Original Research Article

Assessment of risk factors for substance abuse among adolescents in urban slums of Belagavi - A cross sectional study

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Abstract

Background: Substance use has become a problem both among developed and developing countries. Substances which are included are alcohol, Tobacco, Ganja, Charas, Brown Sugar, Opium, etc. Among the adolescents, students are particularly involved in substance abuse due to increasing academic pressures, encouragement by peers, lure of popularity and easy availability of many such substances like alcohol, tobacco (cigarettes and gutka) and other drugs. **Materials and Methods**: Six hundred adolescents of age group between 10 and 19 years in the area of UHC Ram Nagar and Rukmini Nagar were interviewed with the help of predesigned and pretested questionnaire. Data were analyzed using SPSS version 20. **Results**: The present study revealed that Highest prevalence of substance (81%) was seen with adolescents with school dropouts, similarly (64.5%) with working status of adolescents. Low SES and family history of substance use was significantly associated with prevalence of substance. **Conclusion**: The present community-based study, reported a higher prevalence of substance use among females than males. Prevalence was more common with low SES, Illiterate, family history of substance use and School dropouts.

Keywords: Adolescents, Substance Use, Urban Slum.

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INTRODUCTION

Adolescence and early adulthood i.e., in the age group 10 to 19 years and 15-24 years respectively is the most vulnerable[1] and is considered as the most transformative period in the individual's life [2]. It is also critical period when in the first initiation of substance use takes place. In India, approximately 5500 adolescents practice substance use daily, some as early as when they are ten years old.[3] Youth, living in cities that underwent a rapid process of urbanization are more at risk of drug use and abuse. The epidemic of substance abuse in adolescents is increasing at an alarming rate in India and this is the direct result of the changing cultural values, fierce competition in the fields of education and employment, growing economic burden on families and declining supportive bonds for adolescents in this transitional age.[4] Urban settings seem to be more attractive settings for drug dealers: illegal substances having higher costs, as result of their illegality, demand larger and more economically capable markets. Hence substance abuse has been increasing among adolescents as sizeable proportions of adolescents in many states of India experiment with drugs quite early in life.[5] Drug abuse is a

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complex phenomenon, which has various social, cultural, biological, geographical, historical, and economic aspects. The disintegration of the old joint family system, the absence of parental love and care in modern families where both parents are working, decline of old religious, and moral values, etc., lead to a rise in the number of drug addiction cases, who take drugs to escape hard realities of life [6] Among the adolescents, students are particularly involved due to increasing academic pressures, encouragement by peers, lure of popularity and easy availability of many such substances like alcohol, tobacco (cigarettes and gutka) and other drugs. Alcohol and tobacco are the most frequently used substances. Global youth Tobacco survey in 2021 revealed that nearly one-fifth of students in India aged 13-15 years used any form of tobacco. 38% of cigarette, 47% of bidi smokers and 52% of smokeless tobacco users initiated the use before their 10th birthday.[7] industrialization, urbanization and changing life styles have left children struggling for their survival, forcing many to refuge in the dark world of substance abuse. Its use poses a significant threat to the health, social and economic fabric of families, communities and nation.[8]

Objectives: The objective of this study was to study the risk factors for substance use among adolescents of Belagavi city.

MATERIALS AND METHODS

Sample size

Calculated using formula:

$n = z^2\alpha\ pq/d^2$

n – Sample size

q – 57% (p-100)

p – 43% (prevalence of previous study) [9]

d – Relative error 10% of p i.e. 4

$n = z^2\alpha\ pq/d^2$

$= 1.96^2 \times 43 \times 57/4^2$

$n = 588$ (600)

Source of data

Six hundred adolescents residing in the slums of Ram Nagar and Rukmini Nagar of Belagavi were taken. The population of Ram Nagar is 32, 815 and includes 5 slums, and according to the community needs assessment approach (CNAA) survey, adolescents aged between 10 and 19 years were 1725. Similarly, population under UHC Rukmini Nagar is 43, 600 and includes 4 slums, and according to CNAA survey, adolescents aged between 10 and 19 years were 8237

Study design

This study is a community based cross sectional study.

Study period: The study was conducted between January and February.

Inclusion criteria: All adolescents aged between 10 and 19 years who were residing in that area for the past 1 year and who gave informed consent were included in the study.

Exclusion criteria: Adolescents residing <1 year were not included in the study.

Sampling Method: Simple random sampling method was used in the study

Ethical Approval: Was taken from Jawaharlal Nehru Medical College Belagavi Ethical Committee

Sampling Procedure: Around 600 adolescents were selected as subjects using simple random sampling method from 9962 (10-19 years) from Rukimini Nagar and Ramnagar of Belagavi. Random number table was used. Proportionate number of samples was selected from each of the area proportionate to the population size of that area. Statistical analysis was done using Microsoft Excel worksheet 2013 and SPSS version 20.

