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# KNOWLEDGE AND ATTITUDE REGARDING TOBACCO AND ITS USE AMONG ADOLESCENT STUDENTS

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## ABSTRACT

**Introduction**: Tobacco consumption is one of the leading causes of morbidity and mortality all over the world. This habit is increasingly being taken up at an early age. Various factors have been implicated for the uptake of the habit including inadequate knowledge and unfavorable attitude.

**Methodology:** A cross-sectional study was conducted in urban schools in a town, located in South-west Karnataka. The students belonged to 8th and 9th grade and were aged between 13 to 15 years. A self-administered questionnaire adapted from Global Youth Tobacco Survey (GYTS) was used for the study..

**Result:** A total of 1271 students participated in the study with equal participation from boys and girls. The mean knowledge score for the study participants was 14.57 ± 4.0. Approximately 36% of the students had poor knowledge and was significantly less in females compared to males. The knowledge score was significantly different with respect to parent's occupation, their favorable or unfavorable attitude towards not using tobacco products and presence of a smoking family member.

**Conclusion:** In spite of several measures taken to improve the knowledge regarding tobacco hazards and laws among the adolescents, there are various barriers which need to be addressed for effectiveness of these interventions.

**Key words:** Tobacco, knowledge, attitude, adolescents, school, cross sectional

## INTRODUCTION

Globally an estimated 82,000 to 99,000 young people start smoking everyday of which many are under the age of 10 and most reside in low- or middle-income countries.[1] In India, about 5 million children under the age of fifteen are addicted to tobacco. [1] According to WHO, the tobacco consumption in India will continue to increase at 2.4 percent per annum and most of the new users will be school children.[2]

In 2003, the first treaty to control tobacco product usage was signed under headship of World Health Organisation (WHO) as WHO Framework Convention on Tobacco Control (WHO, FCTC) and India committed to it on 5 February 2004.[3] With the rising pandemic of tobacco related diseases, FCTC encourages countries to establish programmes and formulate policies for tobacco usage surveillance.[3] Global Adult Tobacco Survey (GATS) under the guidance of WHO was conducted in 2009-2010 in 29 states of India and 2 Union Territories among adults 15 years and above. The survey found that the mean age of tobacco initiation among 20 to 34 years was around 17.8 years.[3] Hence, it is all the more necessary to address the issue among the younger age group age group to prevent the uptake of this habit in the future.

Global Youth Tobacco Survey (GTYS) conducted in six regions of India on a national level, found a prevalence of 14.6% among the 13 to 15 year adolescents with boys having 3 times higher preva-

lence than girls.[4] Studies conducted among adolescents in North India found the prevalence of tobacco use to be 11.2 % and South India reported a prevalence of 5.5% among boys. [5, 6] A wide range of factors contribute to the initiation of tobacco use among adolescents. Major determinants include exposure to parental, sibling or peer smoking; peer pressure; easy access to smoking and non-smoking forms of tobacco; aggressive promotion and advertising; low cost, etc.[7] There is a need to study the presence of these determinants among adolescents in this area in order to prevent initiation of tobacco use. Hence this research was planned among school going adolescents with the objectives to study the knowledge regarding tobacco products, health hazards and laws; and also to study the attitude about tobacco use, laws, peer and family tobacco use.

## METHODOLOGY

Study population: This study was conducted among 13 to 15 years adolescents students (studying in 8th and 9th grades) from January 2015 to February 2015. Study was carried out in semi urban area of Udupi taluk of coastal Karnataka in South India. In order to estimate an anticipated proportion of adolescents who knows that tobacco consumption causes serious illness to be 92.1%[4], with an absolute precision of 2% at 95% confidence level a sample size of 736 was obtained.

Data collection: After obtaining permission from the Block Education Officer (BEO), a list of all the English medium high schools in Udupi taluk 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. 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 hours' time was given to students for this. No identifiers were used on the questionnaires. Ethical approval was obtained from the Institutional Ethics Committee prior to the data collection.

Data management and Statistical analysis: The data collected was entered and analyzed using SPSS version 15.0. The knowledge score was calculated by giving 1 mark for every right answer and 0 for every wrong answer. Questions on legislations and passive smoking were given double mark for correct answer. The knowledge score was graded as poor, average and good score (based on tertiles). Similarly, score for attitude was also calculated and was classified as favorable attitude of less likelihood of taking the habit tobacco product in the future and unfavorable attitude.

## RESULTS

The socio demographic profile of the study participants are given in Table 1. A total of 1261 students participated in the study with a mean age of 14.57 ± 4.0 years.

