

Original Research Article

Prevalence and determinants of substance abuse among youth in Central Kerala, India

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ABSTRACT

Background: Substance abuse in various forms has been a social problem in various forms for many centuries. Kerala shows a high prevalence in alcoholism and is ranked top in India. This study is aimed at finding the prevalence and determinants of substance abuse among youth in central part of Kerala in South India.

Methods: A community based study was done with 402 college student participants using a self-administered pretested semi structured questionnaire. Data was entered into microsoft excel and analysed using Epiinfo3.5.3.

Results: Out of 402 students, 31.8% used or abused any one of the substances (alcohol, smoking, pan chewing) irrespective of time and frequency in lifetime. Age, gender, place of residence, attitude towards ban were significantly associated with substance abuse.

Conclusions: The alarming trend of substance abuse among the youth reveals the urgent need to curb the menace. Adolescent counselling sessions might ensure preventing such behaviour from being inculcated in early adolescence.

Keywords: Adolescence, Smoking, Substance abuse, Youth

INTRODUCTION

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. Psychoactive substance use can lead to dependence syndrome—a cluster of behavioural, cognitive, and physiological phenomena that develop after repeated substance use and that typically include a strong desire to take the drug, difficulties in controlling its use, persisting in its 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.¹ Psychoactive substance abuse in India continues to be a substantive problem for the individual as well as for the society.² Consumption of different substances has been in existence in India for many centuries; earliest reference to alcohol traced to year 2000B.C.³ Alcohol

consumption can have an impact not only on the incidence of diseases but on injuries and other health conditions. Alcohol consumption has been identified as a component cause for more than 200 diseases with ICD-10 codes.⁴

The prevalence of Alcoholism in Kerala is 20-38%. The state is ranked at the top in alcohol use in the country. The consumption pattern has steadily increased from 1980 to 2010. The age of first drinking has also decreased steadily from 19 years (1986) to 13 years (2001).⁵ Variety of factors affects the magnitude and patterns of consumption.⁴ Tobacco use is a major preventable cause of premature death and disease worldwide. Nearly one million people die in India every year due to tobacco use.⁶ Tobacco use in various forms including smoking and chewing has been an integral part of the community

life in Kerala for centuries. In Kerala, smoking and use of snuff is predominantly a male habit while chewing is more or less similar among men and women.⁷ As Kerala is showing increased trend in the consumption of alcohol, this study was done with the objective of assessing the proportion of substance abuse among youth and to find out the factors associated with it. As per the UN, for statistical consistency across regions, defines 'youth', as those persons between the ages of 15 and 24 years.

METHODS

A cross sectional study was conducted among the two colleges selected randomly from Thrissur district of Kerala. Initially official permission was obtained from the college authorities. The students were explained the purpose of the study. They were assured of the confidentiality of the study which is intended for research purpose only. After obtaining informed consent of students, they were included in the study. The authorities were kept at bay in order to ensure strict confidentiality. A total of 402 college students volunteered to participate in the study.

Sample size was calculated using the formula $4pq/d^2$, where $p=38.4\%$, $q=100-p=61.6$. At 5% allowable error and 80% power, sample size was calculated=161. Prevalence of 38.41% was found in a study in Thiruvananthapuram.⁵

Ethical concern

Initially official permission was obtained from the college authorities. After obtaining informed consent of students, they were included in the study.

Study tool

Data was collected using a self-administered pretested semi structured questionnaire which was explained to them in detail. Questionnaire includes questions about socio-demographic characteristics pertained to student's age, gender, religion, education of parents, occupation of parents, place of residence etc. Regarding alcohol consumption-age and reason for first consumption, frequency, current use, drinking habit among relatives, pattern of substance abuse, awareness and attitude towards alcoholism. Questions regarding tobacco use were type and frequency.

Statistical analysis

Data was entered into microsoft excel and analysed using Epiinfo 3.5.3. Preliminary descriptive analysis was used to assess the distribution of responses of all the quantitative variables. The association between qualitative variables were assessed using χ^2 test (Chi-square test). Statistical significance was set at $P<0.05$ for the study.

RESULTS

A cross sectional study was conducted among 402 professional college students aged between 15-24 years in two colleges of Thrissur district.