RESULTS

A total of 600 Adolescents were included as the study population. Mean age ± SD was 14.75 ±2.47 years. Majority of the study population were Hindus (76.2%). It was observed that the overall prevalence of substance use was 11.8%. This prevalence was highest (13.8%) in 10-13 years age group, followed by 12.9% in 14-15 years age group and 10.1% in 16-19 years of age. Fun and Adventure was found to be main reason (71.9%) for initiation of substance abuse. It was observed in our study that, 73.25% of adolescents using substance had knowledge about adverse effects of substance use and 46.5% of adolescents started using substance because of easy availability followed by 42.3% who said they used it because it was easily available and cheap. It was also found that 50.7% continued a particular substance for fun and 22.6% continued substance use because of addiction. Also, highest prevalence of substance use (81.9%) was seen in fathers and smokeless form of tobacco was the commonly used substance 75% among family members. In present study, Education, schooling, working status of adolescents, socioeconomic status and family history of substance difference was found to be statistically significant.

Table 1: Association of substance abuse with age of adolescents

		Adolescents with Substance Abuse	%	Adolescents without Substance Abuse	%	X^2	df	P value
AGE IN YEARS	10 – 13 YEARS	28	39.4%	175	33.1%	1.486	2	0.476
	14-15 YEARS	18	25.2%	132	25%			
	16-19 YEARS	25	35.4%	222	41.9%			
TOTAL		71		529				
ASSOCIATION OF SUBSTANCE USE WITH SEX OF THE ADOLESCENTS								
SEX	MALE	54	76 %	451	85.2 %	3.975	1	0.046
	FEMALE	17	24%	78	14.8 %			
TOTAL		71		529				
ASSOCIATION OF SUBSTANCE USE WITH RELIGION OF THE ADOLESCENTS								
RELIGION	HINDU	58	81.6%	399	75.5%	2.036	3	0.585
	MUSLIMS	09	12.6%	75	14.1%			
	CHRISTANS	01	1.4%	21	03.9 %			
	OTHERS	03	4.2%	34	06.5 %			
TOTAL		71		529				
ASSOCIATION OF SUBSTANCE USE WITH EDUCATION OF THE ADOLESCENTS								
EDUCATION	ILLETRATE	18	25.3%	1	0.2 %	86.403	4	**P<0.001**
	PRIMARY	04	5.6%	29	5.5 %			
	SECONDARY	13	18.9%	92	17.4 %			
	HIGH SCHOOL	22	30.9%	235	44.4 %			
	PUC	14	19.7%	172	32.5 %			
TOTAL		71		529				
ASSOCIATION OF SUBSTANCE USE WITH SCHOOL DROP OUT OF THE ADOLESCENTS								
SUBSTANCE USE	YES	17	24%	4	0.8 %	92.903 ($X^2$with Yates correction)	1	**p < 0.001**
	NO	54	76%	525	99.2 %			
TOTAL		71		529				
ASSOCIATION OF SUBSTANCE USE AMONG ADOLESCENTS BASED ON WORKING STATUS								
WORKING STATUS	Yes	18	25.3%	10	01.9%	72.268 ($X^2$with Yates correction)	1	**p = < 0.001**
	No	53	74.7%	519	98.1%			
TOTAL		71		529				
ASSOCIATION OF SUBSTANCE USE AMONG ADOLESCENTS WITH TYPE OF FAMILY								
TYPE OF FAMILY	JOINT FAMILY	30	42.2%	192	36.3%	1.885	3	0.597
	3RDGENERATION	27	38%	214	40.4%			
	NUCLEAR	14	19.8%	115	22.5%			
	OTHERS	0		08	01.5 %			
TOTAL		71		529				
ASSOCIATION OF SUBSTANCE USE AMONG ADOLESCENTS BASED ON SES								
INCOME	I	12	16.9%	110	21.2.%	59.1	4	**p = < 0.001**
	II	10	14%	160	30.6%			
	III	08	11.3%	150	28.7%			
	IV	20	28.1%	68	13 %			
	V	21	29.7%	34	6.5%			
TOTAL		71		522*				
***7 PARTICIPANTS DID NOT GIVE FAMILY HISTORY OF SUBSTANCE USE.**								
ASSOCIATION OF SUBSTANCE USE AMONG ADOLESCENTS WITH FAMILY HISTORY OF SUBSTANCE USE								
FAMILY HISTORY	**YES**	14	34.1%	179	32.8 %	33.952	1	**p <0.001**
	NO	27	65.9%	367	67.2 %			
TOTAL		41		546*				
***13 PARTICIPANTS DID NOT GIVE FAMILY HISTORY OF SUBSTANCE USE.**								

DISCUSSION

In our study the mean age was ± SD was 14.75 ±2.47 years. A study conducted among school students in urban areas of Aligarh, constituted 42.4% between age group of 10-13, 35.6% in age group of 14-15 and 22% between 16-19 years [10]. It was observed that the overall prevalence of substance use was 11.8% and the highest (13.8%) in the age group of 10-13 years followed by 12.9% in 14-15 years age group and 10.1% in 16-19 years of age [11]. This difference was not found to be statistically significant. Prevalence of substance use decreased as the age group increased. This may be because of the knowledge and the ability of thinking which increases as the age increases. In the present study females (17.9%) had highest prevalence of substance use than male (10.7%) and difference was found to be statistically significant. Among the substances abused, tobacco was the predominant one, which was seen in 94% of adolescents. Study conducted in Chhattisgarh by Snehamayee showed prevalence of tobacco to be 25% boys more than girls [1]. The reason for substance abuse was found to be higher in girls because they were found to be living in the house whose parents were using substance and also lack of education and knowledge. In our study it was observed that, prevalence of substance use was 81.6% in Hindus, followed by 12.6% in Muslims, 1.4% and 4.2% by Christians and other religions (Jains/Sikhs). This difference was not statistically significant. A study done in Dehra Dun, Uttarakhand revealed that the substance use was maximum among Hindus (32.0%), followed by Muslims (25.0%)[13] in contrast to a study done in Aligarh Uttar Pradesh showed highest prevalence (19.5%) among Muslims than Hindus (10.9%) due to the majority of religious population in both areas respectively.[10] In our study, highest prevalence of substance use (25.3%) was seen in adolescents who were illiterate, followed by 18.3% in adolescents who studied up to secondary. Prevalence of substance use reduced as the education increased. This trend was found to be statistically significant. Lack of knowledge regarding substance use, its adverse effects and less awareness among illiterate makes them more vulnerable for substance use. In the present study highest (81%) use of substance was seen in adolescents with school dropout. This difference was found to be statistically significant, (X^2 with Yates correction 92.903 and $p<0.001$). which was similar to study done in Mumbai. It was also noted that higher number of adolescents (64.3%) using substance were found to be working as compared to non-working. This difference was found to be statistically significant i.e (X^2 with Yates correction 72.268 and $p<0.001$). Also, a study done in Assam reported a higher proportion, i.e 44.14% of the current users as school dropouts in comparison to never users 7.36%.[14,15] It was observed in the present study that adolescents from joint family had highest prevalence (13.5%) of substance use. This difference was not found to be statistically significant $X^2= 1.885$ and $p=0.597$. A study conducted in Dehradun[12] showed 48.8% of adolescents belonging to nuclear family were using substance in comparison to 42.6% belonged to Joint family. Another study conducted in Aligarh [10] showed 14% prevalence of substance use in unitary family and 11.5% in joint family. This difference could be because of higher percentage of joint family than nuclear family in South India and also in Joint family there is lack of attention for children which could also predispose for substance use.

In our study it was observed that, highest prevalence of substance use 38.7%) was seen in class V SES With increase in SES the prevalence of substance use reduced. This difference was found to be statistically significant. Prevalence of substance use increased as the SES decreased, this trend was found to be statistically significant ($X^2=59.1$, $p<0.001$) A study conducted in Dehradun[12] showed that the prevalence of substance abuse among various socioeconomic classes was found to be maximum in the middle slab i.e. social classes II, III and IV. The overall difference in the prevalence rate of substance abuse among various socioeconomic classes was found to be statistically significant ($p<0.01$). In the present study, prevalence of 7.21% was seen in adolescents with family history of substance use while 6.8% with no history of substance use. This difference was found to be statistically significant, ($X^2 = 33.952$, $p<0.001$). A comparison study done in Gangtok, Sikkim among rural and urban students showed prevalence of 35.2% vs 29% in adolescents who had family history of substance use with and of 13.3% vs 8.8% with no family history of substance use[15] Prevalence of substance use among adolescents was more with family history of substance use because adolescents try to experiment looking at the parents or others users in the family.

CONCLUSION

The present community-based study showed thatthe prevalence of substance use to be 11.8%. Our study indicated that between as early as 10 years, was the age for initiation of substance abuse. Lack of education, school dropout, adolescents who were working, lower Socioeconomic status and family history of substance use were associated with substance abuse. Adolescents being future of our country the substance abuse issue needs to be addressed in this vulnerable population at the earliest.

Limitations

The limitations of the study were: Only two urban slums were included in the study. Factors such as source of

money for substance, place of availability, and desire to quit substance were not assessed.

The prevalence of substance abuse might be low in our study as some of adolescents might have not given h/o substance use even though they were users

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