

Original paper

Tertiary care de-addiction centre patients with substance dependence syndrome: A study of sociodemographic profile, sero prevalence of hepatitis B, hepatitis C, human immunodeficiency virus, and psychiatric co-morbidity

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Abstract

Objective

In India, the epidemic of substance misuse among young people has grown alarmingly severe over the past few years. These patients continue to spread the human immunodeficiency virus (HIV), hepatitis B virus (HBV), and hepatitis C virus (HCV) at an alarming pace on a global scale. Co-morbidity between psychiatric diseases and substance use disorders has recently gained significant policy attention. The current study sought to determine the prevalence of psychiatric co-morbidity, HIV, HBV, and HCV infection among individuals with substance use disorders.

Material and methods

The present cross-sectional study was tertiary care Drug De-addiction Centre based study in which their sero-prevalence of anti-HCV, anti-HIV antibodies and HBsAg antigen were determined along with psychiatric co-morbidity among 100 consenting patients of substance dependence syndrome. Pre structured psychiatric thesis, socio demographic

performa, self reporting questionnaire 20 and MINI were applied to study the abovesaid factors. The data was evaluated using Microsoft Office Excel worksheet.

Results

The majority 60.0% of patients had single substance dependence. Out of that maximum had opioid dependence 86.7% followed by alcohol dependence 8.3%. 30 (30.0%) patients were reactive for any of three viral markers and 70 (70%) patients were non-reactive. Regarding psychiatric co-morbidity 29.0% patients of substance dependence syndrome had co-morbid psychiatric illness as per MINI scale.

Conclusions

Thus, the findings of this study will contribute to the development of effective intervention programs to stop the spread of HIV, HBV, HCV, and psychiatric disorder among this population.

Keywords: substance dependence, HIV, HBV

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Introduction

Substance dependence is “A cluster of behavioural, cognitive, and physiological phenomena that develop after repeated substance use and typically include a strong desire to take the drug, difficulties in controlling their use, persisting in their use despite harmful consequences, a higher priority given to drug use than to other activities and obligations, increased tolerance, and sometimes a physical withdrawal state”. In India, the epidemic of substance misuse among young people has grown alarmingly severe over the past few years. Out of 81,802 treatment seekers in India in 2004-2005, 61.3% reported using opioids, 15.5% reported using cannabis, 4.1% reported using sedatives, 1.5% reported using cocaine, 0.2% reported using amphetamines, and 0.9%

reported using solvents (1). Every third male student in Punjab is addicted to drugs, according to a poll by the Punjab government. Additionally, it was discovered that Punjab has 3 times the national average reported for opiate consumption. The issue of drug abuse has become epidemic-level in the state of Punjab (2).

Hepatitis B virus, hepatitis C virus, and human immunodeficiency virus (HIV) continue to spread dangerously swiftly around the world (2). Sharing contaminated injections is the main way that parenteral virus spreads (3). According to research, people who take drugs frequently are more likely to contract these blood-borne viral infections (4).

Co-occurring mental diseases and substance use disorders are common. Substance usage is likely to both start and worsen pre-existing psychological conditions (5). There has been much epidemiological research on the connection between psychiatric problems, substance use, abuse, and dependency (6). Comorbidity between substance use disorders and other psychiatric diseases has recently grown to be a significant policy concern (7). Only a small number of studies have looked at the frequency of psychiatric comorbidity in Punjabi people with substance use disorders. Among patients with substance use disorders, the current study sought to assess sociodemographic traits, the prevalence of HIV, HBV, and HCV infection, as well as psychiatric comorbidity.

Material and methods

Study design

Present study was a cross-sectional, tertiary care Drug De-addiction Centre based study in which sero-prevalence of anti-HCV antibodies, anti-HIV antibodies and HBsAg antigen were determined along with psychiatric co-morbidity among consenting patients of substance dependence syndrome. This study had the approval of the institutional research ethics committee. A total of 100 patients of substance dependence syndrome who were admitted to the Drug De-addiction Centre in 2015-2016 were recruited for study.

Inclusion criteria

Participants with the following criteria were recruited to the study:

1. Meeting the ICD 10 criteria for substance use disorder currently using the substance (active dependence).
2. Age between 15-65 years.
3. Written informed consent.

Exclusion criteria

Participants excluded from the study if afflicted with:

1. Organic brain syndrome.
2. Severe medical ailment.
3. Mental retardation.

Requirements and procedure

A. Instruments:

1. Psychiatric thesis proforma

Psychiatric thesis / Interview proforma made by department of psychiatry was applied to find out the substance abused, duration of use, duration of dependence and sexual history of the patients.

2. Socio-demographic proforma

It was used to see the socio-demographic profile of the patient.

