# **Research Article**

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# Prevalence of substance abuse: a community based study

# Roma S. Dadwani\*, Tintu Thomas

Department of Community Medicine, C. U. Shah Medical College, Gujarat, India

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# \*Correspondence: Dr. Roma S. Dadwani,

E-mail: drromasohil@gmail.com

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## **ABSTRACT**

**Background:** Tobacco, alcohol, and illicit substance use continue to result in substantial morbidity and mortality and significant societal economic costs despite considerable efforts to minimize use of illicit substances and prevent use of illicit substances. The objective is to estimate the prevalence of substance use and its association with sociodemographic variables.

**Methods:** A cross sectional study was carried out through house to house visits on 1341 randomly selected people of 10 years and above age group in urban area of Surendranagar city, Gujarat, India.

**Results:** In present study, overall prevalence of substance abuse was 18.86%. The mean age of onset for drug use was 26.9 years. Proportion of substance abuse found to be greater among males (79.84%), those who were from class IV (68.37%), those who were belongs to joint families (61.67%) and who were literate (55.73%). The most common substance to be abused was tobacco (38%) followed by alcohol (34%). Females showed high prevalence for chhikni or bajjar (80.39%).

**Conclusions:** Our study revealed that in spite of having strict legislation for prohibition of substance abuse, people are still addicted with alcohol, cannabis, drugs etc. So prohibition has done nothing more than drive liquor underground. There is a need to change either in law or in behavior of people at large.

Keywords: Substance abuse, Prevalence, Tobacco, Alcohol

#### INTRODUCTION

The term "psychoactive substances" encompasses tobacco, alcohol and illicit drugs (e.g. opioids, cannabinoids and cocaine) as well as psychoactive prescription drugs and solvents. Today, there is no part of the world that is free from the curse of drug trafficking and drug addiction. India too is caught in this vicious circle of drug abuse, and the numbers of drug addicts are increasing day by day. According to the World health organization (WHO) substance abuse is persistent or sporadic drug use inconsistent with or unrelated to acceptable medical practice. As per the world health report 2002, tobacco and alcohol use were among the 10 leading risk factors for the global burden of disease measured in DALYs. Globally, tobacco and alcohol as a

risk factors cause 4.1% and 4.0% of the total burden of disability respectively. 4.2% of the global population aged 15 and over used illicit drugs, causing 0.8% of the total burden of disability.<sup>3</sup> In India tobacco – attributable mortality is estimated to increase from 1% of total mortality in 1990 to 13% by 2020.4 According to a UN report, One million heroin addicts are registered in India, and unofficially there are as many as five million.<sup>1</sup> Cannabis, heroin, and Indian-produced pharmaceutical drugs are the most frequently abused drugs in India. Cannabis products, often called Charas, Bhang or Ganja are abused throughout the country because it has attained some amount of religious sanctity because of its association with some Hindu deities.<sup>5</sup> Numerous surveys have been conducted since the early 1970 at various levels and in various populations in India to assess the level of psychoactive substance abuse. The prevalence estimates ranged from 0.94 per 1000 population in the earlier studies to 350 per 1000 population in more recent ones. The focus of these studies varied from use of alcohol to use and dependence on the substances in general. In the largest general population study conducted till date, current prevalence of alcohol use was 21.4 per cent, cannabis 3.0 per cent, heroin 0.2 per cent, opium 0.4 per cent and other opiates 0.1 per cent. Further, 17-29 per cent of the current users of these substances were found to be using these substances in dependent pattern. So the present study was conducted to find out prevalence of substance abuse among urban community of surendranagar city, Gujarat.

#### **METHODS**

This was a community based cross sectional study carried out over a period from January 2011 to July 2011 in urban area of Surendranagar, Gujarat. Study was approved by institutional ethical committee. One ward was selected randomly. 12% of population was selected as study sample and among them 5.2% were non respondent and those who are below 10 years. So the sample size was 1341. The study was conducted through house to house visit, interviewing all individuals aged 10 years and above in the family using a pretested questionnaire containing information about drug use and their socio demographic factors. Verbal consent was obtained from study participants.

