

An investigation into factors associated with addiction among drug addicts residing in rehabilitation centres

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Abstract

Drug addiction is a condition when the patient becomes permanently dependent on the use of illicit substances which affect or cause physiological changes. It includes different types of drugs such as Caffeine, Amphetamine, Cocaine and Nicotine. Central nervous system is mainly affected by this drug as it slows down the activity of the brain. Therefore, the present study was designed to evaluate the factors responsible for drug addiction and assess the social behaviour among 250 male drug addicts from the two districts (Patiala and Fatehgarh Sahib) of Punjab. The questionnaire included information regarding socio-demographic characteristics such as age, education, marital status, occupation of the subject and information about the drugs used. The prevalence of the substance abuse observed in the present study highlights the striking use of drugs in Punjab, recognizing prevalence on the basis of region and shortlisting measures to counter this menace.

Drugs are those chemical substances which transform the functioning of the cells or any body tissues. These modifications of functional tissues result in the changes of physical behaviour patterns. Drug addiction means that the patient becomes permanently dependent on the use of illicit substances which affect or cause physiological changes. These physiological changes increase the use of particular substances or drugs. Drug dependence makes individual depend on different types of chemicals and drugs. These

chemical substances may stimulate the central nervous system or depress/slow down the activity of the nervous system. Drug Dependence is of two types: Physical Dependence and Psychological Dependence. Physical Dependence starts due to repeated use of drugs which change the physiological state of the patients. Psychological Dependence or Psychic Dependence is one in which drug addicts have strong desire to take drugs to maintain the emotional characteristics.

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The major drug type is Cannabis which is cultivated as "*Cannabis sativa*". It is common in India and Central Asia. Tetrahydrocannabinol (THC) is physioactive chemical which is present in cannabis. Drug addicts take cannabis orally through smoking.⁵ Marijuana is a sub type of cannabis drug which also contains the physio-active chemicals which are used as mind altering chemicals.⁴ It is present in the form of greenish mixture, which is formed from the dried leaves, seeds and flower buds.⁹ Different types of the marijuana drugs are consumed in India like Bang, Ganja, Charas.⁸ Hallucinogens are present in the form of seeds called "Morning Glory Seeds". The seeds and mushrooms contain chemicals called Mescaline and Psilocin, which are active alkaloids. Stimulant drugs speed up the functioning of neurotransmitters in central nervous system. It includes different types of drugs such as Caffeine, Amphetamine, Cocaine and Nicotine.⁶ Narcotic drugs suppress the activity of the central nervous system. They act as pain relieving agent. Different types of drugs are included in this category like opioids, morphine and heroine. Opium is present in the form of milky liquid form, which is extracted from the poppy plants mainly from the seed pods. Heroin is a type of illicit drug.¹⁵ It is present in two forms called Brown sugar and Smack. Central nervous system is mainly affected by this drug as it slows down the activity of the brain. It is taken orally through smoking or injected with the help of syringes. Depressants are also called "downers" because they slow down the activity of the brain. There are different types of depressants like Barbiturates and Tranquilizers, which are most commonly used by the drug addicts. Alcohol is the type of depressant drug which

is formed or produced by the fermentation of sugar with yeast. The intoxicating ingredient found in beer and liquor is Ethyl alcohol which is commonly taken with water or soda.¹

The various effects of these drugs are lack of co-ordination because sensory motor neurons are affected by depressants. Heavy drug dosage causes a state of coma in drug addicts. The chances of lung cancer are also increased. Signs of chronic bronchitis are also found in cannabis drug addicts.²¹ Excessive drug dosage causes seizures, brain damage and loss of appetite. The patients cannot work properly because they feel weak and tired.⁶

Drug addicts take drugs to reduce depression and tension. Drug addiction is common in those patients who face such problems because in this condition stability of mind reduces. Therefore, patients take drugs like alcohol, opioids to reduce the symptoms of depression. Subjects can easily join the gang or drug addict group when their family relationships are strained. Among peer groups, friends play an important role in addiction because they are intermediate sources who provide drugs to addicts. Drugs are easily available in markets which are also responsible for drug addiction in youth.

