Section: Community Medicine

Original Research Article

PREVALENCE AND PATTERN OF SUBSTANCE ABUSE AMONG URBAN SLUM DWELLERS OF RANCHI

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ABSTRACT

Background: The World Health Organization (WHO) defines substance abuse as "Persistent or sporadic use of a drug inconsistent with or unrelated to acceptable medical practice". India is not free from substance-abusing individuals, especially adolescents, and such cases are growing each day. The world sees an increasing trend in drug abuse among young people under the age of 30. Trends show that 320 million young people aged between 15-29 years are dying from alcohol-related causes, resulting in 9% of all the deaths in that age group. The objective is to estimate the overall prevalence of substance abuse and to identify the pattern of substance abuse among slum dwellers of Ranchi between the 10-30 years age group.

Materials and Methods: A total of 72 substance abusers were identified using snowball sampling technique and interviewed for estimating the prevalence and pattern of substance abuse.

Results: The overall prevalence of substance abuse in the study population was observed as 9.6%. Following pattern was observed in study subjects, 100% were tobacco users, 97.2% were cannabis users, 90.3% were prescription drugs users, 81.9% were opioids users, 75% were alcoholic beverages users and 66.7% were sedatives users.

Conclusion: There is an increasing trend of polysubstance users. There is a rising trend in cannabis, opioids, and prescription drugs usage.

Keywords: Substance abuse, Slum dwellers, Tobacco, Cannabis, Prescription drugs.

INTRODUCTION

The World Health Organization (WHO) defines substance abuse as "Persistent or sporadic use of a drug inconsistent with or unrelated to acceptable medical practice".[1] Both developed and developing nations face an increasing public health challenge in the form of substance abuse.[2,3] India is not free from substance-abusing individuals, especially adolescents, and such cases are growing each day.[4] Students are known for abusing substances such as tobacco, alcohol, cannabis, and various allopathic drugs despite their known ill effects.[5] Consumption of addictive substances has been an ancient practice worldwide and in India for many centuries.[6,7] The world sees an increasing trend in drug abuse among young people under the age of 30. Trends show that 320 million young people aged between 15-29 years are dying from alcohol-related causes, resulting in 9% of all the deaths in that age group.[8]

Slums are economically backward areas with socioeconomic problems. Substance abuse might be different in the slum population and might be related to these problems. There is limited Ranchi-specific data about the prevalence and pattern of substance abuse. Hence, we intended to estimate the overall prevalence of substance abuse and identify the pattern of substance abuse in slum dwellers of Ranchi between the 10-30 years age group.

Objectives

1. To estimate the overall prevalence of substance abuse among slum dwellers of Ranchi between the 10-30 years age group.

2. To identify the pattern of substance abuse among slum dwellers of Ranchi between the 10-30 years age group.

MATERIALS AND METHODS

Study Design: This study is a descriptive observational, cross-sectional, community-based study. We adopted a multi-method approach comprising both quantitative and qualitative research methods. Key informant interview of the subjects was used to fulfil the planned objectives.

Study Population: Male individuals between the age group 10-30 Years residing in the selected slum areas of Ranchi.

Inclusion Criteria

- Male slum dwellers of the area under study.
- Between the age group 10-30 years
- Indulged in any of the substance abuse.
- Persons/guardians giving their consent/assent.

Sampling Technique: Three slums from the Ranchi Municipal Corporation, listed slums were randomly selected, and initial meetings were held with local notables of these slums to explain the purpose of the study. Initial potential research participants were identified and interviewed. We used the snowball technique (existing study participants recruit future participants from among their acquaintances) to pick subsequent research participants. This process continued till we reached saturation in the study area. The ultimate sample size of the study after exclusions was 72 subjects.

Overall prevalence Calculation: According to the United Nations Population Database, the Youth Population share in India for 2020 is 33.84% (9). Therefore, the study area's youth population was around 1499, and the male youth population was 750, which was the population at risk.

Study Period: Between June 2018 and November 2020. Data collection became prolonged due to COVID-19 restrictions.

Data Collection: We used a semi-structured, pretested questionnaire involving Alcohol, smoking, and substance involvement screening test (ASSIST) Version 3.0. ASSIST contains eight questions usable across a variety of cultures to screen for the following substances:

- Tobacco products
- Alcohol
- Cannabis
- Cocaine
- Amphetamine-type stimulants (ATS)
- Sedatives and sleeping pills
- Hallucinogens
- Inhalants
- Opioids
- Other drugs

The questionnaire was pretested amongst 5 participants, and necessary modifications were made accordingly.

