

PREVALENCE AND PATTERN OF SUBSTANCE ABUSE AT BANDARDEWA, A BORDER AREA OF ASSAM AND ARUNACHAL PRADESH

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ABSTRACT

A total of 312 persons aged 10 years and above were interviewed to collect information about their habits of taking tobacco, alcohol and other substances. The study reveals that 40.4% of the respondents used tobacco irrespective of their using pattern, with significant difference between sexes ($p < 0.001$). Among tobacco users 58.2% were only tobacco chewers. 26.3% were smokers and 15% of them were practicing both the modes. 61.4% among housewives were tobacco users. Prevalence of alcohol use was 36.5% among the respondents. Alcohol use among males (39.5%) was slightly higher than females (32.6%). A significant association of alcohol users ($p < 0.01$) was observed with level of educational status. 3.4% of the study population were found to be habituated with substance abuse other than tobacco and alcohol. Percentage of injecting drug users was found to be 1.28%. A very small number (0.64%) was also found to be addicted to petrol inhalation.

Key words : Substance abuse, prevalence and pattern

Global trade and liberalisation of socio cultural interaction of the society have made easy access to use and spread of Narcotic substances (Murray & Lopez, 1997). Progressive increase of substance abuse in the developing countries not only adds to the increasing morbidity pattern but has been forming a nidus for several dreaded infection of recent times (Neuueark & Anthony, 1997). It has been found in studies from different countries that geographical distribution of drug abuse correlated well with the availability of drugs (Gossop & Grant, 1990). North Eastern states of India bordering Myanmar have experienced high prevalence of substance abuse including injecting drug use. Out of the North Eastern States Manipur adjacent to the golden triangle has recorded a large number of injecting drug users with high positivity of HIV amongst Injecting Drug Users (IDU) (Panda et al., 1994). Seropositivity of HIV amongst injecting drug users in Mizoram and Nagaland has been showing an increasing trend

(Hazarika et al., 1995). But it is observed that in Arunachal Pradesh, there has been no report of IDU in the state upto April, 1998 (State AIDS Cell, 1998). It may be mentioned that entry to the state of Arunachal Pradesh needs innerline permit. The fact cannot be denied that as Assam is the transit point for entry and exit of all the north eastern states access to drug availability in Arunachal Pradesh may become easier through some entry points to the state from Assam. The fallout of drug abuse should be more in the entry points. Keeping this view in mind the present study was planned at one of the main entry point of these two states.

MATERIAL AND METHOD

The present study was undertaken to determine the prevalence and pattern of substance abuse in a selected population of 10 years and above at 'Bandardewa', a newly emetging tiny commercial township in the

PREVALENCE AND PATTERN OF SUBSTANCE ABUSE

crossroad of exit from the state of Assam and entrance to the state of Arunachal Pradesh. This place is inhabited by various ethnic group from Assam and Arunachal Pradesh. Bandardewa is gaining its importance because it is one of the main entry point to Arunachal Pradesh from Assam and exchange of trade takes place in this commercial township in between the two states. This place is situated in National Highway No.52 at a distance of 186 km from Tezpur towards west and 30 km from Lakhimpur, one of the major town in the north bank of the river Brahmaputra towards east. This junctional point Bandardewa leads to the capital town Itanagar through Naharlagun, another major town of Arunachal Pradesh. These two towns are situated about 10 km inside Arunachal Pradesh from this place. Sample size : Out of 300 household in the township every 5th house was selected for the study and persons of 10 years and above were covered and were interviewed in a predesigned pretested proforma.

Interview was carried out separately for each person individually in a face to face manner by two trained personnel. Substance abusers were grouped as (1) current users who reported that they were ever user who currently use everyday or on some days and also presently using the substance (Anonymous,1994); (2) ever users who reported that they used previously but has left the habit for more than one month to several years.

Data collected, compiled and were analysed as per statistical norms. Chi-square test was applied to observe the significance of association between the variables.

RESULTS

The findings of the study are presented in Table-1 and Table-2.