According to Punjab Opioid Dependence Survey (2015), (survey includes ten districts and data were collected by Respondent Driven Sampling method), Heroin (53%) was the common drug used among the drug addicts and 33% of the subjects injected drugs through intravenous method. Household survey conducted in Union Territory of Chandigarh (Punjab) observed that alcohol (6.72%) consumption was common among male drug addicts.³ The cross-sectional study was

performed in male adults in 15 villages of Jalandhar(Punjab) and they found that alcohol (41.8%) consumption was common among addicts.¹⁸

Drug addiction is common in youth and it affects every country. It is a global phenomenon. In Punjab, drug addiction is very common and has reached to an alarming situation. The main factors which are responsible for drug addiction are society, friends and family history. Hepatitis C and HIV diseases are common in drug addicts.¹¹ Drug addicts are not aware about these diseases due to lack of education. Government of Punjab has established Rehabilitation centers and drug de-addiction centers to control the usage of drugs in Punjab. The youth of Punjab are mainly affected by this problem. About 70% of the drugs are consumed by young boys and girls in Punjab. An alarming rate of drug addiction exists in the state of Punjab. Therefore, the present study was designed to evaluate the factors responsible for drug addiction and

assess the social behaviour among the addicts.

The data was collected by non-random sampling using questionnaire method. The questionnaire sheet included information regarding socio-demographic characteristics such as age, education, marital status and occupation of the subject and information about substances or drugs used (duration of drug use, family history of substance abuse, perceived reasons of substance use, harmful effects of substance use, different types of drugs, sources of their introduction and reasons for taking them). The questionnaire was pretested and appropriate revisions were made before the actual data was collected. The study sample included 250 drug addict males admitted at Civil Hospitals and Rehabilitation centres in two districts (Patiala and Fatehgarh Sahib) of Punjab and the data was collected from January to March, 2019. The data was compiled using Microsoft office Excel worksheet. The percentage and proportion for every variable was calculated.

Table-1. Sociodemographic characteristics of the subjects

Variables	Number of Subjects (n)	Percentage (%)
Age of Subjects (years)		
15-30	132	52.8
30-45	93	37.2
45-60	25	10
Educational Qualification		
Illiterate	12	4.8
Below Matriculation	49	19.6
Matriculation/ Senior secondary/ Graduate	189	75.6
Marital Status		
Married	128	51.2
Unmarried	122	48.8
Employment status		
Employed	198	79.2
Unemployed	52	20.8

The analysis in the present study reported that from the total number of male drug addicts, more than half of the subjects (52.8%) were in the 15-30 years age group. Majority (75.6%) of the subjects had passed matric or graduation whereas 4.8% of the subjects were illiterate. Half of the subjects were married and 79.2% of the subjects were employed with jobs identified as business, labour, government jobs and drivers (Table-1).

Table-2. Substance use profile of the subjects

Age of initiation of substances use (years)	Number of Subjects (n)	Percentage (%)
Below 20	150	60
20-30	95	38
30-40	4	1.6
Above 40	1	0.4
Drug Frequency		
Daily	233	93.2
Alternate days	17	6.8
Cause		
Stress	49	19.6
Shock due to the loss of close Friend/ Family member	17	6.8
Media and entertainment	168	67.2
Any other	9	3.6
Peer pressure	7	2.8
Sources of drugs		
Family member	12	4.8
Friend	183	73.2
Colleagues	4	1.6
External agents	13	5.2
Any other	31	12.4
Family member + Friend	7	2.8
Use of any medical drug		
Yes	57	22.8
No	193	77.2
Mode of Intake		
Oral	181	72.4
Nasal	5	2

Intravenous	7	2.8
Oral +Nasal	33	13.2
Oral +Nasal + Intravenous	24	9.6
Effect of drugs on family relations		
Affected	40	16
Not affected	210	84
Disease		
Hepatitis C	31	12.4
HIV	2	0.8
Any other	54	21.6
Hepatitis C+ Any other	3	1.2
None of above	160	64

Majority (60%) of the drug addicts started the use of substances when they were below 20 years and only negligible number of the subjects consumed drugs when they were 40 years and above. In the present study, 93.2% of the subjects took drugs daily. Greater percentage of the addicts took drugs upon being influenced by media and entertainment (67.2%) followed by stress (19.6%) because new generation celebrities are followed as role models and the youth are their greatest fans. In entertainment industry, drugs are being used by them which influence the young and teenage groups. The subjects had accessibility to the drugs through their friends (73.2%). In

the present study, 22.8% of the subjects took tablets, capsules and syrups which were readily available in medical shops. Drugs were administered into the body orally (72.4%) and 9.6% subjects took drugs through three different ways *i.e.* orally, nasally and intravenous. Further it was observed that 16% of the subjects had problems with their family members and friends due to drug addiction, 12.4% of the subjects were found to be positive for Hepatitis C, 21.6% drug addicts suffered from different types of diseases such as liver inflammation, hypertension and 2 cases were found to be HIV positive (Table-2).

Table-3. Drug type and its effect on the body weight

Drugs Type	Frequency	Percentage	Weight Loss	Weight Gain	No effect
Opioid addict	70	20	52(20.8%)	10(4%)	188(75.2%)
Alcohol addict	130	52	123(49.2%)	15(6%)	112(44.8%)
Any other	50	28	65(26%)	3(1.2%)	182(72.8%)

In the studied subjects, half of the drug addicts consumed alcohol (52%) and minority (20%) of them took opioids. A total of 20.8% patients addicted to opium lost weight and majority of the subjects (75.2%) neither gained nor lost weight. Secondly, among alcoholic patients, half of the subjects lost weight (49.2%) and 26% of the heroin addicts lost weight (Table-3).

The present study was designed to study the risk factors among the drug addicts. An evidence of the epidemic of substance abuse in rural Punjab among the young generation has also been reported by Sharma *et al.*, 2017 in their cross-sectional study.¹⁸ The prevalence of substance abuse was found to be 65.5% and most common substance abused was alcohol (41.8%), followed by tobacco (21.3%). Demographic variables such as male gender, illiteracy, and age above 30 years were found to be significantly associated with drug abuse. Moreover, it was observed that every third person is indulged in drugs. Punjab opioid Dependent Survey (2015) revealed that 76% of the addicts were in the age group of 18 to 35 years.¹⁶ The present study revealed that 52.8% of the subjects belonged to the age group of 15-30 years. Hence, the results of the present study were quite similar to the earlier survey. Alcohol consumption was commonly (52%) used by the male students staying at hostels and the frequency of alcohol consumption was different from the present study.¹⁷ Swendsen *et al.*, (2012) reported use and abuse of alcohol and illicit drugs in US adolescents. The results of this study showed that nearly half (47.1%) of the adolescents consumed alcohol regularly.

These results are similar to the present study which also shows that alcohol is the most common abused substance being consumed than other types.²⁰ Khosla *et al.*, (2008) did random sampling in students of different colleges in Ludhiana district of Punjab and reported that most common factor of consuming alcohol was being forced by friends for drinking alcohol (38.8%).²⁰ These results were in disagreement with the present study. Avasthiet *et al.*, (2017) conducted a study to find out the prevalence and use of illicit substances in Union Territory of Chandigarh and observed that 78% respondents were employed³ which was in conformity with the results of the present study.

The sources who provided drugs to the drug addicts in the selected sample were studied. Friends (73.2%) were major source of provision of drugs to drug addicts. The results were similar to the ones reported by Atwoli *et al.*, (2011) among college students in Eldoret Municipality western Kenya.² They found that majority (75.1%) of the participants admitted that drugs were provided by their friends and peers. In both studies, friends were the major sources behind provision of drugs.

Different reasons for taking drugs were studied previously by Gupta *et al.*, (2013) among male students of Chandigarh who reported that majority of the subjects took drugs to get relief from stress (66.0%) and peer pressure (45.6%).⁷ These results were not similar to the present study. Common causes of drug addiction were studied by Avasthiet *et al.*, in 2017 observing that majority (67.03%) of the subjects took drugs for entertainment or fun³ which were in agreement with the

present study. Kokiwar and Jagdand (2011) found that the reasons behind the initiation of substances were peer pressure (52.9%) followed by the entertainment (21.1%) among male drug addicts of Karim Nagar District of Andhara Pardesh.¹³ These results were different from the present study which showed that media and entertainment (67.2%) was the major cause of drug addiction. The difference between the results of both the studies could be due to the different social environment and sample size.

In 2017, a study was conducted on the HIV positivity rate among injecting drug users in Delhi and Punjab.¹⁹ The results were different from the present study. Mahajan *et al.*, (2016) conducted study to found out the prevalence of Hepatitis C among the intravenous drug addicts at Swami Vivekanand Drug De-addiction and treatment Centre, Amritsar, 38.2% patients were found to be Seropositive for Hepatitis C.¹⁴ These results were different from each other because the studied area and sample size of both studies was different.

An influence of the sociodemographic variables was also observed by Kaur *et al.* (2018) as it was observed that 83.5% of subjects were belonging to rural areas and more than half (57%) of subjects were living in nuclear families.¹⁰ Family history of drug addiction was also considered in the present survey which elaborated that the results of the previous studies were different from those of the present one. Gupta *et al.*, (2013) reported that 49% of male students used substances on daily basis, followed by 23% who consumed drugs weekly.⁷ These results were different from the present study as 93.2% of the drug

addicts included in this study were taking drugs daily.

The prevalence and epidemiology of the substance abuse observed in the present study highlights the striking use of drugs in Punjab that also suggests to recognize prevalence on the basis of region. The teenage and professional development years could be considered as the major factor for initiation of drug usage along with social media which needs to be addressed immediately to reduce this menace from the society.

References :

1. Alozai U.U., S. Sharma (2019). *Star Pearls Publishing*.
2. Atwoli L., A.P. Mungla, M. N. Ndung'u, K.C. Kinoti, and E.M. Ogot (2011). *BMC Psychiatry 11*: 34.
3. Avasthi A., D. Basu, B.N. Subodh, P.K. Gupta, N. Malhotra, P. Rani and S. Sharma (2017). *Indian Journal of Psychiatry 59*(3): 284-292.
4. Balhara Y.P.S., A.K. Mishra, H. Sethi, S. Singh, and S.K. Khandelwal (2016). *Indian Journal of Psychological Medicine 38*(4): 331-335.
5. Behere A.P., P.B. Behere, and T.S.S. Rao (2017). *Indian Journal of Psychiatry 59*(3): 262-263.
6. Ciccarone D. (2011). *Primary Care 38*(1): 41-58.
7. Gupta S., S.S. Sorpal, D. Kumar, T. Kaur, and S. Arora (2013). *Journal of Clinical and Diagnostic Research 7*(8): 1632-1636.
8. Hosztaffis (2011). *Acta Pharmaceutica Hungarica 81* (4): 173-183.
9. Justinovo Z., L.V. Panlilio, and S.R.

- Goldberg (2009). *Drug addiction. Current topics in behavioral neurosciences 1*: 309-346.
10. Kaur A., S.K. Maheshwari and A. Sharma (2018). *Indian J Psy Nsg. 15*: 13-7.
 11. Kaur K. (2017). *Human Biology Review, 6* (1): 20-29.
 12. Khosla V., K.R. Thankappan, G.K. Mini, and P. Sharma (2008). *Indian Journal of Medical Research. 128*(1): 79-81.
 13. Kokiwar P.R. and G.R.S. Jogdand (2011). *Indian Journal of Public Health. 55*(1): 42-45.
 14. Mahajan P., M. Singh, A. Garg, P.D. Garg, and G. Singh (2016). *Dual Diagnosis: Open Access. 1*(6): 2472-5048.
 15. Nadeem A., B. Rubeena, V.K. Agrawal, and K. Piyush (2009). *Pravara Med Rev. 4*(1): 4-6.
 16. Punjab Opioid Dependent Survey (2015). National Drug Dependent Treatment Centre, AIIMS, New Delhi.
 17. Sarkar K., S.K. Roy, and R. Singh (2018). *Journal of Community Medicine and Public Health. 5*(8): 3304.
 18. Sharma B., A. Arora, K. Singh, H. Singh, and P. Kaur (2017). *Journal of Family Medicine and Primary Care 6*(3): 558-562.
 19. Swain P., J.K. Das, S. Jha, and G.S. Kumar (2017). *Indian Journal of Sexually Transmitted Diseases and AIDS 38*(2): 121-127.
 20. Swendsen J., M. Burstein, B. Case, K.P. Conway, L. Dieker, J. He, K.R. Merikangas (2012). *Arch Gen Psychiatry 69*(4): 1503.
 21. Volkow N.D., R.D. Baler, M.C. Wilson, and S.R.B. Weiss (2014). *The New England Journal of Medicine 370* (23): 2219-2227.