Pattern of substance abuse among patients in a rehabilitation center

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ABSTRACT

Background: Substance use disorders have profound implications for individuals, their families, and society as a whole. At present, drug trafficking and addiction have ensnared every corner of the globe, impacting millions of individuals worldwide. This pressing issue of drug abuse is concerning due to the underlying conditions fueling it, including shifting cultural values, increasing economic stress, and weakened social support networks. **Aims and Objectives:** This study aimed to identify the trends in drug abuse and its influencing factors among patients undergoing treatment for addiction in rehabilitation centers in Telangana. **Materials and Methods:** The study, a descriptive cross-sectional analysis, involved 222 individuals grappling with drug addiction at the primary rehabilitation center for drug addiction treatment in Telangana. Information was gathered using a pre-tested, structured questionnaire between September and December 2022 under the Department of Pharmacology. **Results:** Among the respondents, 95% were male and 5% were female, with a majority falling in the 21–30 age brackets. The religious breakdown comprised 151 Hindus, 32 Muslims, and 30 Christians, while 41% hailed from tribal regions. Injection emerged as the most prevalent method of substance abuse among 194 participants. The onset of drug abuse mostly occurred between ages 11 and 20, primarily driven by self or peer pressure. Notably, 89% of participants reported being compelled to consume substances. **Conclusion:** The study found a significant correlation between male gender and drug consumption (P<0.05), as well as between the 21 and 30 age group and drug intake (P<0.05). Additionally, the research highlighted a high prevalence of drug dependence among educated individuals, with familial conflicts and peer pressure being cited as common triggers for various forms of substance abuse.

Key words: Substance abuse; Rehabilitation center; Addiction; Triggers

INTRODUCTION

Substance use disorders (SUDs) have profound implications for individuals, their families, and society as a whole. Recognized as a disease by the American Medical Association, addiction can be treated. Illicit drug use and trafficking not only hinder the economic progress of nations but also contribute to crime, violence, and corruption.[1] At present, drug trafficking and addiction have ensnared every corner of the globe, impacting millions of individuals worldwide.

The global status report on alcohol and health revealed that 43% of the world's population (2.3 billion) had consumed alcohol in the past year as of 2016. According to the World Drug Report, around 271 million individuals aged 15–64 had used illicit drugs in the preceding year, with an estimated 35 million suffering from SUDs.[2,3] India faces a significant SUD problem, with a national survey in 2019 indicating that about 75 million people in the country struggle with various SUDs. Alcohol ranks as the most prevalent psychoactive substance in India, followed by cannabis and opioids. The survey pinpointed 57 million individuals with alcohol use

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disorder, 9 million with cannabis use disorder, and 7.7 million with opioid use disorder in India.[4]

India is grappling with a growing epidemic of substance abuse, as reported by a United Nations study which identified 1 million registered heroin addicts in the country, potentially reaching 5 million unofficially. This pressing issue of drug abuse is concerning due to the underlying conditions fueling it, including shifting cultural values, increasing economic stress, and weakened social support networks.

Estimations of substance use, however, fluctuate over time due to various factors like substance availability and cost, existing laws and their enforcement, societal attitudes towards specific substances, peer pressure, and other sociocultural influences.[5] A study published by the World Health Organization in 1980 initially noted the absence of widespread heroin abuse in India, but within 4 years, the same author contradicted this observation, citing a rapid rise in heroin dependence at a de-addiction center in Delhi. This was followed by the emergence of newer substances in the abuse landscape, including buprenorphine injection, codeine-based cough syrups, opioids, inhalants, cocaine, and various "club and rave drugs."[6,7]

Addressing drug abuse necessitates grassroots efforts involving primary care physicians, social workers, and community health workers. The significant social stigma attached to drug abuse underscores the importance of primary care workers being well-informed about the multifaceted nature of this issue, ensuring timely and effective care for those affected. This particular study aimed to analyze the socio-demographic profile and patterns of substance abuse among attendees of a drug de-addiction center (rehabilitation center) in Telangana. Enhanced understanding of these factors can aid healthcare workers and policymakers in making informed decisions.

Aims
Analysis of the Pattern of substance abuse among patients in a rehabilitation center in Telangana.

Objectives
1) To determine the Demographic pattern contributing to the substance abuse among patients undergoing treatment for addiction in rehabilitation center in Telangana
2) To identify the trends in drug abuse and treatment aspects in the patient's undergoing treatment for addiction in rehabilitation centers in Telangana

MATERIALS AND METHODS

Descriptive cross-sectional study was conducted in a rehabilitation center after approval from the Institutional Ethics Committee, Gandhi Medical College (Rc. No. IEC/GMC/2022/06/18). A total of 222 outpatients from Drug addiction rehabilitation centers in Telangana were taken for the study and data were collected from them. The study period was from September to December 2022. Pre-tested as well as pre-validated self-structured questionnaire was used to collect data from the participants. The details in the questionnaire were clearly explained to the participants in their vernacular language (Telugu and Hindi), and the responses were collected. Technical- and medical-related information was collected by reviewing the hospital records and other documents relevant to the study participants.