#### RESULTS

Out of total 1341 samples, nearly half of them (46%) were below 30 years of age. The study population showed almost equal sex distribution (males 51%, females 49%). Majority were Hindus (90%).

Overall prevalence of substance abuse was 18.86% (Figure 1).

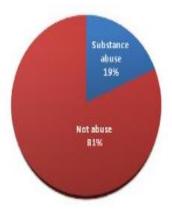


Figure 1: Prevalence of substance abuse (n=1341).

Out of total drug abusers majority (42.68%) were in age group 30-50 years, followed by age group of 50 and above (39.13%) and below 30 years (18.18%). The

proportion of substance abuse was significantly higher with increase in age (Table 1).

Table 1: Age wise prevalence of substance abuse.

	Substance abuse				
Age (Year)	Yes	No	Total		
10-20	11	296	307		
20 -30	35	272	307		
30- 40	67	184	251		
40-50	41	120	161		
50- 60	30	90	120		
60 and above	69	126	195		
Total	253	1088	1341		
$\chi 2 = 110.4$ ; df = 5;p<0.05					

Table 2: Socio demographic profiles of drug abusers (N = 1341).

Socio demographic factors         Drug abuse (%) χ2         χ2         p           Age of onset (N = 253)         26. 9±13.4*         -         -           Family type         Nuclear         097 (07.2%)         6.98         0.008           Joint         156 (11.6%)         156 (11.6%)         194.99         0.000           Education         112 (08.4%)         194.99         0.000           Literate (%)         141 (10.5%)         18.74         0.000           Sex         Male         202 (15.06%)         118.74         0.000           Female         051 (03.80%)         149.1         0.000           Occupation         Housewife         28 (2.08%)         149.1         0.000           Students         03 (0.22%)         149.1         0.000           Students         95 (7.08%)         149.1         0.000           Business         34 (2.53%)         149.1         0.000           Service         06 (0.44%)         0.000         0.000         0.000           Retired         03 (0.22%)         0.000         0.000         0.000         0.000         0.000         0.000         0.000         0.000         0.000         0.000         0.000         0.000				
factors           Age of onset (N = 253)         26. 9±13.4*         - <t< td=""><td></td><td>Drug abuse (%)</td><td>χ2</td><td>p</td></t<>		Drug abuse (%)	χ2	p
N = 253   Family type   Nuclear				
Nuclear         097 (07.2%)         6.98         0.008           Joint         156 (11.6%)         156 (11.6%)           Education         Illiterate (%)         112 (08.4%)         194.99         0.000           Literate (%)         141 (10.5%)         18.74         0.000           Sex         Male         202 (15.06%)         118.74         0.000           Female         051 (03.80%)         149.1         0.000           Occupation         149.1         0.000           Students         03 (0.22%)         149.1         0.000           Farmer         49 (3.65%)         149.1         0.000           Business         34 (2.53%)         149.1         0.000           Service         06 (0.44%)         16.98         16.98         17.00           Retired         03 (0.22%)         17.00		26. 9±13.4*	-	-
Joint       156 (11.6%)         Education       Illiterate (%)       112 (08.4%)       194.99 0.000         Literate (%)       141 (10.5%)       18.74 0.000         Sex       Male       202 (15.06%)       118.74 0.000         Female       051 (03.80%)         Occupation         Housewife       28 (2.08%)       149.1 0.000         Students       03 (0.22%)       Labourers       95 (7.08%)         Business       34 (2.53%)       Service       06 (0.44%)         Retired       03 (0.22%)       Unemployed         Unemployed       35 (2.60%)	Family type			
Education         Illiterate (%)       112 (08.4%)       194.99 0.000         Literate (%)       141 (10.5%)         Sex       Sex         Male       202 (15.06%)       118.74 0.000         Female       051 (03.80%)         Occupation         Housewife       28 (2.08%)       149.1 0.000         Students       03 (0.22%)         Farmer       49 (3.65%)         Labourers       95 (7.08%)         Business       34 (2.53%)         Service       06 (0.44%)         Retired       03 (0.22%)         Unemployed       35 (2.60%)	Nuclear	097 (07.2%)	6.98	0.008
Illiterate (%)	Joint	156 (11.6%)		
Literate (%) 141 (10.5%)  Sex  Male 202 (15.06%) 118.74 0.000  Female 051 (03.80%)  Occupation  Housewife 28 (2.08%) 149.1 0.000  Students 03 (0.22%)  Farmer 49 (3.65%)  Labourers 95 (7.08%)  Business 34 (2.53%)  Service 06 (0.44%)  Retired 03 (0.22%)  Unemployed 35 (2.60%)	Education			
Sex         Male       202 (15.06%)       118.74 0.000         Female       051 (03.80%)         Occupation         Housewife       28 (2.08%)       149.1 0.000         Students       03 (0.22%)         Farmer       49 (3.65%)         Labourers       95 (7.08%)         Business       34 (2.53%)         Service       06 (0.44%)         Retired       03 (0.22%)         Unemployed       35 (2.60%)	Illiterate (%)	112 (08.4%)	194.99	0.000
Male         202 (15.06%)         118.74         0.000           Female         051 (03.80%)         118.74         0.000           Occupation           Housewife         28 (2.08%)         149.1         0.000           Students         03 (0.22%)         149.1         0.000           Farmer         49 (3.65%)         149.1         0.000           Labourers         95 (7.08%)         149.1         0.000           Business         34 (2.53%)         34 (2.53%)         34 (2.53%)           Service         06 (0.44%)         0.000         0.000           Retired         03 (0.22%)         0.000         0.000           Unemployed         35 (2.60%)         0.000         0.000	Literate (%)	141 (10.5%)		
Female 051 (03.80%)  Occupation  Housewife 28 (2.08%) 149.1 0.000  Students 03 (0.22%)  Farmer 49 (3.65%)  Labourers 95 (7.08%)  Business 34 (2.53%)  Service 06 (0.44%)  Retired 03 (0.22%)  Unemployed 35 (2.60%)	Sex			
Occupation       Housewife     28 (2.08%)     149.1 0.000       Students     03 (0.22%)       Farmer     49 (3.65%)       Labourers     95 (7.08%)       Business     34 (2.53%)       Service     06 (0.44%)       Retired     03 (0.22%)       Unemployed     35 (2.60%)	Male	202 (15.06%)	118.74	0.000
Housewife 28 (2.08%) 149.1 0.000  Students 03 (0.22%)  Farmer 49 (3.65%)  Labourers 95 (7.08%)  Business 34 (2.53%)  Service 06 (0.44%)  Retired 03 (0.22%)  Unemployed 35 (2.60%)	Female	051 (03.80%)		
Students         03 (0.22%)           Farmer         49 (3.65%)           Labourers         95 (7.08%)           Business         34 (2.53%)           Service         06 (0.44%)           Retired         03 (0.22%)           Unemployed         35 (2.60%)	Occupation			
Farmer 49 (3.65%)  Labourers 95 (7.08%)  Business 34 (2.53%)  Service 06 (0.44%)  Retired 03 (0.22%)  Unemployed 35 (2.60%)	Housewife	28 (2.08%)	149.1	0.000
Labourers       95 (7.08%)         Business       34 (2.53%)         Service       06 (0.44%)         Retired       03 (0.22%)         Unemployed       35 (2.60%)	Students	03 (0.22%)		
Business       34 (2.53%)         Service       06 (0.44%)         Retired       03 (0.22%)         Unemployed       35 (2.60%)	Farmer	49 (3.65%)		
Service 06 (0.44%)  Retired 03 (0.22%)  Unemployed 35 (2.60%)	Labourers	95 (7.08%)		
Retired 03 (0.22%) Unemployed 35 (2.60%)	Business	34 (2.53%)		
Unemployed 35 (2.60%)	Service	06 (0.44%)		
	Retired	03 (0.22%)		
Socia acanomic class	Unemployed	35 (2.60%)		
Socio economic Class				
Class II 006 (00.44%) 10.543 0.014	Class II	006 (00.44%)	10.543	0.014
Class III 039 (02.90%)	Class III	039 (02.90%)		
Class IV 173 (12.90%)	Class IV	173 (12.90%)		
Class V 035 (02.60%)	Class V	035 (02.60%)		

