

## Original research article

**A prospective observational study to determine the knowledge and attitude regarding tobacco and its use among students****Dr. Abhishek Anand<sup>1</sup>, Dr. Swati Sharma<sup>2</sup>, Dr. Ajay Kumar Shahi<sup>3</sup>****<sup>1</sup>Senior Resident, Department of Dentistry, Narayan Medical College and Hospital, Sasaram, Bihar, India****<sup>2</sup>Assistant Professor, Department of Pedodontics, Dental Institute, Rims, Ranchi, Jharkhand, India.****<sup>3</sup>Associate Professor, Department of Oral and Maxillofacial Surgery, Dental Institute, Rims, Ranchi, Jharkhand, India.****Corresponding Author: Dr. Abhishek Anand****Abstract**

**Aim:** to determine the knowledge and attitude regarding tobacco and its use among adolescents students.

**Material and methods:** A prospective, observational study was conducted by the Department of Dentistry, Narayan Medical College and Hospital, Sasaram, Bihar, India, among 13 to 15 years adolescent's students (studying in 8th and 9th grades). Total 200 students were included in this study. A pre-structured and pretested questionnaire containing the following information was used to collect the data. Data on age, gender, grade, parent's education and occupation, current use of tobacco products among students, knowledge, attitude and perceptions regarding use of tobacco and tobacco products was obtained using a semi-structured questionnaire.

**Results:** Total of 200 students participated in the study with a mean age of  $14.84 \pm 4.2$  years. Knowledge regarding tobacco content in various products differed with the product. Presence of tobacco in cigarette, gutka and bidi was known to 85.5%, 88.5% and 75% of the students respectively. The students lacked knowledge regarding snuff and khaini being tobacco products (23.5% and 30% respectively). History of use of tobacco in family member was seen in 15%. About 10% students had friends who consumed tobacco products. About 4% of the students thought that tobacco is not harmful. Correct knowledge regarding hazards of passive smoking was present among 87% of the students and 65% students were aware of a law against smoking in public places. Government rules to keep a check on tobacco sale was reported by 55.5% of the students and 58.5% knew that danger signs of using tobacco product are printed on the package of the product.

**Conclusion:** The study suggests though the knowledge of students toward tobacco consumption is adequate, tobacco consumption habit is higher in students. This gap can be reduced by proper counseling of the students.

**Keywords:** knowledge, attitude, tobacco, students

**Introduction**

Use of tobacco is the second major cause of death and one of the major preventable cause of disability worldwide.<sup>1</sup> According to estimates of WHO, if current smoking patterns are not reversed, the use of tobacco will be responsible for 10 million deaths per year by the decade 2020-2030, with about 70% of them occurring in developing countries, mainly China and India.<sup>2</sup> India is home for one sixth of global population. Currently about one-fifth of all worldwide deaths attributed to tobacco occur in India, more than 8,00,000 people die and 12

million people become ill as a result of tobacco use each year.<sup>3</sup> In India, the deaths attributable to tobacco are expected to rise from 1.4% of all deaths in 1990 to 13.3% in 2020.<sup>4</sup> The prevention of tobacco use in young Indians appears as the single greatest opportunity for preventing non-communicable disease. It is estimated that 5,500 adolescents start using tobacco every day in India, joining the 4 million young people under the age of 15 who already regularly use tobacco.<sup>5</sup> Adolescence is a transition phase when the mind is naturally motivated to experimentation and exploration of the world. It is the age when the majority of drug users start use of substances like inhalants and tobacco, later followed by addiction to alcohol and others in third decade of life.<sup>6</sup> Use of cigarettes, alcohol and illicit drugs by adolescents is a matter of concern world-wide. Drug use in this age group is associated with increased risk of accidents, violence and high-risk sexual behavior and hence infections such as HIV, interpersonal problems, decline in academic performance and failure to complete education etc. Drug use puts them to high risk of suffering from conduct and mood disorders.<sup>7</sup> Helping young people to avoid starting addictive substances is a widely endorsed goal of public health, but there is uncertainty about how to achieve the goal. Schools provide a route for communicating with a large proportion of young people, and school-base programmes for smoking prevention have been widely developed and evaluated.<sup>8</sup> There is paucity of attempts to assess the level and extent of knowledge of the adolescents, attitude of adolescents towards addiction and their practices of addiction. As males start drugs at an early age and are more likely to abuse the tobacco, therefore this study was planned in male college students of rural area to study knowledge and attitude of tobacco consumption and the prevalence of practice of tobacco consumption and to identify the effects of various socio-demographic variables (age, social status, education level, address) with knowledge, attitudes and practice of tobacco consumption.