Socio-Demographic characteristics

Among the 402 college students, 229 (57%) were males and 276 (68.7%) belonged to the age group 19-24years. Majority 233 (58%) were Hindus. Among their fathers 155 (38.5%) had received school education while 241 (59.9%) had attained college education. Among students' mothers 144 (35.8%) had got school education and 255 (63.5%) college education. Predominantly 210 (52.2%) students were residing in hostels, 149 (37.1%) day scholars and 43 (10.7%) were paying guests. Among their fathers 64.2% were professionals, 25.1% skilled or unskilled labourers, 2% unemployed and 8.7% of fathers were retired or deceased. Majority, 79% of mothers were home makers.

Age Characteristics for Substance Abuse

Median age for each habit (alcoholism, cigarette smoking and pan chewing) was same-18years. The least age of first attempt was 5 years for alcohol, 7years for cigarette and 10years for pan chewing.

Habit of substance use

128 (31.8%) were having the habit of substance use of which 110 (27.4%) consumed alcohol. 395 (98.3%) acquaintances of the students have one or the other habit of substance usage. Usage of snuff by inhalation was answered by 3 students (0.7%). Majority of college students 336 (83.6%) favoured ban especially in public places (Table 1).

Table 1: Distribution based on substance abuse (N=402).

Characteristics of Substance abuse	F	%
Type*(N=128)		
Alcohol	110	27.4
Cigarette/Beedis	65	16.2
Pan chewing	26	6.5
Narcotics	12	2.98
Substance abuse among acquaintances (N= 395)		
Parents	90	24.4
Relatives	120	29.9
Friends	185	46

*Many have more than one habit; F=frequency; %=percentage.

292 (72.6%) never consumed alcohol. Out of 110 who consumed alcohol, 51 (12.7%) consumed only during social functions. 23 (5.7%) consumed only once in their lifetime (Table 2).

Table 2: Characteristics of alcohol usage (N=110).

Alcoholism	F	%
Usage		
During social functions	51	12.7
Frequency of alcoholism		
Just once	23	5.7
Monthly	17	4.2
Weekly	12	3.0
Daily	7	1.7
Pattern of alcohol use		
Single item	39	35.5
Multiple item	71	64.5

F=frequency; %=percentage.

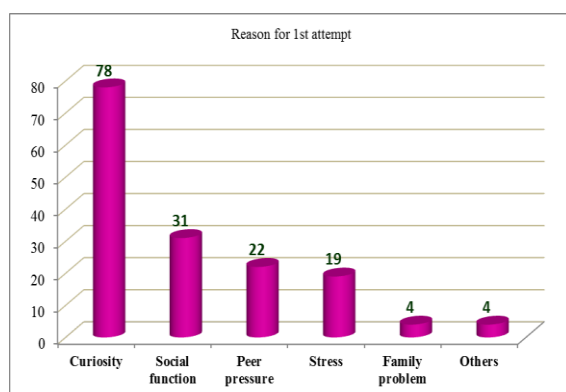
Smoking was seen among 65 students, out of which 23 (34.4%) were daily smokers. 6 or more cigarettes were smoked per day by 6 students (9.25) (Table 3).

Table 3: Characteristics of tobacco usage (N=65).

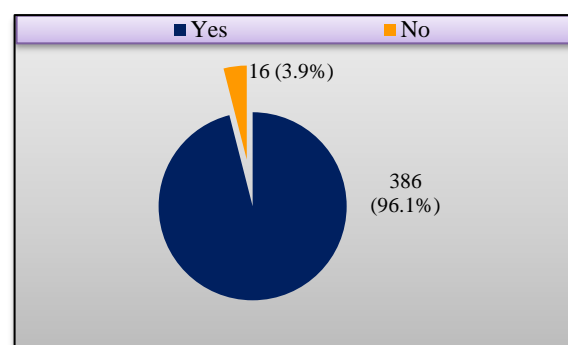
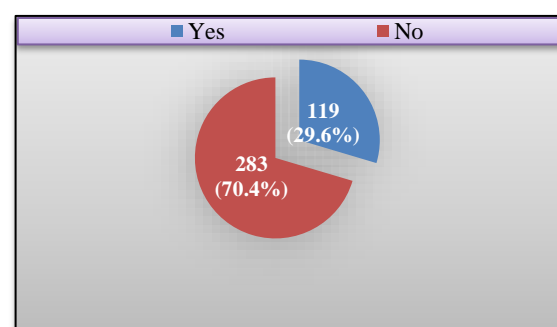
Smoking	F	%
Type smoked		
Cigarette	47	72.3
Others	18	27.7
Frequency		
Just Once	19	29.2
Monthly	11	16.9
Weekly	12	18.5
Daily	23	35.4

F=frequency; %=percentage.