Knowledge regarding tobacco content in various products differed with the product. Presence of tobacco in cigarette, gutka and bidi was known to 86.4%, 87.3% and 74.1% of the students respectively. The students lacked knowledge regarding snuff and khaini being tobacco products (24.1% and 29% respectively).

History of use of tobacco in family member was seen in 16.4%. About 7% students had friends who consumed tobacco products. About 3.5% of the students thought that tobacco is not harmful.

**Table1: Socio demographic profile**

| Socio demographic characteristic | Frequency (%) |
|---|---|
| **Gender** | |
| Males | 712 (56.5%) |
| Females | 549 (43.5%) |
| **Class** | |
| 8th | 651 (51.6%) |
| 9th | 610 (48.4%) |
| **Religion** | |
| Hindu | 1072 (85.0%) |
| Muslims | 74 (5.9%) |
| Christian | 95 (7.5%) |
| Others | 5 (0.4%) |
| Did not reveal | 15 (1.19%) |
| **Socio economic status** | |
| APL | 506 (41.3%) |
| BPL | 80 (6.5%) |
| Don't know | 640 (52.2%) |
| **Father's occupation** | |
| Professional and White collar | 673 (53.4%) |
| Skilled and Semi-skilled | 450 (35.7%) |
| Unskilled | 39 (3.1%) |
| Unemployed | 6 (0.5%) |
| Don't know | 93 (7.4%) |
| **Mother's occupation** | |
| Professional and White collar | 291 (23.1%) |
| Skilled and Semi-skilled | 48 (3.8%) |
| Unskilled | 45 (3.5%) |
| Housewife | 802 (63.6%) |
| Don't know | 75 (5.9%) |

**Table 2: Correct knowledge about the harmful effect of tobacco (n=1261)**

| Question | Freq. (%) |
|---|---|
| Does tobacco cause heart attack? | 965 (76.5) |
| Does tobacco cause asthma? | 562 (44.6) |
| Does tobacco cause gastritis? | 187 (14.8) |
| Does tobacco cause lung cancer? | 1102 (87.4) |
| Does tobacco cause mouth cancer? | 1059 (84.0) |
| Does tobacco cause headache? | 371 (29.4) |
| Is standing near a person who is smoking harmful? | 1090 (86.4) |

**Table 3: Attitude regarding tobacco products (n=1261)**

| Question | Freq. (%) |
|---|---|
| Do Smokers have more friends? | 164 (13.2) |
| Should sale of tobacco to under 18 years be allowed? | 69 (5.5) |
| Parents who smoke are better? | 24 (1.9) |
| Should smoking be banned in public places? | 1110 (88.9) |
| Should tobacco be sold near educational institutes? | 53 (4.2) |
| Do you feel using tobacco for 1 or 2 years is safe? | 108 (8.7) |
| Do you feel quitting tobacco difficult? | 982 (77.9) |

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

| Knowledge | Poor | Average | Good | P value |
|---|---|---|---|---|
| **Gender** | | | | |
| Male | 228 (32) | 301 (42.3) | 183 (25.7) | 0.006 |
| Female | 223 (40.6) | 196 (35.7) | 130 (23.7) | |
| **Class** | | | | |
| 8th | 249 (38.2) | 242(37.2) | 160 (24.6) | 0.131 |
| 9th | 202 (33.1) | 255 (41.8) | 153 (25.1) | |
| **Father's occupation** | | | | |
| Skilled & above | 281 (32.9) | 357 (41.9) | 215 (25.2) | 0.027 |
| Unskilled@ | 128 (40.6) | 465 (39.8) | 294 (25.2) | |
| **Mothers occupation** | | | | |
| Working | 119 (31.0) | 148 (38.5) | 117 (30.5) | 0.013 |
| Housewife | 295 (36.8) | 324 (40.4) | 183 (22.8) | |
| **Attitude** | | | | |
| Unfavourable | 49 (73.1) | 13 (19.4) | 5 (7.5) | <0.01 |
| Favourable | 402 (33.7) | 484 (40.5) | 308 (25.8) | |
| **Smoking among family members** | | | | |
| Presence | 23 (26.1) | 39 (44.3) | 26 (29.5) | 0.002 |
| Absence | 421 (36.3) | 454 (39.1) | 286 (24.6) | |
| **Smoking among friends** | | | | |
| Presence | 23 (26.1) | 39 (44.3) | 26 (29.5) | 0.156 |
| Absence | 421 (36.3) | 454 (39.1) | 286 (24.6) | |
| **Any educational class taken for tobacco** | | | | |
| Yes | 142 (26.9) | 215 (40.7) | 171 (32.4) | < 0.001 |
| No | 299 (41.8) | 276 (38.5) | 141 (19.7) | |

*Poor ≤ 13, Average = 14 to 17, Good ