Original Research Article

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Prevalence of substance abuse among high school students in field practising area of Dr. B. R. Ambedkar Medical College, Bengaluru

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ABSTRACT

Background: Substance abuse is an increasing public health problem. Use of tobacco, alcohol, and other substances is a global problem and affects many children and adolescents. Abuse of substances exposes the youth to several physical, psychological and social consequences. Objectives of the study were to determine the prevalence of substance abuse amongst high school students in selected schools of Bengaluru and to identify factors predisposing to substance abuse.

Methods: Type of study was cross-sectional, study was done from November 2017 to January 2018, study subjects were high school students, sample size was 300, tool for study was structured questionnaire, descriptive analysis done using Microsoft Excel.

Results: Out of 300 subjects 10% agreed that they have done abuse of substances. Most of them started it at age below 15 years. Most common reason to start was for fun.

Conclusions: Substance abuse was present among high school students and most commonly abused substance was tobacco in the form of cigarettes and most common reason was for fun followed by peer pressure and low marks.

Keywords: Substance abuse, High school children, Prevalence, Predisposing factors

INTRODUCTION

Use of tobacco, alcohol, and other substances is a worldwide problem and affects many children and adolescents. Early initiation of substance use is usually associated with a poor prognosis and a lifelong pattern of deficit and irresponsible behaviour. 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. 4.2% of the global population aged 15 and over used illicit drugs, causing 0.8% of the total burden of disability. In India

tobacco-attributable mortality is estimated to increase from 1% of total mortality in 1990 to 13% by 2020.⁶ 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.⁷

Keeping in mind that adolescence is the age in which if some habit is started affects the life for prolong period we tried to find out the prevalence of drug abuse among high school students and what was the reason to start it. So, our objective for study was to determine the prevalence of substance abuse amongst high school students in selected schools of Bengaluru and to identify factors predisposing to substance abuse.

METHODS

The study was a population-based, descriptive cross-sectional study, conducted on 300 students of high schools in the period of November 2017 to December 2018 in field practising area of Dr B. R. Ambedkar Medical College Bangalore, Karnataka, India.

The survey module was developed using a self-administered questionnaire, designed by adopting the questionnaire suggested by the GAP (global assessment programme on drug abuse) toolkit module 3.8

A pilot study was carried out and data analysed. The proportion of drug abuse turned out to be 13%. Sample size was estimated with relative error of 30% of proportion of drug abuse. Sampling frame of all high school students in the study area was prepared and randomly 300 students were selected for the study. Required changes made in questionnaire.

Pre-tested questionnaire contained questions related to socio-demographic details, habits related to smoking, tobacco chewing, alcohol intake and other drugs, and reasons to start the use of substances and age at the start of abuse.

All the participants were explained the purpose of the study and were ensured strict confidentiality. Next verbal informed consent was taken from each of them before the distribution of the questionnaire. The participants were given the choice of not participating in the study if they did not want to. $2^{\rm nd}$ and $3^{\rm rd}$ visit was done to all the schools to cover the absentees. There was active cooperation by the school teachers.

Analysis

Data collected was entered in excel spread sheet and analysis carried out. Percentage and frequency calculated. The results are taken as statistically significant for p < 0.05.

RESULTS

Total 300 high school students took part in the study. Predominantly they were in age group 14 to 16 years.

Table 1 shows the sociodemographic details of the subjects.

Figure 1 shows the prevalence of substance abuse among study subjects. Out of 300 high school students 30(10%) students agreed that they abused substance.

Table 2 shows that out of 30 abusers major proportion was of males turned out to be 86.7% (26) and those who belonged to nuclear family was 83.4% (25). The proportion of substance abuse among male and female is statistically significant (p=0.0001).

Table 1: Sociodemographic details.

Socio demographic variables		Number (n=300)	Percentage (%)
Age (in years)	12–14	43	14.3
	14- 16	206	68.6
	>16	51	17
Gender	Male	167	55.6
	Female	133	44.3
Class	8^{th}	118	39.3
	9 th	94	31.3
	10^{th}	88	29.3
Religion	Hindu	149	49.6
	Muslim	123	41
	Christian	28	9.3
Family	Nuclear	263	87.6
	Joint	37	12.3

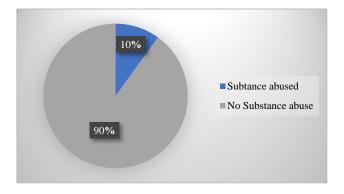


Figure 1: Diagrammatic representation of percentage of students who abused substance.

Table 2: Distribution of substance abuser according to gender and family type.