### **Material and methods**

A prospective, observational study was conducted among 13 to 15 years adolescent's students (studying in 8th and 9th grades) during 1 year after taking the approval of the protocol review committee and institutional ethics committee.

#### **Sample size**

According to Global Youth Tobacco Survey (2009)<sup>5</sup>, considering the prevalence of tobacco consumption as 14.6%; with absolute precision of 5% and power of 80%, sample size was calculated and it came to 190 and is rounded up to 200.

#### **Data collection**

After obtaining permission from the Block Education Officer (BEO), a list of all the English medium high schools was obtained. Six schools were selected from the list by convenient sampling. After obtaining permission from the principal, informed consent from the parents and assent from the students was obtained to include the student in the study.

A pre-structured and pretested questionnaire containing the following information was used to collect the data. Data on age, gender, grade, parent's education and occupation, current use of tobacco products among students, knowledge, attitude and perceptions regarding use of tobacco and tobacco products was obtained using a semi-structured questionnaire. After giving an overview of the objectives of the study the students were instructed to fill in the questionnaire and drop it into a box circulated in the class room. Half an hour's time was given to students for this. No identifiers were used on the questionnaires.

### **Results**

The socio demographic profile of the study participants are given in Table 1. A total of 200 students participated in the study with a mean age of  $14.84 \pm 4.2$  years. Knowledge regarding tobacco content in various products differed with the product. Presence of tobacco in

cigarette, gutka and bidi was known to 85.5%, 88.5% and 75% of the students respectively. The students lacked knowledge regarding snuff and khaini being tobacco products (23.5% and 30% respectively). History of use of tobacco in family member was seen in 15%. About 10% students had friends who consumed tobacco products. About 4% of the students thought that tobacco is not harmful

**Table 1: demographic profile**

Gender	Number	Percentage
Males	110	55
Females	90	45
Class		
8 <sup>th</sup>	103	51.5
9 <sup>th</sup>	97	48.5
Religion		
Hindu	169	84.5
Muslims	11	5.5
Christian	16	8
Others	4	2
Socio economic status		
APL	81	40.5
BPL	15	7.5
Don't know	104	52
Father occupation		
Professional and White Collar	107	53.5
Skilled and Semi-skilled	71	35.5
Unskilled	6	3
Unemployed	2	1
Don't know	17	7
Mother's occupation Professional and White Collar	47	23.5
Skilled and Semi-skilled	7	3.5
Unskilled	8	4
Housewife	138	69

**Table 2: Correct knowledge about the harmful effect of tobacco**

Question	Number	Percentage
Does tobacco cause heart attack?	151	75.5
Does tobacco cause asthma?	90	45
Does tobacco cause gastritis?	31	15.5
Does tobacco cause lung cancer?	180	90
Does tobacco cause mouth cancer?	170	85
Does tobacco cause headache?	61	30.5
Is standing near a person who is smoking harmful	174	87

**Table 3: Attitude regarding tobacco products**

Parameter	Number	Percentage
Do Smokers have more friends?	27	13.5
Should sale of tobacco to under 18 years be allowed?	12	6
Parents who smoke are better?	4	2
Do you feel quitting tobacco difficult?	180	90
Should tobacco be sold near educational institutes?	10	5
Do you feel using tobacco for 1 or 2 years is safe?	18	9
Should smoking be banned in public places?	160	80

**Table 4: Correlates of Knowledge score\***

Gender	Number	Poor	Average	Good
Males	110	34	50	26
Females	90	40	28	22
Class				
8th	103	40	38	25
9th	97	30	40	27
Mothers occupation				
Working	62	20	22	20
House wife	138	40	70	28
Attitude				
Unfavorable	20	6	8	6
Favorable	180	60	75	45
Smoking among family members				
Presence	30	7	13	10
Absence	170	65	80	25
Smoking among friends				
Presence	20	5	7	8
Absence	180	67	78	35
Any educational class taken for tobacco				
Yes	78	18	38	22
No	122	52	40	30

\*Poor  $\leq$  13, Average = 14 to 17, Good  $\geq$  18

Correct knowledge regarding hazards of passive smoking was present among 87% of the students and 65% students were aware of a law against smoking in public places. Government rules to keep a check on tobacco sale was reported by 55.5% of the students and 58.5% knew that danger signs of using tobacco product are printed on the package of the product. (Table 2) The attitude of the students regarding the usage of tobacco and its products are depicted in Table 3. About 6% of the students felt that using tobacco made one smart and cool. Also 4% of the students were of the opinion that smoking makes one more attractive. The knowledge score was poor among 37.5% of the students and significantly less among the females ( $p = 0.007$ ). The knowledge score was significantly different with respect to their favorable or unfavorable attitude towards use of tobacco products, parent's occupation and presence of a family member smoking (Table 4). The attitude of the students was found to be statistically significantly associated with knowledge, while association with presence of

smoking among family members or friends was statistically non-significant. There was no difference in the attitude between gender or grade of the students.