Statistics
The observations and results were tabulated accordingly in the MS EXCEL 10, and data were analyzed using the Software Package for the Social Sciences version 22. Relevant information on the sociodemographic profile, substance abused, particulars related to the drug abuse, psychological intervention dropout, and relapse rates were taken and results were presented as mean and simple proportions (Descriptive statistics).

RESULTS

The study was conducted in 222 participants. Most of the participants were in the age group of 21–30 years. One hundred and sixty participants were in the age group of 21–30 years. Majority were males (95%). Ethnicity assessed which showed 59% were non-tribals. One hundred and ninety-five participants out of 222 were in middle class (MC). Among the study participants, 151 belong to Hindu religion. About 59% were in urban residence and 41% in rural. The demographic details such as gender, age, ethnicity, social status, educational, and marital status are explained in the following Table 1. Majority of the participants belong to 21–30 years followed by 11–20 years. About 59% of participants were from non-tribal area and 41% were from tribal area. According to the Kuppuswamy scale, the social status was divided into below poverty line, lower class (LC), MC, and upper class. Most of the participants were in MC category. About 68% of participants were Hindus (H) followed by 14% of Muslims (M) and 13% Christians (C) and remaining 5 % Buddhists (B) and others. About 59% of participants were from urban area.

Among the study participants, 4 (1.8%) were illiterate and 201 (90.5%) were literate. Within the Literate 5 (2.5%) studied up to Class V, 9 (4.5%) studied up to Middle school, that is, Class VI-VIII. Sixty-five (32.3%) studied up to secondary school, that is, Class IX-X, 122 (60.7%) studied up to senior secondary school. that is, XI-XII and 17 (7.6%) were graduates. The employment status is shown in Table 2. One hundred and thirty-five participants were

not employed. This can be one of the main reasons for substance abuse.

One hundred and seventy-eight (80%) of the participants parents were together. The remaining 20% were in the background of single mother, single father, and divorce. Most of the participants have <2 siblings. Majority of the participants did not have the family history of substance abuse (74%). About 64% of the participants were newly married followed by 29% of participants were married and living with the family. One hundred and thirty-five participants were not employed. This can be one of the main reasons for substance abuse.

Considering the substance abuse, the most common one which the participants abused was heroin followed by alcohol which occupies the second place and cannabis as well as tobacco as 3rd and 4th preference, respectively. There are few participants who had inhalant abuse. Almost majority of the participants had the substance abuse through injection route. After taking the substance few

participants had the history of domestic violent behavior for which they had been arrested by the police also. The statistics regarding to the substance abuse such as age of initiation of abuse, frequency, source, and violent behavior associated with substance abuse are given in Table 4.

Injection was the most common route of substance abuse in the study. About 80% of the study participants started substance abuse by their teen age 11–20 years. Self and peer pressure were the most common reasons for the substance abuse. About 95% of the participants were taking the substance everyday. About 89% of the participants were forced into substance abuse and 11% were not forced. About 27% of the study participants had done the illegal activities. Among illegal activities, the participants were involved in domestic violence.

The most common pharmacological intervention given to the substance abusers was buprenorphine (agonist) as most of the participants had the addiction to the opioids. Psychological intervention includes guest lecturing from past users, counseling, session to enhance treatment adherence, recreation activities – sports, physical exercise, yoga workshop, meditation, motivation enhancement, and structuring of time. All the psychological interventions were given to all the 222 participants. The attempts of the deaddiction survey were also done which showed 91 participants with the history of first de-addiction treatment whereas 77 participants had history of more than first attempt and the remaining 54 respondents could not recollect the details regarding the attempts of de-addiction treatment.

Novelty of the study
Telangana exhibits the highest prevalence of drug users among the Southern states of India. Despite this, the state possesses only one addiction treatment facility, contrasting with relatively smaller states such as Arunachal Pradesh and Goa, which boast more such facilities. An analysis reveals a significant gap in research focusing on the assessment of drug abuse patterns in the Southern region of India, with more attention directed toward the northern

Table 1: Sociodemographic data of study participants

Variable	Number	Percentage
Gender		
Male	211	95%
Female	11	5%
Age		
11–20 years	43	19%
21–30 years	160	72%
31–40 years	19	9%
Religion		
Hindu	151	68%
Muslim	32	4.4%
Christian	30	13.5%
Buddhists	3	1.3%
Others	6	2.7%
Ethnicity		
Tribal	131	59%
Non-Tribal	91	41%
Residence		
Urban	131	59%
Rural	91	41%

Table 2: Education and employment data of study participants

Variable	Level of School Education	Percentage	Number
Education			
Illiterate		1.8%	4
Literate		90.5%	201
	Up to class V		5 (2.5%)
	Middle school - VI to VIII		9 (4.5%)
	Secondary school - IX and X		65 (32.3%)
	Senior secondary school - XI and XII		122 (60.7%)
Graduate		7.7%	17
Employment status			
Not employed		60.8%	135
Previously Employed		21.2%	47
Employed		18%	40

Table 3: Family details of participants

Variable	Number	Percentage
Family type		
Parents together	178	80%
Others	44	20%
Single mother	36	81.9%
Single father	6	13.6%
Divorce	2	4.5%
Number of siblings of participants		
More than 2	123	55.4%
<2	97	43.6%
Family history of substance abuse		
Yes	58	26%
No	64	74%
Marital status		
Never married	154	69.3%
Married - Living with spouse	65	29.2%
Separated	3	1.3%
Referral details		
Family	157	70.7%
Self	52	23.4%
Friend	11	4.9%
Social worker	2	1%

Table 4: Data regarding substance usage details among participants

Variable	Number	Percentage
Type of substance use		
Injection	194	87.4%
Non-injection	28	12.6%
Age at initiation of substance use		
11–20 years	163	73.4%
21–30 years	52	23.4%
More than 30 years	7	3.2%
Source of substance		
Ownself	119	53.6%
Friends	100	45%
Family	3	1.4%
Frequency of substance usage		
Everyday	197	88.7%
Several times a week	25	11.3%
History of illegal activity		
No	162	73%
Yes	60	27%
History of violence activity		
No violence	66	29.7%
Street fights	43	19.3%
Domestic violence	113	51%
History of police arrest		
Yes	88	40%
No	134	60%

and northeastern parts. Our study not only delves into understanding the patterns of drug abuse but also explores the demographic, social, and environmental determinants contributing to this behavior. Such insights are crucial for community physicians in tailoring interventions and fostering awareness to curb the escalating trend of drug abuse. In addition, our research scrutinizes the ethical and legal dimensions of drug abuse, examining its ramifications such as involvement in illicit activities and violence. Furthermore,

we assessed the pharmacological treatment effects on participants, complementing psychological interventions for better patient care. Encouraging further studies with larger sample sizes in the southern regions of India based on our questionnaire-based approach can significantly contribute to the overall well-being of the community.

DISCUSSION

In our current study, the average age among drug addicts was 27.23 years, which closely resembles Rahman et al., research findings where the average age was 25.3 years, notably more common among the 25–30 age group. Interestingly, in our study, only 5% of addicts were females, suggesting a lower prevalence of drug addiction among women.[8] The majority of participants identified as Hindus, which contradicted Habib's findings, where a larger proportion were Muslims. Moreover, our study revealed that most drug addicts had education levels up to senior secondary schooling.[8-10]

Regarding employment status, our study reported 60% unemployment among participants, akin to Rahman et al., findings of 58% unemployment.[8] In terms of residence, 59% of our respondents hailed from urban areas and 41% from rural regions, potentially influenced by lifestyle differences, accessibility, and increased demand.[11,12] The prevalence rates in slums and rural areas were notable and should not be disregarded, aligning with Habib study, where 82% were urban participants.[10]

Family dynamics also emerged: 80% of participants belonged to joint families, while 20% came from broken families. Examining siblings, 43.6% had more than two siblings, while 56.4% had fewer than two siblings.

We also assessed the social status of participants, revealing that 87.8% belonged to the MC, with 9% falling into the LC. Notably, 26% had a family history of substance abuse. Most participants (70%) were directed to the deaddiction center by family members, followed by self-referrals and friends.

In our study, 87% of participants abused substances through injection, while 13% used non-injection routes. These findings were similar to Farah et al's., studies, which reported 76% and 80% of participants, respectively, using the injection route.[12] Notably, 73% of participants-initiated substance abuse between ages 11 and 20, often obtaining substances independently or from friends. Illegal supply was the primary source of drugs.[13]

Statistical tests revealed a significant association between gender and first drug experience (P=0.002) and also

between the 21 and 30 age group and drug intake (P=0.052) based on Chi-square testing.

Limitations of the study

1) More accurate results can be achieved with larger sample size as it is conducted in only one center. So future studies can be done with larger sample size
2) Follow up of the treatment effects could not be assessed in our study. So further studies can be done for the follow-up of the patients to analyse the treatment effects.

CONCLUSION

In our current research, most of the participants were male, but there was a noticeable level of female involvement. Our study highlighted heroin as the most prevalent and frequently abused substance. While all income groups were engaged, the prevalence was notably higher among families earning between 10,000 and 20,000/-per month. We found that the age group most commonly involved in drug abuse falls within the 21–30 range, suggesting the importance of targeting preventive programs toward this demographic. The unemployed constitute a significant portion of society, indicating a need for vocational training alongside job opportunities.[14,15]

Drug dependence poses risks not just to individuals and their families but also to the nation as a whole. To diminish the number of individuals dependent on drugs, effective policies need to be implemented. In addition, conducting these studies regularly is crucial to address evolving trends. Prevention stands as the most crucial aspect of reducing drug demand and is pivotal in the battle against drugs. Since individuals in their most productive years are highly susceptible, early identification of drug addicts and timely intervention is imperative.

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