



A study of profile of patients admitted in the drug de-addiction centers in the state of punjab

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Abstract

Introduction: In Punjab, drug addiction is a cancer which is crippling the mental and physical well being of the youth population of Punjab. There are 15 DDCs supported by Indian Red Cross Society in Punjab and many private DDCs are also functional. So this study is an attempt to know the profile of patients taking treatment from these centres. **Materials and Methods:** 7 DDCs run by Indian Red Cross Society & 3 DDCs being run by Private registered societies located in various districts of Punjab were included. A pretested questionnaire was used to interview the patients who were admitted. **Results:** 120 patients were interviewed. All were males. 47.5% were in age group of 20-30 years. Mean age of starting drug abuse was 21.15 ± 5.29 years. 79.2% patients started drugs due to peer pressure. 59% belonged to rural area. 46% were in upper middle socioeconomic status & 65% patients were married. Patients were using more than one route and 13.3% were on IDU. As per single drug usage, 20.8% were addicted to alcohol & 20.8% to capsule. As per multiple drug usage, 62.5% were tobacco addict, 42.5% to alcohol & 40.8% to capsule. Rs 170.63 was the average amount spent per day. 85.0% patients were dependent on self for buying drugs. 16% patients had positive family history of drug abuse. 60% patients were brought to centre by family members. 39.2% patients had positive history of previous treatment at any other DDC. **Conclusions:** It is recommended that both Red Cross & Private DDCs should be checked regularly by authorities like Civil Surgeon and Deputy Commissioner & private centers should also be supported & promoted by the government so that these centers run in a better way & can provide more facilities.

Key words- Drug De-Addiction Centers (DDCs), Drug Addiction

Introduction

The use or abuse of drugs in one form or the other has lived with the mankind as part of the life for ages. Natural drugs prepared from plants or fruits that grow wild have been abused in Asia since ancient times. The cultivation of the opium poppy, which is known for its medicinal properties, spread from Asia minor to India and China more than 1,000 years ago. Cannabis grows wild in large quantities in many tropical areas and alcohol is easily obtained from fermentation. Alcohol, opium and cannabis were the traditional substance of abuse in India marked by moderate consumption generally ritualized in social gatherings and have found their way into the life of people and have been used for social, recreational and medicinal purposes [1].

Use of synthetic substances capable of having an altered effect on human health and behavior is of recent origin. World Health Organization (2002) estimates that there are about 2 billion people worldwide who consume alcoholic beverages and 76.3 million with diagnosable alcohol use disorders [2]. Alcohol causes 2.3 million deaths (3.8%) and a loss of 69 million (4.5%) of Disability-Adjusted Life Years [3,4,5].

India is hemmed between the golden triangle which include Myanmar (Burma), Laos, Vietnam, and Thailand and the golden crescent which include Afghanistan, Iran, and Pakistan; two prominent drug-producing hubs in the world. India as a natural transit zone, faces a major problem of drug trafficking. Drug addiction in India has of late emerged as a matter of

great concern both due to the social and economic burden caused by substance abuse.

National Survey (2004), on extent, pattern and trend of drug abuse conducted at the behest of Ministry of Social Justice and Empowerment (MSJE), Government of India and United Nations indicates that among males 12-60 years, drug abuse is quite common in the country. Tobacco was the most frequently used substance (55.8%), followed by alcohol (21.4%), cannabis (3.0%), opiates (0.7%) and sedatives (0.1%). About 15 million persons addicted to alcohol and various kinds of other drugs need urgent attention for their treatment, rehabilitation and reintegration into social mainstream. It was found that the five states reporting the largest numbers of drug users in descending order were Uttar Pradesh, Maharashtra, Punjab, Bihar, and Kerala [6].

Drug abuse is also associated with increased risk of other diseases like HIV and STD's. In India, among Injecting Drug Users (IDUs), HIV seroprevalence is as high as 8.71 percent [7].

Drug addiction or substance abuse is a pathological or abnormal condition which arises due to frequent drug use. The disorder of addiction involves the progression of acute drug use to the development of drug-seeking behavior, the vulnerability to relapse, and the decreased, slowed ability to respond to naturally rewarding stimuli. DSM-IV has categorized three stages of addiction: a) preoccupation/anticipation, characterized by constant cravings and pre-occupation with obtaining the substance, b) binge/intoxication, characterized by using more of the substance than necessary to experience the intoxicating effects and c) withdrawal/negative effect characterized by experiencing tolerance, withdrawal symptoms, and decreased motivation for normal life activities.

According to DSM-IV, TR 2000; criteria for substance (drugs) dependence is "a maladaptive pattern of substance (drugs) use, leading to clinically significant impairment or distress", as manifested by three (or more) of the following, occurring at any time in the same 12-month period:

- (1) Tolerance, as defined by either of the following:
 - (a) a need for markedly increased amounts of the substance to achieve Intoxication or desired effect
 - (b) markedly diminished effect with continued use of the same amount of the substance
- (2) Withdrawal, as manifested by either of the following:

- (a) the characteristic withdrawal syndrome for the substance
- (b) the same (or a closely related) substance is taken to relieve or avoid withdrawal symptoms
- (3) The substance is often taken in larger amounts or over a longer period than was intended.
- (4) There is a persistent desire or unsuccessful efforts to cut down or control substance use.
- (5) A great deal of time is spent in activities necessary to obtain the substance (e.g., visiting multiple doctors or driving long distances), use the substance (e.g., chain-smoking), or recover from its effects.
- (6) Important social, occupational, or recreational activities are given up or reduced because of substance use.
- (7) The substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance (e.g., current cocaine use despite recognition of cocaine-induced depression, or continued drinking despite recognition that an ulcer was made worse by alcohol consumption).
- (8) Drug treatment-cum-rehabilitation centre play an important role to make drug addict, free of addiction. It provide services to the community as awareness generation, Identification of addicts, motivational counselling, detoxification/de-addiction, vocational rehabilitation, after care and re-integration into the social mainstream and preventive education [8].

In Punjab, drug addiction is a cancer which is crippling the mental and physical well being of the youth population of Punjab, rendering them lifeless. Youth with lots of time, money and lacking parental supervision get easy lured into the drug habit, either prompted by peers or on their own. This study is an attempt to study the profile of patients admitted in drug de-addiction centers running across various districts of Punjab to get an insight into the problem.

Materials and Methods

This study was done in ten drug de-addiction centers situated across various districts of Punjab. **Selection of DDCs:** In Punjab, there are 15 drug de-addiction centers which are run by Indian Red Cross Society [9]. There are more private de-addiction centers run by private registered societies. 7 DDCs run by Indian Red Cross Society (selected by random sampling from 15 centers in list) and 3 DDCs being run by private

registered societies were included. Seven DDCs being run by Indian Red Cross Society which were selected for the study were at Patiala, Kharar (Mohali) NawanShahar, Gurdaspur, Ludhiana, Faridkot, Bathinda districts. Three DDCs being run by private registered societies which were selected for the study were in cities of Dasuya, Qadian and Bhogra. **Inclusion Criteria:** Those patients who were admitted in the DDCs and physically available at the time of visit were included. A total of 120 patients were interviewed. **Exclusion Criteria:** Those patients who were in state of addiction or inebriated, or not available due to any reason at time of visit were excluded. Total 5 patients were excluded.

Permission for Study: Permission was taken from Secretary, Indian Red Cross Society, Punjab Branch Chandigarh to visit Patiala, Gurdaspur, NawanShahar, and Kharar as per letter number DDC/2009-10/188 dated 14th Feb, 2010. Project directors of other drug de-addiction centers were contacted and purpose of study was explained in detail and due permission from them was taken. The study was duly approved by ethical committee of Government Medical College & Rajindra Hospital, Patiala.

Data Collection: Only those patients who were admitted at centers on the day of scheduled visit, were interviewed in person. Interview of indoor patients was done after making rapport with them, taking their informed consent and explaining them the purpose of study. Confidentiality of information provided by them was ensured. From interview of patients, on the basis of a separate pre-tested proforma, data was obtained regarding their socio-demographic profile, details of drug abused, amount spent per day, reason for starting drugs, source of income for spending on money, previous history of admission to any DDC and family history of any drug abuse. **Data analysis:** The data thus collected was then statistically analyzed.

Results

Out of 120 patients, who were interviewed, all were males. Table 1 shows age, sex, residence, marital status wise distribution of patients. The range of age distribution was 15-73 years with mean age of 31.22 years. Majority (47.5%) of patients were in age group of 20-30 years followed by 30-40 years (35.8%). About 78 (65.0%) patients were married followed by 38 (31.7%) unmarried. 4 (3.3%) were divorced due to drug abuse. 49 (41%) were from urban areas and 71 (59%) belonged to rural area.

Table 2 shows education, occupation and income status of patients. About 34.2% patients were

educated upto matric followed by 19.2 % patients who have done 10+2. About 43.3% of patients were farmer followed by 29.2% who were skilled workers. 27.5% of the patients had monthly income of more than Rs 20,000 followed by 24.2% having income between Rs 10,000-19,999.

Table 3 shows route of administration and type of drugs abused by patients. Patients were using more than one route. 114 (95%) patients were using oral route, 18 (15%) were using sniffing route and 16 (13.3%) were on IDU. As per single drug abuse, out of 120 patients, 25 (20.8%) of patients were addicted to alcohol. Among opioids, 25 (20.8%) were addicted to capsule, 4 (3%) were addicted to opium, 3 (2.5%) to smack, 2 (1.6%) to bhukki and 1 (0.8%) to tablets. 3 (2.5%) patients were addicted to Injection Avil. 2 (1.6%) were addicted to bhang. Among Benzodiazepines, 3 (2.5%) were addicted to Injection Diazepam and 1 (0.8%) on Alprazolam. 1 (0.8%) patient was addicted to eraser fluid.

Table 4 shows amount spent per day on drugs, source of income for drugs and reasons for starting drugs by patients. The range was Rs 25-1500 per day with average spending of Rs 170.63 per day. 37.5% were spending Rs 100-200 per day, followed by 21.7% spending Rs 50-100 per day. 85.0% were dependent on self for buying drugs and 11.8% on family.

79.2% started drugs due to peer pressure, 8.3% due to curiosity, 6.7% due to family grief, and 3.3% due to unemployment. About 3 (2.5%) patients started drugs due to breakup with their girlfriends and all were in age group of 15-20 years.

Table 5 shows family history of drug intake, previous history of DDC visit, history of relapse and patient brought to centre by whom at DDCs. 16% patients had positive family history of drug abuse. 39.2% had positive history of previous treatment at any other drug de-addiction centers and history of relapse to drug addiction. 60.0% were brought to centre by family members, 26 (22%) reported themselves, 15 (12%) were brought by relatives.

Table 7 shows age of starting drug abuse by patients. The range of age of starting drug abuse was 13-48 years with mean age of starting at 21.15 ± 5.29 years with majority (54.2%) starting drugs in age group of 20-30 years followed by 35.0% in 10-20 years.

Table 1: Age, sex, residence, marital status wise distribution of patients undergoing treatment at de-addiction centers

Particulars (n=120)		Number of Patients	Percentage
Sex	Male	120	100
	Female	0	0
Age (years)	10-20	2	1.7
	20-30	57	47.5
	30-40	43	35.8
	40-50	10	8.4
	50-60	7	5.8
	>60	1	0.8
	Range	15-73 years	
	Mean ± SD	31.22 ± 9.50 years	
	Marital Status	Un-married	38
Married		78	65.0
Separated/divorced due to drug abuse		4	3.3
Residence	Urban	49	41.0
	Rural	71	59.0

Table 2: Education, occupation and income status of patients undergoing treatment at de-addiction centers