Ethical Consideration: The Institutional Ethical Committee of RIMS, Ranchi, issued ethical clearance for this study.

Data Management: MS Excel was used for data management.

RESULTS

Prevalence = Total number of cases × 100
Population at risk

$$\frac{72 \times 100}{750} = 9.6\%.$$

The overall prevalence of substance abuse in the study population came out to be 9.6%, out of which 98.6% of the subjects were polysubstance users (at least three different substances).

The pattern of the different substance abuse was observed as follows [Table 1 and Figure 1].

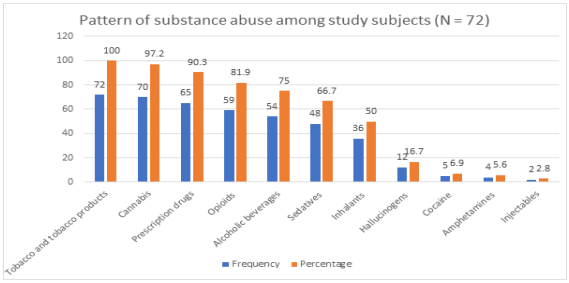

Figure 1 Pattern of substance abuse among the study subjects (N=72).

Table 1: Pattern of substance abuse among the study subjects (N=72).

Name of substances	Frequency (N=72)	Percentage (%)
Tobacco and tobacco products	72	100
Cannabis	70	97.2
Prescription drugs	65	90.3
Opioids	59	81.9
Alcoholic beverages	54	75
Sedatives	48	66.7
Inhalants	36	50
Hallucinogens	12	16.7
Cocaine	5	6.9
Amphetamines	4	5.6

DISCUSSION

The overall prevalence of substance abuse: The overall prevalence of substance abuse was 9.6%, which is higher than the Global average of 5.6%.[10] Our study shows a higher prevalence rate than some Indian studies such as Awasthi et al. 4.65%,[11] and Chavan et al 6.88%.[12] Higher prevalence rate than

our study was recorded by many Indian studies such as Thacore et al. 18.5%,[13] Dadwani et al. 18.86%,[14] Meena et al. 19.78%,[15] Dube et al. 22.8%,[16] Jena et al. 28.8%.[17] This might be due to the low number of subjects available owing to the COVID-19 Pandemic.

The pattern of substance abuse: 90.3% of the subjects had abused prescription drugs which is a trend that needs attention. The prescription drugs mostly abused were alprazolam, nitrazepam, tramadol, and cough syrups. Cannabis was used by 97.2% of subjects which is far more than in other Indian studies such as Ashtankar HJ et al. 7.2%,[18] Ghulam R et al. 8.9%,[19] Basu et al,[20] 10.1% and Sau M et al. 43%.[21] This shows that there is an increasing trend of using cannabis or its products such as Ganja/weed and Charas. Opioids and opiates were abused by 81.9% of the study population, which is more than the findings of Awasthi et al. 1.53%,[22] Dadwani et al. 3.56%,[14] Ghulam R et al. 4.9%,[19] Sau M et al,[21] 29.6% and Maaruf et al. 79%(23).[23] 75% of the study population used alcoholic beverages, which is higher than the Indian NFHS 4 data 29.5%,[24] Sau M et al. 38.3%,[21] Maaruf et al. 41%,[23] Ghulam R et al,[19] 46.5% and Ashtankar HJ et al. 70.35%.[18]

66.7% of the study population used sedatives. Sedative abuse has been very high in our study compared to that of the National Survey by NDDTC 2019 1.08%,[25] Basu et al 7%,[26] and Ghulam R et al. 2%.[19]

50% of the study population used inhalants which is also higher than the studies done by the NDDTC National Survey 2019 0.7%,[25] and Ghulam R et al. 1%.[19] Hallucinogens and amphetamines were used by 16.7% and 5.6% of the study subjects respectively. 100% of the study population were using tobacco products which is similar to the findings of Sau M et al.[21] The higher frequency and prevalence of tobacco products are because of their legality and attitude towards it that the people don't consider it to be part of substance abuse.

This study shows a clear pattern of increased prevalence of cannabis, opioids, sedatives, and tobacco abuse than most of the other studies. This may be a growing trend in Ranchi. Moreover, most of them are polysubstance users.

CONCLUSION

From the above study, we have found that

- There is an increasing trend of polysubstance users.
- There is a rising trend of cannabis, opioids, and prescription drugs.

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