The mean age of onset for drug use was 26.9 years. Out of total drug abusers, nearly two third (61.67%) were belongs to joint families, 55.73% were literate, 79.84% were males, 37.54% were laborers, 19.36% were farmer, 13.83% were unemployed, 13.43% were doing business, 11.06% were house wife and majority (68.37%) were belongs to class IV. All these socio demographic factors

showed statistically significant association with substance abuse (Table 2).

Nearly 12% of unmarried and 22% of married study population was substance abusers. Those who were divorce and separated among them nearly 39% were substance abusers.

Majority (38.34%) were using tobacco in different form followed by alcohol (34%), chhikni or bajjar (16%), opium (3.56%), drugs (1.18%), cannabis (1%) and multiple substance use (6.3%) (Figure 2).

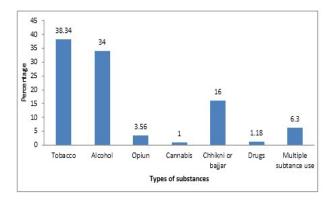


Figure 2: Prevalence of different types of substance use (N=253).

Compared to males, females showed high prevalence for chhikni or bajjar (80.39%) while it was tobacco (48.01%) and alcohol (38.61%) for males. Overall prevalence of substance abuse was high among males and the difference was statistically significant (p<0.05). Among substance abusers, nearly 9% were having different types of mental morbidities like depression, anxiety and psychotic illness.

# **DISCUSSION**

In present study, the overall prevalence of substance abuse was found to be 18.86% which was almost similar to study conducted by Meena et al (19.86%) and lower than the studies conducted by Din Prakash R et al (49.7%), Sarangi L et al (43.4%) and Prashant R et al (32.7%).  $^{10-12,18}$ 

Present study showed that majority (38.34%) were using tobacco in different form followed by alcohol (34%), chhikni or bajjar (16%), opium (3.56%), drugs (1.18%), cannabis (1%) and multiple substance use (6.3%). Compared to present study, NHS reported high prevalence for tobacco (55.8%), cannabis (3.1%) and drug abuse (3.6%) and low prevalence for alcohol (21.4%) and opium use (0.3%). Tiwari SC et al reported high prevalence for different substance use, Mehta et al (42%) reported almost similar prevalence for tobacco use

and others reported high prevalence for alcohol use and varied prevalence for cannabis use. 9,10,12-14,17

The present study showed that the mean age of onset for drugs use was 26.9±13.4 years which was low compared to Din Prakash R et al study. <sup>10</sup> In present study, 42.68% drug abusers were in age group 30-50 years while Din Prakash R et al reported 59.8% drug abusers were in the age group 15 to 34 years. <sup>10</sup> Sex wise prevalence of substance abuse was higher among males compared to females and almost similar finding was reported by others also. <sup>10,15,16</sup>

### **CONCLUSION**

Our study revealed that in spite of having strict legislation for prohibition of substance abuse, people are still addicted with alcohol, cannabis, drugs etc. So prohibition has done nothing more than drive liquor underground. There is a need to change either in law or in behavior of people at large.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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