3. The self reporting questionnaire (SRQ 20)

The self reporting questionnaire (SRQ) was developed by WHO as an instrument designed to screen for psychiatric disturbances, especially in developing countries. It consists of 20 questions which have to be answered by yes or no. It may be used either as a self-administered or as an interviewer administered questionnaire. Its translated Punjabi version was used for the study.

4. Mini international neuropsychiatric interview (MINI). diagnostic assessment

The MINI was designed as a brief structured interview for the major axis I psychiatric disorders in DSM-IV and ICD-10.

Study Procedure

A total of 100 patients of substance dependence syndrome who were admitted to the Drug De-addiction Centre were recruited for the study. Subjects were selected by non-randomized convenient sampling only after a consultant psychiatrist from department of psychiatry independently confirmed the clinical diagnosis. The nature and purpose of the study was explained to the subjects and they were assured about the confidentiality of the information given. An informed written consent for participating in the study was obtained from these persons reporting for treatment and meeting ICD 10 criteria for substance dependence syndrome. An interview of the patient was conducted with the help of psychiatric thesis proforma and socio-demographic profile was noted in socio-demographic proforma. The researcher collected blood samples (5ml) of the consenting patients using aseptic precautions. These samples were sent to the Microbiology Department of GGS Medical College where they were analyzed for anti-HIV antibodies, anti-HCV antibodies and HBsAg antigen using ELISA test.

Screening for any psychiatric illness was assessed by SRQ 20 on Day 10 of detoxification after the minimization of withdrawal symptoms. The instrument was used as a self administered questionnaire. The persons scoring more than 7 on SRQ 20 were administered MINI for making the final diagnosis as per ICD 10 criteria.

The diagnosis of psychiatric co-morbidity made, would be confirmed by the consultant of the psychiatry department.

Statistical analysis

The data were subjected to statistical evaluation using SPSS 20. Descriptive data were analyzed by percentage, mean, and standard deviation. To represent the data both tables were used.

Results and observations

Table 1 depicts socio-demographic profile of the whole sample.

Table 1. Total sample distribution by sociodemographic characteristics		
	Variables	N (%)
Age (in years)	15-20	7 (7%)
	20-25	21 (21%)
	25-30	25 (25%)
	30-35	17 (17%)
	35-40	6 (6%)
	40-45	10 (10%)
	45-50	5 (5%)
	50-55	5 (5%)
	55-60	2 (2%)
	60-65	2 (2%)
	Range	15-65 years
	Mean Age ($\pm$ SD)	30.4 $\pm$ 11.2 years
Gender	Male	98 (98%)
	Female	2 (2%)
Marital Status	Married	68 (68%)
	Unmarried	32 (32%)
Education	Illiterate	15 (15%)
	Primary Education	12 (12%)
	Middle	10 (10%)
	Matriculation/ Higher Secondary	41 (41%)
	Graduate	18 (18%)
	Post-Graduate	4 (4%)
Occupation	Employed	90 (90%)
	Unemployed	10 (10%)
Income	0-2000	12 (12%)
	2001-4000	6 (6%)
	4001-6000	3 (3%)
	6001-8000	10 (10%)
	>8000	69 (69%)
Region	Rural	68 (68%)
	Urban	32 (32%)
Type of family	Nuclear	53 (53%)
	Joint	47 (47%)

Table 2 depicts that majority 60 (60.0%) of patients had single substance dependence. 30 (30.0%) had two substance dependence and about 10% of patients had 3 or more substance dependence.

Table 2. Total sample distribution by number of substance used	
No. of substance used	N (%)
Single substance	60 (60.0%)
Two substances	30 (30.0%)
Three substances	5 (5.0%)
Four substances or more	5 (5.0%)

Table 3 depicts that among the patients with single substance dependence, maximum had opioid dependence 52 (86.7%) followed by alcohol dependence 5 (8.3%), cannabis dependence in 2 (3.3%) and volatile solvents 1 (1.7%). No patient was found consuming sedatives or tobacco as single substance.

Table 3. Total sample distribution by type of substance used in single substance dependence	
Type of substance used	N (%)
Opioids	52 (86.7%)
Alcohol	5 (8.3%)
Cannabis	2 (3.3%)
Sedative	0
Tobacco	0
Volatile solvents	1 (1.7%)
Total	60 (100%)

Table 4 depicts that majority of patients 33 (33.0%) had duration of substance dependence between 5 to 10 years, followed by 29 (29.0%) patients who had duration of dependence less than 5 years and 16 (16.0%) patients had duration of dependence more than 15 years.

Table 4. Total sample distribution by duration of substance dependence	
Duration (years)	N (%)
<5	29 (29.0%)
5-10	33 (33.0%)
10-15	22 (22.0%)
>15	16 (16.0%)
Total	100 (100%)

Table 5 shows that among 100 patients of substance dependence syndrome 42 (42.0%) were intravenous drug users (IDUs).

