsis and endocarditis respectively (Scheidegger & Zimmerli, 1989).

In a case report of Goel et al, a prolong and sustained bacteraemia was found in a 25-year old intravenous drug addict which persists with even multiple regimens of antibiotics which confirm a risk of bacteraemia in intravenous drug addicts (Goel, Munshi, Thyagarajan, & Presentation, 2016). In a study by Possi, inhalants like Glues is strongly associated with risk of Lung, brain, and liver damage or even death through suffocation or choking, and anaemia. Whereas Heroin abuse is correlated with risk of brain and liver destruction, drug induced hepatitis and embolism (Poss, 1996). Intravenous drug addiction is

associated with systemic infections like endocarditis which can affect brain due to cerebral embolism or infarction causing stroke. Viral hepatitis or HIV infections which are commonly counteracted can cause hepatic or HIV-induced encephalopathy. Right sided infective endocarditis can occur in chronic drug users and very rarely they may present with pulmonary hypertension or edema especially in Heroin, Cocaine and Amphetamine drug addicts. Also very commonly they may present with pulmonary infections, aspiration pneumonia, bacterial pneumonia and tuberculosis. As indicated earlier, risks of Hepatitis B, C and D is greatest in intravenous drug addicts with about 20% of these infections, in America for example, occur among drug users. Both acute and chronic kidney injury, interstitial nephritis or glomerulonephritis were associated with Cocaine addiction (Committee & Editors, Eastern Journal of Psychiatry, 2009)

#### **2.1.4 PSYCHIATRIC/PSYCHOLOGICAL IMPLICATIONS:**

Wide range of clinical as well as epidemiological studies have demonstrated the link between substance abuse, particularly alcoholism and chronic anxiety disorder and was found to be more common in men than women. In a clinical study by a Kushner et al, about 23-70% of alcoholics have anxiety disorder specifically phobias and neurosis and about 20-45% of patients with anxiety disorder have history of alcoholism. Also, elevated rates of anxiety disorder were found in relatives of patients with alcoholism in many family studies. These findings indicate that alcoholism contribute to the development of anxiety disorders (R. Katherine et al, 1995). In a study by Sareen et al, an association between anxiety disorders like social phobia, panic disorder, agoraphobia, specific phobia, and generalized anxiety disorder with chronic use of amphetamines, cocaine, hallucinogens and heroin were established in two American communities (Sareen, Chartier, Paulus, & Stein, 2006). Many studies have shown the relationship between maternal addiction to cocaine, alcohol, or heroin during pregnancy and significant decrease in cerebral reserve capacity and functions and decrease brain size of the newborn with less ability to compensate for the loss of the brain function during adulthood which may progress to neurodegenerative diseases like Alzheimer's disease and presenile Dementia (Fein & Sclafani, 2004).

Chronic substance abuse is heavily related with risk of cognitive impairments and dementia especially in those who chronically abuse alcohol, benzodiazepines, tobacco and cannabis. Heavy and frequent alcohol consumption is very much correlated with increased risk of dementia, however, the role of alcohol alone in alcohol induced dementia is heavily debated and was believed to be a contributing factor in the presence of other factors. Although some case control studies reported benefit of smoking in the treatment of dementia due to nicotine which

is a cholinergic agent, a main target of dementia treatment, however, current emerging evidence from cohort studies disputes these findings as association between smoking and Alzheimer's dementia has been established by these studies. This negative relationship is currently supported by the European Community Concerted Action Epidemiology of Dementia (EURODEM) study. Also, current studies showed an association between benzodiazepines and cognitive decline in which individuals who have ever use BDZ are 1.7 more times to develop dementia than those who have never use it (Hulse, Lautenschlager, Tait, & Almeida, 2005).

Clinically, a strong relationship between substance abuse disorder and depression has long been established with both major depressive disorder (MDD) and other psychiatric disorders (Deykin, Levy, & Wells, 1987). Maternal substance abuse was also associated with the development of major depressive disorder in many studies (Luthar and Sexton, 2007). Psychiatric disorders are commonly associated with substance abuse and this poses a great challenge for treatment of both psychiatric and substance abuse disorders. Therefore, high index of suspicion for possibility of substance abuse should be employed in all patients with psychiatric disorders (Batki & Francisco, 1990). Psychosis in patients with history of substance abuse is not uncommon especially in chronic alcoholics. They commonly present with morbid suspicions, paranoid ideas, delusions or hallucinations and are more common in females and those below 30 years (Hoffbrand & Brown, 1988).

#### **2.2 SOLUTIONS OF SUBSTANCE ABUSE**

Prevention is the best solution of drug addiction and the following preventive measures are worthwhile in addressing the menace of drug addiction. These include public enlightenment activities to increase general awareness of the society to the problems and mass media, seminars, or workshops are tools to accomplish this goal. Preventive education for targeted audiences such as families, schools, workers, religious organizations, and out of school youths is also effective tool of prevention. Other preventive measures are strategies focused on the individuals and peer groups - provision of recreational facilities for youths in rural and urban areas, moral rearmament that de-emphasizes materialism, improved employment opportunities and effective control of drug availability as well as drug education as part of school curriculum (Johnson et al., 1990).

For effective prevention of drug abuse, there should be a psychological reorientation of the community and policy makers in which denial of the menace should be ended and reality of the problems be faced by recognizing that substance abuse is a serious public problems of the poor,

rich, educated, employed, unemployed or even community leaders (Jr Califor et al., n.d.). In a setting where the parents are drug addicts, children have greatest vulnerability of becoming drug addicts largely due to stressful and hardship they might be exposed resulting from poor parenting and neglect. To prevent drug abuse in these group of children, a prenatal and infancy visitation program should be instituted in which a trained nurse or social worker visits pregnant women and mothers of these children to provide support in addressing issues that could help mothers to stop addiction and the skills that could increase the parent-child interaction. For pre-school children, the effective strategy for prevention of substance abuse is through childhood education programmes provided by trained teachers and addressing their socio-economic problems. During middle childhood and adolescence, parenting skills programs are the most effective way of preventing adolescents substance abuse during which parents are taught skills for warm child rearing, guided on how to enact rules for child acceptable behaviors, trained on how to closely monitor their children during their leisure time and how to make friends and get personal and social skills (Consultation, Use, & Disorders, 2015; International Standards on Drug Use Prevention Second Updated Edition, n.d.).

As peer pressure appear to be significant indicator of adolescent drug abuse, therefore they should be trained on how to resist peer pressure towards substance abuse by creating negative attitudes with regards to substance abuse (Mcalister, Perry, Killen, Slinkard, & Maccoby, 1980). For individuals that are already addicts, a program called behavioral couple therapy could benefit them immensely and this involve bringing the addict and spouse or live-in partner together with the purpose of supporting abstinence and improving relationship. This is achieved by encouraging the couples to develop daily schedules of activities that could re-enforce the abstinence (Farrell & Schein, 2011). Other behavioral therapies for drug addicts include contingency management therapies in which specific activities are rewarded. Individual is given certain tasks to accomplish and then rewarded later after meeting the goals. Another behavioral therapy is the Cognitive Behavior and Skills Training Therapies in which individual learns to understand the conditions he is most at risk for drug use and therefore avoid them through a number of strategies to better cope with those conditions (Carroll and Onken, 2005). Preventive measures can be tendered to school based adolescents through taught programs where they will learn the skills to develop self-esteem, overcoming anxiety, resisting peer pressure and effective communicating skills achievable via group discussions, presentations, seminars, rehearsal and behavioral assignments (Botvin, Griffin, Diaz, & Ifill-williams, 2001).

Family based therapy has been shown by many studies to be very effective in the treatment of substance abuse especially in adolescents. It has been demonstrated to be an

important factor in encouraging the addict to keep up to treatment and clinical follow up, greatly reduced the possibility of drug use, significantly wipe away negative behaviors and particularly enhanced personal and social skills (Liddle & Dakof, 1995). Schools are also important means of drug abuse prevention where effective approaches such as spread of information regarding the menace of drug abuse, health education and programs on drug abuse and enacting school policy of, for example, drug-free schools should be instituted (Botvin et al., 2001). Health promotion programs are also shown to be an effective means of drug abuse prevention through two main strategies: enhancing positive health behaviors and discouraging negative health behaviors focusing on personality, behaviors and environment through community organizations, educational interventions and health behavior campaigns (Perry & Jessor, 1985). In a study by Pentz et al, massive community programs have enormously impacted on the reductions of drug abuse rate among adolescents and these programs include mass media campaigns, school-based educational programs, parent enlightenment in the involvement of child homework, community organizations and presentations as well as health policies that seriously deals with drug addictions especially in schools (Pentz et al., 2009).

Clinically, patient can be treated using three modalities: pharmacotherapy, outpatient counseling-based care and therapeutic communities. Pharmacotherapy is the use of Methadone maintenance, a synthetic narcotics for heroin and other opiates abuse; Levo-alpha acetylmethadol (LAAM), a derivative of methadone; Naltrexone, a fast acting opiate antagonists. The counseling program is the commonest method of treating drug addicts and it include psychotherapy, peer counseling and a series of meetings. Therapeutic communities is a program that emphasizes socialization, life style modifications and behavioral change (Sindelar & Fiellin, 2001).

### 3. CONCLUSION

Substance or Drug abuse is a global problem that usually affects youths and young adults causing serious physical, social and health related problems. There are many forms of abused drugs but cannabis remains the most commonly abused drug. Social and economic problems with easy availability of the substances are increasingly contributing to the menace of substance abuse especially among adolescents. In this review, the main implications of substance abuse have been highlighted and with fully elaboration of the solutions to the problems. Also, extensive discussion of the major preventive strategies has been elucidated. Multiple strategies like public enlightenment campaigns, educational approaches, school-based and community-based programs are usually adopted in addressing the problems of drug abuse. However, in-

patient management may be required in individuals that are physiologically drug dependents.

The review has some limitations as only published data were used and focus is mainly on the implications and the possible solutions. No explanations were given on the various drugs of abuse, however, a highlight is provided. Also, the review did not discuss the sources and origins of drug addictions.

1.

## 4. ACKNOWLEDGEMENT

I would like to acknowledge the effort of Amina M Adam for editorial support and advise as well as her review for the manuscript.

## 5. CONFLICTS OF INTEREST

The authors declared that no conflicts of interest involved in the formation of the manuscript.

## REFERENCES:

- Baker, E. H., George, S., & Sandle, G. I. (1996). COMPLICATIONS OF LAXATIVE. (February). <https://doi.org/10.1146/annurev.med.47.1.127>
- Barrett, S.P., Meisner, J.R. & Stewart, S.H. (2008). What Constitutes Prescription Drug Misuse? Problems and Pitfalls of Current Conceptualizations. *Current Drug Abuse Reviews*, 1, 255-262
- Batki, S. L., & Francisco, S. (n.d.). Drug Abuse , Psychiatric Disorders , and AIDS Dual and Triple Diagnosis.
- Blose, J., & Holder, H. D. (1979). Injury-Related Medical Care Utilization in a Problem Drinking Population.
- Bornstein, M. H. (n.d.). Handbook of Parenting Volume 4 Social Conditions and Applied Parenting (Vol. 4).
- Botvin, G. J., Griffin, K. W., Diaz, T., & Ifill-williams, M. (2001). Drug Abuse Prevention Among Minority Adolescents : Posttest and One-Year Follow-Up of a School-Based Preventive Intervention. 2(1).
- Carroll, K. M., Ph, D., Onken, L. S., & Ph, D. (2005). Reviews and Overviews Behavioral Therapies for Drug Abuse. (August), 1452-1460.
- Chou, L., Ho, C., Chen, C., & Chen, W. J. (2006). Truancy and illicit drug use among adolescents surveyed via street outreach. 31, 149-154. <https://doi.org/10.1016/j.addbeh.2005.04.011>
- Committee, J. A., & Editors, D. P. (2009). PSYCHIATRY (Vol. 12).
- Consultation, S., Use, D., & Disorders, D. U. (2015). scientific Consultation on Prevention of Drug abuse. (December).
- Deykin, E. V. A. Y., Levy, J. C., & Wells, V. (1987). Adolescent Depression , Alcohol and Drug Abuse. 77(2).
- Diagnostic and Statistical Manual, Fifth Edition Update, October, 2018
- Disorders, A. (1995). Comorbidity of Alcoholism The Role of Family Studies.
- Drug use, impaired driving and traffic accidents. (n.d.).
- Farrell, T. J. O., & Schein, A. Z. (2011). NIH Public Access. 18(1), 51-54.
- Fein, G., & Sclafani, V. Di. (2004). Cerebral reserve capacity : implications for alcohol and drug abuse. 32(September 2003), 63-67. <https://doi.org/10.1016/j.alcohol.2003.10.003>
- Fridell, M., Hesse, M., Meier, M., & Kühllhorn, E. (2008). Antisocial personality disorder as a predictor of criminal behaviour in a longitudinal study of a cohort of abusers of several classes of drugs : Relation to type of substance and type of crime. 33, 799-811. <https://doi.org/10.1016/j.addbeh.2008.01.001>
- G oel, N., Munshi, L. B., Thyagarajan, B., & Presentation, C. (2016). Case Report Intravenous Drug Abuse by Patients Inside the Hospital : A Cause for Sustained Bacteremia. 2016, 3-6.
- Hodding, G. C., Angeles, L., Jann, M., Ackerman, I. P., & Angeles, L. (1980). A Literature Review. 383-391.
- Hoffbrand, B. I., & Brown, M. J. (1988). Psychosis from alcohol or drug abuse Preoperative biochemical screening Compensation for medical negligence. 297(November).
- Hulse, G. K., Lautenschlager, N. T., Tait, R. J., & Almeida, O. P. (2005). Dementia associated with alcohol and. 109-127. <https://doi.org/10.1017/S1041610205001985>
- International Standards on Drug Use Prevention Second Updated Edition. (n.d.).
- J Johnson, C.A., Pentz, M.A., Weber, M.D., Dwyer, J.H., Baer, N., MacKinnon, D.P. and Hansen, W.B. (1999). Relative Effectiveness of Comprehensive Community Programming for Drug Abuse Prevention With High-Risk and Low-Risk Adolescents. *Journal of Consulting and Clinical Psychology*, Vol. 58, No. 4, 447-456
- J Johnson, M. E., Reynolds, G. L., & Fisher, D. G. (2001). Employment status and psychological symptomatology among drug users not currently in treatment. 24.
- Jr, J. A. C., Long, R., Bogart, H., Cole, N. K., Kennedy, J., Kennedy, P., ... Kennedy, M. (n.d.). celebrity morbidity list here begins with.
- Freek, M.J., Nielsen, D.A., Butelman, E.R. & Laforge, K.S. (2005). Genetic influences on impulsivity, risk taking, stress responsivity and vulnerability to drug abuse and addiction. *Journal of nature neuroscience*, 8, 11
- Liddle, H. A., & Dakof, G. A. (1995). EFFICACY OF FAMILY THERAPY FOR DRUG ABUSE : PROMISING BUT NOT DEFINITIVE. 2(4).
- Lingford-Hughes, A.R., Welch, S., Peters, L. and Nutt, D.J. (2012). BAP updated guidelines: evidence-based guidelines for the pharmacological management of substance abuse, harmful use, addiction and comorbidity: recommendations from BAP. *Journal of Psychopharmacology*, 0(0) 1 -54
- Mcalister, A., Perry, C., Killen, J., Slinkard, L. E. E. A. N. N., & Maccoby, N. (1980). Pilot Study of Smoking , Alcohol and Drug Abuse Prevention. 70(7).
- Mohammed, A. (2012). Suicidal and self-injurious behavior among patients with alcohol and drug abuse. 91-99.
- O'Brien, C.P., Childress, A.R., Ehrman R. & Robbins S.J. (1998). Conditioning factors in drug abuse: can they explain compulsion? *Journal of Psychopharmacology*, 12(1), 15-22
- Objective, A. (2003). Early Age of First Drunkenness as a Factor in College Students'

Unplanned and Unprotected Sex Attributable to Drinking. 111(1).

Orriols, L., Philip, P., Moore, N., Castot, A., Gadegbeku, B., Delorme, B., ... Lagarde, E. (2009). Benzodiazepine-Like Hypnotics and the Associated Risk of Road Traffic Accidents. *Clinical Pharmacology & Therapeutics*, 89(4), 595–601.  
<https://doi.org/10.1038/clpt.2011.3>

Pentz, M. A., Dwyer, J. H., Mackinnon, D. P., Flay, B. R., Hansen, W. B., Wang, E. Y. L., & Johnson, C. A. (2009). A Multicommunity Trial for Primary Prevention of Adolescent Drug Abuse.

Pernanen, K. (2001). inmates in canadian federal institutions. 13(3), 20–24.

Poss, M. K. (1996). Effects of Drug Abuse on Cognitive and Social Behaviours : A Potential Problem Among Youth In Tanzania. 3(1), 111–128.

Rumberger, R. W., & Lim, S. A. (2008). Why Students Drop Out of School : A Review of 25 Years of Research. (October), 805–893.

Sareen, J., Chartier, M., Paulus, M. P., & Stein, M. B. (2006). Illicit drug use and anxiety disorders : Findings from two community surveys ✱. 142, 11–17.  
<https://doi.org/10.1016/j.psychres.2006.01.009>

Scheidegger, C., & Zimmerli, W. (1989). Infectious Complications in Drug Addicts : Seven-Year Review of 269 Hospitalized Narcotics Abusers in Switzerland. II(3).

Sindelar, J. L., & Fiellin, D. A. (2001). INNOVATIONS IN TREATMENT FOR DRUG ABUSE : (83).

Thacher, T. D., Fischer, P. R., Tebben, P. J., Singh, R. J., Cha, S. S., Maxson, J. A., & Yawn, B. P. (2014). NIH Public Access. 88(2), 176–183.  
<https://doi.org/10.1016/j.mayocp.2012.10.018>.Increasing

United Nations Office on Drugs and Crimes, World Drug Report, 2012

Widom, C. S. (1993). Alcohol Abuse as a Risk Factor for and Consequence of Child Abuse.

IJSER