Out of 312 persons interviewed prevalence of tobacco use was found in 40.4%, of which 50.8 percent were found among males and 26.7% were in females ($p < .001$). Another 2.2% were ever users but has left the habit. Out of the tobacco users 58.2% were tobacco chewers, 26.3% were smokers and 15.5% were

practicing both chewing and smoking. No significant association of tobacco use had been observed with religion or marital status. It is revealed from the study that literacy had no impact on use of tobacco in the study population. It was found that 61.4% of the housewives were tobacco users followed by 44.9% of self employed respondents (Table 1).

The study reveals that 36.5% among the respondents were alcohol users. Alcohol use was more (39.5%) in males as compared to females (32.6%). Another 2.9% were ever users but has left the habit. As regards to marital status alcohol use was higher in unmarried than in married respondents. But no significant association had been observed among alcohol users with sex and marital status. Unlike tobacco users literacy had a strong impact on use of alcohol. Alcohol users were found comparatively higher among illiterate people (47.4%) followed by respondents studying upto primary level (28.9%) and than lower prevalence was found in respondents studying upto secondary or higher level ($p < .01$) - Table-1. Occupation wise, out of the respondents employed in service, 53.3% were alcohol users, followed by businessman (51%). Alcohol users were also found among students (25%), housewives (22.7%) and unemployed youths (21.4%). Distribution of alcohol users according to religious practices revealed that 41.3% of alcohol users were Hindu followed by Christian (16.0%) and Muslim (12.5%; $p < .01$) (Table-1).

Other substance abuse were found only among males (3.4%). All of them were current users. Of these 1.28% were observed to be injecting drug users and a small number (0.64%) were found to be addicted to petrol inhalation. rest of the substance abusers were found to be habituated in taking antiallergic or sedative drugs like phensedyl, diazepam etc. (Table-1)

Distribution of substance abuse showed an increasing trend with age ($p < .001$) - Table-2. In case of other type of substance abuse a relatively higher users (3.2%) had been observed in adolescent group (10-19 years) followed by 3.1% in 20-29 years age group and 1.2% in 30-39 years age group (Table-2).

TABLE 1
DISTRIBUTION OF SUBSTANCE USERS IN DIFFERENT SOCIODEMOGRAPHIC CLASS

Variable	No. of Respondents	Substance users (current)		Other drugs (%)
		Tobacco (%)	Alcohol (%)	
<u>Sex</u>				
Male	177	50.8	39.5	3.4
Female	135	26.7	32.6	-
Chi-square (Association)		18.56 (p<.001) d.f.=1	.028 NS d.f.=1	
<u>Marital status</u>				
Married	212	38.7	34.9	1.9
Unmarried	100	44.0	40.0	2.0
Chi-square (Association)		.792 NS d.f.=1	.778 NS d.f.=1	
<u>Religion</u>				
Hindu	254	42.5	41.3	1.2
Christian	50	32.0	16.0	4.0
Muslim	8	25.0	12.5	12.5
Chi-square (Association)		2.7 NS d.f.=2	13.6 p<.01 d.f.=2	6.7 p<.05, d.f.=2
<u>Education</u>				
Illiterate	135	40.0	47.4	3.0
Primary	69	46.4	28.9	2.9
Middle	97	38.1	28.9	-
Secondary & higher	11	27.3	18.2	-
Chi-square (Association)		2.03 NS d.f.=3	12.62 p<.01 d.f.=3	
<u>Occupation</u>				
Student	52	32.7	25.0	5.8
Unemployed	14	28.6	21.4	-
Self-employed	69	44.9	30.4	4.3
Employed	15	26.7	53.3	-
House wife	44	61.4	22.7	-
Business	98	35.7	51.0	-
Cultivator	20	40.0	45.0	-
Chi-square (Association)		13.83 (p<.05) d.f.=6	5.56 NS d.f.=6	
Total	312	126 (40.4%)	114 (36.5%)	6 (1.9%)

Most of the tobacco users (61.9%) started taking tobacco before the age of 20 years. The mean age at start of taking tobacco was 20.1 (sd±7.1) years. 49.1% of alcohol users started taking alcohol before they attained the age of 20 years and more than 50% of the users started taking alcohol after the age of 20 years. The mean age at start of taking alcohol use was 21.6 (sd=7.2) years. Substance abusers other than tobacco and alcohol started using drugs before 20 years of age. Duration of tobacco use in 50% of the respondents was 20 years or more. The

mean duration of tobacco use of the users was found to be 18.9 (sd=6.9) years. Duration of alcohol use in 55.3% of the users was in between 10-19 years and 34.2% of the users had been using alcohol for more than 20 years. Mean duration of alcohol use was found to be 17.4 (sd=6.3) years (Table-2).