Reasons for the first attempt at alcohol consumption was curiosity (19.4%) in present study (Figure 1). Out of 402 students, 386 (96.1%) of students were aware of health consequences of substance abuse (Figure 2) and 119 (29.6%) of the students' parents were aware of the students' habit of substance abuse (Figure 3).



*Only 158 were responders to the question

Figure1: Reason for First Attempt at Substance use.***Figure 2: Awareness regarding consequences (N=402).****Figure 3: Knowledge of parents regarding the substance abuse of student.**

The present study found that age less than 19 years, place of residence, gender and attitude to ban were statistically significant among substance users and non-users (Table 4).

Table 4: Determinants of substance abuse.

Variable	Subs users	Subs non- users	p value
Age Group			
≤19	25	101	<0.001
>19	103	173	
Place of stay			
Day scholar	36	113	0.01
Hosteller/Paying guest	92	161	
Gender			
Male	108	121	0.001
Female	20	153	
Attitude towards BAN			
BAN it	118	218	<0.001
Don't BAN	10	56	
Use in Acquaintances			
Use	70	172	0.122
Do not Use	58	102	
Awareness			
Yes	126	2	0.155
No	260	14	

DISCUSSION

Out of 402 students, 31.8% used or abused any one of the substances (alcohol, smoking, pan chewing, narcotics) irrespective of time and frequency in lifetime. The prevalence of alcohol consumption was 27.4% among college students. Age, gender, place of residence, attitude towards ban were significantly associated with substance abuse. Our study found prevalence of alcohol consumption was 27.4% among college students aged 16-20yrs which is similar to the study in Punjab (31.1%) and NFHS 3 (32%).^{5,8} This is greater than the result of a study at Karnataka (5.7%) among 15-19 yrs but lesser than a study at Thiruvananthapuram among males (38.41%).⁵

Reasons for the first attempt at alcohol consumption were curiosity (19.4%) in present study. Study in Punjab too found encouragement from friends (38.8%) and curiosity (25%) reason among males while curiosity (54.5%) reason among females.⁸ Median age of initiation of alcoholism was 18years in the present study similar to a study in Udupi, Karnataka which found as 16.8years.⁹ Least age of alcohol consumption in our study was 5years. Our study revealed 24.4 % of parents, 29.9 % of relatives and 46 % of friends were having substance abuse. This is lower than the study in Udupi, Karnataka (54.5%).⁹

Smoking

Prevalence in our study was 16.2% which is comparable to NFHS 3 findings (19%) and is more than the prevalence in a study conducted by Guru raj et al.^{10,11} Our study found 72.3% of smokers use cigarettes whereas in Noida revealed 40% use smokeless tobacco, 20% cigarettes and 40% beedis.¹²

Frequency

Our study reveals that 35.3% smoke daily which is similar to a study that showed as 41%.⁹ Weekly smoking was found to be 18.5% in our study which is less than 59.3% in Karnataka.⁸

Attitude

Our study revealed 83.6% of students' favoured ban on smoking in public place similar to study 83% and 82.8%.^{11,13} Awareness regarding harmful health effects seen in 96% in our study similar to 94.4% of a study in Bangalore.¹³

Determinants of Substance Abuse

The present study found that age less than 19years, place of residence, gender and attitude to ban were statistically significant among substance users and non-users. This is similar to the study in Udupi which showed males consumed more alcohol and tobacco and factors such as religion and tobacco use among family members were

found to be influential.⁹ A study among males in Thiruvananthapuram showed that religion and socio-demographic factors such as marital disharmony, poor income, poor education and unemployment are significantly associated with alcohol dependence.^{5,6}

CONCLUSION

The alarming trend of substance abuse among the youth reveals the urgent need to curb the menace. As the role of family and school is pivotal in eliminating this habit, school based programmes can be initiated to generate awareness regarding the potential health hazards. Educational material regarding substance abuse and their harmful effects can be imparted to teachers and later introduced in school curriculum. Adolescent counselling sessions might help students to reveal family issues and take preventive measures.

Recommendations

Provide awareness classes to students starting at an early age for preventing them from inculcating these unhealthy habits during adolescence. Provide awareness classes to parents of youth so that the bad influence of family can be curtailed and parents can be on the lookout for the initiation of these habits in their children.

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