Table 5. Total sample distribution by intravenous drug user	
IDUs	N (%)
IV drug user	42 (42.0%)
Non-IV drug user	58 (58.0%)

Table 6 depicts 30 (30.0%) patients were reactive for any of three viral markers and 70 (70%) patients were non-reactive.

Table 6. Total sample distribution by viral markers		
Variable	Viral markers	N (%)
Reactive	HIV	2 (2%)
	HCV	20 (20%)
	HBsAg	8 (8%)
Non-Reactive		70 (70%)

Table 7 depicts that 29 (29.0%) patients of substance dependence syndrome had co-morbid psychiatric illness as per MINI scale. Among these, 71% patients had no psychiatric co-morbidity and 29% had psychiatric co-morbidity.

Table 7. Total sample distribution by psychiatric co-morbidity as per MINI scale (N=100)	
MINI	N (%)
Mood disorder without psychotic symptoms	19 (19.0%)
Anxiety disorder	7 (7.0%)
Mood disorder with psychotic features	2 (2.0%)
Antisocial personality disorder	1 (1.0%)
No psychiatric co-morbidity	71 (71.0%)

Discussion

This study showed some interesting findings regarding sociodemographic profile, viral markers and psychiatric co-morbidity. 98 patients were male in our research. This was similar to the findings of study done in the past (8) in which authors found that the majority of cases in their study were male. However one study done in 1978 (9) also found 1 female drug user in their study. The reason could be embarrassment and shame. The majority of our patients were in the 25-30 age range, followed by 20-25 age range. Our findings were supported by Malik P et al (10) who reported most common age group in his study was 25-34 years. Consequently, drug misuse caused the most productive years of life to be wasted. However majority 68.0% of subjects in our study were married which closely resembles the results of a study done by authors in 2012 in rural Punjab (10). They found that 73.80% were married in their study. This might be due to the good social support and motivation to leave substance by family members after marriage.

Maximum of our patients in 90% cases were employed and 10% were unemployed. The majority of them had monthly income more than 9000 per month and were from rural background. These findings were consistent with findings of a study done in 2012 (11) and the authors found that majority of patients in their studies were farmers 42.5% and 85.5% patients from rural background. The main reason could be the easy accessibility to the central location of the centre and less expensive treatment in the government setup.

We found that 30 (30.0%) patients were reactive for any of three viral markers and 70 (70%) patients were non-reactive. This is supported by a study done in 2015 in North India (12) and the reason could be higher due to the sharing of needles. It has been found that Hepatitis C was more prevalent than Hepatitis B, possibly because 75% to 85% of HCV infections progress to chronic disease, whereas only 5% of HBsAg infections do. Because of this, HCV infected individuals may spread the infection over time.

In our study, 100 patients with substance dependence syndrome had an anti-HIV sero-prevalence of 2%, compared to 4.8% among injecting drug users. These results were in line with the study done in 2012 (12).

This was lower than the nation's general antiHIV antibody seroprevalence of 7.14% in the IDU population (13). This discrepancy in the seroprevalence of HIV may be brought on by our study's limited sample size.

In our study, the prevalence of psychiatric co-morbidity was found to be 29%, which largely affected opioid dependent people, 62.1% in IDU and 37.9% in Non-IDU.

Most of these patients had comorbid mood problems. 13 (44.8%) of the patients had a major depressive episode, followed by anxiety in 5 (17.2%), major depressive episode in 3 (10.3%), and dysthymia in 2. These findings were comparable to those of Kumar V et al (16), who studied opioid dependent persons and discovered that out of 25 patients, 19 (76.0%) had comorbid psychiatric disease.

In the index study, 71% had no psychiatric co-morbidity and 29% had psychiatric co-morbidity. Out of 29%, 19% had mood disorder without psychotic symptoms. Our findings were supported by the results of the study done in USA (17).

Conclusions

There were several gaps and questions in the area that remain to be answered in patients of substance dependence and psychiatric co-morbidity. The challenges with regard to treatment adherence of substance dependence and psychiatric co-morbidity are another area that will assume importance. A person may have upto three co morbid diagnosis, which indicates a poor result and suggests that the physician should not stop after making one or two diagnosis. Our study finding showed that people with substance dependence syndrome were more likely to get hepatitis B, C and HIV infections. For patients, doctors, and decision makers, the burden of these viral indicators in people with substance dependence syndrome specially IDU's, has clear ramifications.

Conflicting interests

None.

Authors funding

None.

Authors contribution

Both authors have made substantial contributions to all of the following: (1) the conception and design of the study, or acquisition of data, or analysis and interpretation of data, (2) drafting the article or revising it critically for important intellectual content, (3) final approval of the version to be submitted, and (4) agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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