DISCUSSION

Prevalence of tobacco use was higher in males (50.8%) than females (26.7%). Tobacco

PREVALENCE AND PATTERN OF SUBSTANCE ABUSE

TABLE 2
SUBSTANCE USERS BY AGE, AGE AT START & DURATION OF USE

	No. of Respondents	Substance users (current)		
		Tobacco (%)	Alcohol (%)	drugs (%)
<u>Age group (years)</u>				
10-19	63	14.3	4.8	3.2
20-29	95	44.2	33.7	3.1
30-39	85	45.9	42.3	1.2
40-49	33	48.5	51.5	--
50-59	22	54.5	68.2	--
60 & +	14	57.1	78.6	--
Chi-square (Association)		23.83 d.f.=5	p<.001	52.33 d.f.=5 p<.001
<u>Age at start</u>				
< 20 years		61.9	49.1	
20-29 years		25.4	36.0	
30 years & +		12.7	14.9	
Mean±SD		20.1±7.1	21.6±7.2	
<u>Duration of use</u>				
< 10 years		11.9	10.5	
10-19 years		37.3	55.3	
20 years & +		50.8	34.2	
Mean±SD		18.9±6.9	17.4±6.3	

use amongst males was high as reported in earlier studies from Arunachal Pradesh (Chaturvedi et al., 1997). Chewing (58.2%) was the mostly used mode amongst tobacco users. Prevalence pattern of tobacco users among housewives (61.4%) was higher than other respondents. Similar type of observation was made by Spangler et al. (1997). Literacy had no impact on use of tobacco by the respondents as revealed in the study.

Literacy had a direct impact on use of alcohol in the study population showing significant statistical association. Most of the alcohol users were either employed in service or holding petty business. This study revealed a definite association of use of alcohol with religion. Hindus were more addicted to alcohol than other religious groups. Results were similar to the findings of Seck et al. (1994).

Among the substance abusers alcohol and tobacco use were found to be increasing with the increase of age which was similar to the findings of Giovino et al. (1995). Chaturvedi et al. (1998) has also reported similar findings from Mizoram.

Among the substance abusers other than tobacco and alcohol majority of the respondents were in the adolescent and younger group of people. All of the injecting drug users (1.28%) were found to be students. In our earlier study at Assam, Heroin users mostly injecting drug users were detected (studies on drug abuse pattern in Assam, India, unpublished data, Regional Medical Research Centre, N.E. Region, ICMR, Dibrugarh, 1993). Chaturvedi et al. (1997) has documented absence of injecting drug users in Changlang district of Arunachal Pradesh. So presence of 1.28% injecting drug users at border of these two states may suggest a lateral spread. Affinity towards inhalation of volatile substance - e.g. petrol though encountered in two of the respondents (0.64%) is a matter of serious concern as this type of behaviour leads to belligerent psychosocial behaviour and may even cause lead poisoning. This unique behaviour among them has been reported for the first time from this region. Pahwa et al. (1998) in a case report of petrol inhalation dependent reported violent and assaultive behaviour of a

teenager of 13 years old who was addicted to inhalation of volatile substance - petrol and kerosene.

Mean age at start of taking tobacco and alcohol use was found to be 20.1 (± 7.1) years and 21.6 (± 7.2) years respectively. Mean duration of tobacco use by the users were 18.9 (± 6.9) years and that of alcohol use mean duration of the users were found to be 17.4 (± 6.3) years.

In spite of some limitations, the study presents a variable picture of substance abuse at Bandardewa, the study area. While potential toxicity of excessive tobacco and alcohol use need not be elaborated, practicing of substance use other than these two though in small number is quite alarming. Harmful effect on health from substance abuse in the area needs indepth study. Access to availability of narcotic substance and its spread should be checked in the entry points by creating awareness among people and implementing proper legislative measures.

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