Particulars (n=120)		Number of Patients	Percentage
Education	Professional Degree	2	1.7
	Graduation	7	5.8
	10+2/Diploma	23	19.2
	Matric	41	34.2
	Middle	19	15.8
	Primary	22	18.3
	Illiterate	6	5
Occupation	Professional	1	0.8
	Semi-professional	9	7.5
	Clerical/Shop/Farmer	52	43.3
	Skilled Worker	35	29.2
	Semi-skilled Worker	7	5.8
	Unskilled Worker	8	6.7
Income (Rs)	Un-employed	8	6.7
	>20,000	33	27.5
	10,000-19,999	29	24.2
	7,500-9,999	4	3.3
	5,000-7,499	28	23.3
	3,000-4,999	206	16.7
	1,001-2,999	6	5
≤1,000	0	0	

Table 3: Route of administration and type of drugs abused by patients undergoing treatment at de-addiction centers

Route of Administration of Drugs	Oral	114	95
	Sniffing	18	15
	IDU	16	13.3
TYPE OF DRUGS ABUSED		Single Drug Abuse	Multi Drug Abuse
Tobacco		0	75 (62.5%)
Alcohol		25 (20.8%)	51 (42.5%)
OPIOIDS Single drug abuse = 35 (29.2%) Multi drug abuse = 111 (92.5%)	Opium	4 (3.0%)	17 (14.1%)
	Bhukki	2 (1.6%)	7 (5.8%)
	Smack	3 (2.5%)	19 (15.8%)
	Capsule	25 (20.8%)	49 (40.8%)
	Tablets	1 (0.8%)	11 (9.2%)
	Syrup	0	8 (6.6%)
	Injection Avil		3 (2.5%)
BENZO-DIAZEPINES Single drug abuse = 4 (33.3%) Multi drug abuse = 22 (18.3%)	Injection Diazepam	3 (2.5%)	16 (13.3%)
	Tab. Alprazolam	1 (0.8%)	6 (5.0%)
Eraser Fluid		1 (0.8%)	0
Bhang		2 (1.6%)	8 (6.6%)

Table 4: Amount spent per day on drugs, source of income for drugs and reasons for starting drugs by patients undergoing treatment at de-addiction centers

Particulars (n=120)		Number of Patients	Percentage	
Amount spent per day on Drugs by Patients	<50	14	11.7	
	50-100	26	21.7	
	100-200	45	37.5	
	200-300	15	12.5	
	300-400	8	6.6	
	400-500	3	2.5	
	500-1000	6	5	
	1000-2000	3	2.5	
	Range		Rs 25-1500	
	Mean		Rs 170.63	
Source of Income for buying Drugs	Self	102	85.0	
	Family	14	11.8	
	Employer	1	0.8	
	Friends	2	1.6	
	Theft	1	0.8	
Reasons for starting drugs	Peer Pressure	95	79.2	
	Curiosity	10	8.3	
	Unemployment	4	3.3	
	Family Grief	8	6.7	
	Breakup with Girlfriend	3	2.5	

Table 5: Family history of drug intake, previous history of DDC visit, history of relapse and persons brought to centre by whom at DDCs

Particulars (n=120)		Number of Patients	Percentage
Family History of Drug Intake	YES	19	16
	NO	101	84
Person who brought patient to DDC	Self	26	22
	Family	72	60
	Relative	15	12
	Others	7	6
Previous History of DDC visit and History of Relapse	Yes	47	39.2
	No	73	60.8

Table 6: Relationship between early initiation of drug abuse & family history of drug intake

Family history of drug intake	Age of starting drug abuse		Total	Chi-square	p value
	<20years	>20years			
Yes	12	7	19	7.87	<0.01 H.S.
No	30	71	101		
Total	42	78	120		

Table 7: Age of starting drug abuse by patients undergoing treatment at de-addiction centers

Particulars (n=120)		Number of Patients	Percentage
Age of Starting Drugs	10-20	42	35.0
	20-30	65	54.2
	30-40	11	9.1
	40-50	2	1.7
	50-60	0	0
	>60	0	0
	Range	13-48 year	
	Mean±SD	21.15 ± 5.29 year	

Discussion

Present study comprised of 120 male only patients. Female wards are present at Ludhiana and Patiala centers but no female patients were admitted there. Similar findings were reported by Benegal et al [10], who studied financial burden of alcohol on 113 patients admitted to a special de-addiction centre in Karnataka, and found that all the patients were males. Mohan et al [11] conducted a study on 180 cases at one de-addiction clinic in GMC, Jammu (J&K) and also found that all were males.