### Discussion

Health risk behavior is an important link to the overall health status of adolescents and is important determinant of morbidity and mortality in this age group. Tobacco consumption is widespread in India. The reasons behind consuming tobacco were influence of TV celebrity, peer pressure and fun.

Smoking is one of the most common forms of recreational drug use. Tobacco smoking is today by far the most popular form of smoking and is practiced by over one billion people in the majority of all human societies. According to our study 87% of students opted to be non-smokers in the future. This result can be supported by two studies<sup>9,10</sup>, which showed that students opted to be non-smokers because of the health risks of smoking and the social stigma associated with it. In contrast, a government survey done among youths in India in 2013 found that even with good knowledge about the harmful effect of tobacco use, the uptake of tobacco and tobacco products was high.<sup>11</sup> In our study, the mean knowledge score for the study participants was  $14.84 \pm 4.2$ . Males had significantly better knowledge compared to females ( $p = 0.007$ ) and the knowledge score did not improve with the increasing grades. The GTYS done in India also found a similar difference in the knowledge among the two genders.<sup>12</sup> However, a study done in Kerala among 13 to 19 years, found knowledge among females to be better than males ( $p < 0.01$ ). Also, awareness regarding health hazards of tobacco and various legislations against tobacco was better with increasing age. In our study, students with unfavourable attitude, i.e., students likely to use tobacco products in the future had poor knowledge compared to students with favorable attitude ( $p < 0.001$ ). This hints that interventions taken towards increasing the knowledge of the students could have a positive impact towards a favorable attitude of not taking up the habit of tobacco use. Proper interventions are required to shape the attitude of adolescents to prevent the risk of uptake of tobacco in the future.

Students with father working in a skilled job and above and a working mother were found to have significantly better knowledge. This could be explained by better socio economic status of the family and better knowledge among parents which they would impart it to their children as well. A cohort survey done among 9000 individuals from four different countries found that lower socioeconomic status was associated with lower awareness of harms of nicotine.<sup>13</sup> Although a survey done in India (2013) has documented low parental supervision and parental attitude favourable to smoking were risk factors for the uptake of the habit among adolescents.<sup>11</sup>

Including tobacco and its effect as a part of school curriculum is well documented in the tobacco control policy guidelines and has been incorporated in many institutes. In our study, we found that students reported to have attended any educational classes had a better knowledge score compared to those who have never attended any ( $p < 0.001$ ). Approximately only about 62% of the students knew about the various legislations for tobacco control. The attitude of the students regarding these tobacco control policy was favorable. Around 95% of the students agreed that tobacco products should not be sold near educational institutes and should not be sold to less than 18 years. A study done in Soviet Union among 18 years and above reported that increased public awareness is necessary for increased support for tobacco control measures.<sup>14</sup> Bonding with friends is an important part of adolescent development. The impact of peers on regular smoking is greater than that of parents and siblings.<sup>15</sup> In our study smoking among family members was found to be significantly associated with better knowledge about tobacco usage compared to students with no smoker in the family where as smoking among friends did not have any relation.

In the present study 6% of the students believed that smokers had more friends and 4% of the students believed that these people were cool and attractive. A study done by Mpabulungi et al.<sup>16</sup> and Saji et al.<sup>17</sup> also found 60% and 35.6% believed that those who smoke had more friends compared to those who do not respectively. In another study done in Udaipur City among 15 to 25 years old found that 65.9% of men who smoked agreed that people who smoke have more friends and 28.7% of them agreed that people who smoke are attractive. In a study done in New Delhi among school going adolescents a common reason for use of tobacco were to show them grown up individual, friends/peer pressure, to increase self-confidence and to relieve stress.<sup>18</sup> Such unfavorable attitude have a strong predisposition towards the habit of smoking and should be addressed at an earlier age.<sup>19</sup>

### Conclusion

The study suggests though the knowledge of students toward tobacco consumption is adequate, tobacco consumption habit is higher in students. This gap can be reduced by proper counseling of the students. Adolescent tobacco use in rural area is a matter of concern. Many psychosocial factors also have an important role to play in initiation of this habit. Adolescent health education, Sensitization programs for adolescent students and members of Parent Teacher Association and NGOs have to be given in a systematic manner. There is an urgent need to launch school-based tobacco awareness and prevention programs, IEC activity for primary prevention.

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