		Total	Substance abuse (N=30)	Proportion	P value
Gender	Male	167	26	0.16	0.0001*
Gender	Female	133	4	0.0001	0.0001
Eastle.	Nuclear	263	25	0.095	0.2041
Family	Joint	37	5	0.14	0.3941

^{*}Statistically significant.

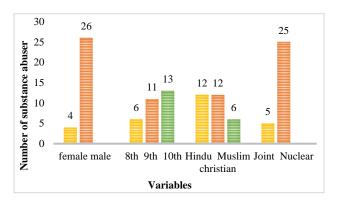


Figure 2: Graphical representation of observations of substance abusers.

Figure 2 shows the graphical representation of observation of different variables gender, class, religion and family type and prevalence of substance abuse. Here we can see that as the class and age is advancing number of abusers has increased. Religion has no much influence but male gender and those who belong to nuclear family shows more number of students involved in substance abuse.

Table 3: Substance abuse pattern (N=30).

Substance abuse	N	Percentage (%)
Only cigarette	2	6.6
Only tobacco	3	10
Only alcohol	5	16.6
More than one substance	20	66.6

Frequency of using tobacco was once a day in 1 (7.14%) subject, frequency of using cigarettes was once a day in 4 (18.18%) subjects and nobody had alcohol on daily basis. Alcohol was taken once a week by 4(18.18%) students. Table 3 shows the pattern of substance abuse. 66.6% (n=20) abused more than one substance means most of the abusers were using more than one substance.

Table 4: Reasons to start substance abuse (N=30).

Reason	N	Percentage (%)
For fun	16	72.7
For fun+peer pressure+ fight with parents	1	4.5
For fun+ peer, pressure+low marks	1	4.5
Low marks+peer pressure	2	9.1
Peer pressure+fight with parents	1	4.5
Did not answer	9	30

The reason to start the substance abuse was for fun, peer pressure, fight with parents, low marks shown in table 4.72.7% (n=16) said that they started using substances only for fun and remaining had more than one reason to start. Most of them started the abuse below 15 years of

age. Mean age to start substance abuse for alcohol was 13.4 years, for cigarette 15.3 years and for tobacco 14.2 years. Mean age who are abusing substance is 14.4 years.

DISCUSSION

The present study revealed 30 adolescents (10%) significantly males were involved in one or more type of substance abuse and it was comparable to the findings of studies by other authors, where we noted similar results with that of other studies. 9,10 Present study showed that majority (66.6%) were using tobacco in different form along with other substances, 16% were using only alcohol, 10% were using only chewable tobacco, and 6% were using only cigarettes. Prevalence of substance abuse is associated with social factors also. In our study prevalence was more among students who belongs to nuclear families compare to those who are staying in joint families. Prevalence was more in higher class students. Mean age to start substance abuse was for alcohol 13.4 years, for cigarette 15.3 years and for tobacco 14.2 years. Mean age who are abusing substance is 14.4 years.

Reason to start alcohol was for fun is the answer given by majority (72.2%) of the students, followed by peer pressure, fight with the parents and low marks. These reasons can be modified by taking good care of adolescents by the parents and school and involvement of students in such activities can be stopped.

Existing studies have found a high correlation between adolescent abuse and becoming a problem drug user in adulthood, therefore, it can be inferred that many problem drug users start abusing drugs at an early age. 11 Additionally, accidental and intentional fatalities that are associated with drug and alcohol use represent one of the leading preventable causes of death for the 15 to 24-year-old population. Alcohol and other drug use in the adolescent population carries a high risk for school underachievement, delinquency, teenage pregnancy, and depression. 11

Recommendation

There is need to create awareness among students regarding health hazards of substance abuse. Education remains one of the simplest, yet most effective tactics for minimizing risky behaviour. Education regarding hazards of substance abuse should be given to the parents as well. Efforts should be taken to engage adolescents in meaningful activities like sports, cultural activities, debate competition, quiz competition etc. especially in early ages an act which may discourage them from exposure to substance use. There should be monthly parent teacher meetings. Parents and school's personnel both should come together to overcome the problem of substance abuse and to give the better future to our youngsters.

Limitation of the study

- The findings of the present study cannot be generalized to the entire population, it is specific to school children.
- Even after repeated visits, few absentees could not be covered.
- Follow up of the users could not be done.

CONCLUSION

Substance abuse was present among high school students and it was more prevalent in higher class students, in males and in the students, who are staying in nuclear families. Most commonly abused substance was tobacco in the form of cigarettes and most common reason was for fun followed by peer pressure and low marks.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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