In present study, the range of age distribution was 15-73 years with mean age of 31.22 years. Majority (47.5%) of patients were in age group of 20-30 years followed by 30-40 years (35.8%). About 78 (65.0%) patients were married followed by 38 (31.7%) unmarried. 4 (3.3%) were divorced due to drug abuse. 49 (41%) were from urban areas and 71 (59%) belonged to rural area.

Similar findings were reported by Mohan et al [11] who found that 59% belonged to 20-30 years group and 25% belonged to 30-40 years age group. Kadri et al [13] also found that majority of patients were of the age group between 26-35 years (46%) [13]. Singh et al [16] found that 59.03% of drug abusers were more than 30 years of age followed by 19.86% in 26-30 years. DeSilva & Fonseka [16] found that mean age of the drug addicts was 34.04 ± 7.5 years which is similar to mean age of 31.22 ± 9.50 years of present study. Thus age group of 20-40 years is the most common age group in which drug addicts are more.

Mohan et al [11] also reported that 70% of the cases were married. So more of married males take treatment at DDCs. Possible reason could be motivation of addict by family members.

Mohan et al [11] found that 55% belong to urban area and 45% were from rural background. Kadri et al [13] found that 84.4% of the addicts were Urban. Saluja et al [12] found that 83.5% were from urban background. This difference observed can be due to difference in socio-economic conditions of people of Punjab, and their rural agricultural based economy.

In this study, more than 50% of patients had undergone matric and 10+2. Thus, educated youth is also falling in bad habit of drug abuse. This is similar to finding of Singh et al [16] that most of the drug abusers were educated up to primary and secondary level (40.13 and 41.10% respectively). Similarly, it was found by Saluja et al [12] that most of the patients were school dropouts (54.1%).

In present Study, as more patients were in higher income group, this could be the reason that average spending calculated was Rs 170.63 per day on drugs. Benegal et al [10] found that the average individual spent Rs 1938.40 per month (Rs 64.61 per day) on alcohol. The difference could be due to better socioeconomic profile of admitted patients and increase in prices in year 2011 compared to year 2001.

In our study, 114 (95%) patients were using oral route, 18 (15%) were using sniffing route and 16 (13.3%) were on IDU. But DeSilva & Fonseka [14] in their study in Sri Lanka found that less than 1% used the intravenous route. Thus oral route is the major route of drug abuse and the number of addicts on IDU is also increasing. Addicts on IDU are at increased risk of many diseases like HIV, Hep-B, Hep-C, Abscess formation. Due to this, needle exchange programme was launched in 1995 by Government and National AIDS Control Organization to decrease incidence of HIV in drug addicts on IDU.

In this study, as per single drug abuse, out of 120 patients, 25 (20.8%) of patients were addicted to alcohol. Among opioids, 25 (20.8%) were addicted to capsule, 4 (3%) were addicted to opium, 3 (2.5%) to smack, 2 (1.6%) to bhukki and 1 (0.8%) to tablets. 3 (2.5%) patients were addicted to Injection Avil. 2 (1.6%) were addicted to bhang. Among Benzodiazepines, 3 (2.5%) were addicted to Injection Diazepam and 1 (0.8%) on Alprazolam. 1 (0.8%) patient was addicted to eraser fluid. Sachdev et al [15] in their study on changing pattern of drug abuse among patients attending de-addiction centre in Faridkot from 1994 to 1998 and concluded that there was an increase in the patients using the drugs available over the counter with chemist. This is similar to finding in present study.

Kadri et al [13] found that alcohol (70.2%) was most commonly used, followed by smack (13.8%). Singh et al [16] found that opium and alcohol were the most commonly abused drugs (66.75% and 8.68%) respectively. Saluja et al [12] found that commonest abused substance was opioids (76.2 %) and 54.2 % were also nicotine dependent. Venkatesan and Stelina [17] found that majority of the patient were alcohol dependent and polysubstance dependence showed an increasing trend. The difference in the findings observed could be due to easy availability of alcohol on corner of every street and drugs at all medical stores and from drug peddlars. Moreover, Punjab as a transit zone for drugs from Pakistan so availability of Opium, Heroin and Smack is also high.

Majority of patients relied on self for spending on drugs in our study. But, still this cause problems to the family as major part of income is spent by addict for obtaining drugs and other basic needs of family remains unfulfilled.

In our study, 79.2% started drugs due to peer pressure, 8.3% due to curiosity, 6.7% due to family grief, and 3.3% due to unemployment. About 3 (2.5%) patients started drugs due to breakup with their girlfriends and all were in age group of 15-20 years. Saluja et al [12] found that most common reason for starting the use of drug was curiosity (78.8%). DeSilva & Fonseka [14] found that 74% initiated taking drugs as an experiment out of curiosity. This difference could be due to the fact that both peer pressure and curiosity play a major role as pointed out by above mentioned authors and they at most of the times co-exist.

About age of starting drug abuse, Kadri et al [13] found that 46.4% of them had started taking the drugs before the age of 20 years. Singh et al [16] found that 44.13% of the abusers had started substance abuse at the age of 16 to 20 years. Saluja et al [12] found that mean age at 1st use of primary substance was 14.8 years. DeSilva & Fonseka [14] found that majority (70.1%) started using drugs when they were in the age group 10-20 years. Venkatesan and Stelina [17] found that the number of people getting initiated to substance use in early age (10-19 years) showed an increasing trend. In present study earliest age of drug abuse is 13 years which is similar to finding of starting of drug abuse before 20 years by above mentioned authors. Thus youth of Punjab is falling victim to drug abuse at a very young age.

In current study, 16% patients had positive family history of drug abuse. 39.2% had positive history of previous treatment at any other drug de-addiction centers and history of relapse to drug addiction. Similar findings were reported by Kadri et al [13] who found that 26.1% had positive family history of drug addiction. Similarly, Singh et al [16] in their study found that 24.8% of them gave history of drug addiction in family members. Saluja et al [12] found that nearly 40.2% of the subjects had positive family history of drug dependence.

On statistical analysis by Chi-square test, the association between family history of drug intake and age of starting drug abuse was found to be statistically highly significant ($p < 0.01$). So, patients were starting drug abuse at earlier age in which family history was positive. Similar finding was explained in study by Johnson and Leff [18], that Children of Alcoholics (COAs) and children of other drug-abusing parents are especially vulnerable to the risk for maladaptive

behaviour because they have combinations of many risk factors present in their lives. The single most potent risk factor of parent's substance-abusing behaviour can place children of substance abusers at risk of drug abuse.

In this study, 60.0% were brought to centre by family members, 26 (22%) reported themselves, 15 (12%) were brought by relatives. Similar findings were reported by DeSilva & Fonseka [14] in their study who found that most of them (75.8%) were either self-referrals or referred by family members to the rehabilitation centers. Thus, motivation by family members play a major role for addict to get treatment at DDC.

DeSilva & Fonseka [14] in Sri Lanka reported that more than 55% of drug addicts were readmissions compared to 39.2% in present study. This difference could be due to difference in the socio cultural practices and drug abuse behaviour in the two countries. It also indicates that same addicts after de-addiction at DDC fall again into drug abuse and possible reason for this is that such patients go to same peer group and encounter similar surroundings.

Conclusion

This study shows that youth of Punjab is falling in vicious trap of drug abuse at early age with high rates of relapse. There is urgent need to cover all schools and colleges and universities with awareness programmes to warn the youth population against drugs. Educated youth is falling in bad habit of drug abuse which is an alarming situation and due to this, his/her studies is affected and whole academic carrier is destroyed. Support for substance abuse education, prevention and treatment must come from all sides including families, community groups, schools, policymakers, and health professionals. A vocational rehabilitation like training in tailoring, carpentering or computer courses must be financed and supported at all DDCs to reintegrate the de-addicted persons into social mainstream. It is recommended that all DDCs should be supervised periodically by government authorities from the office of Civil Surgeon/Deputy Commissioner.

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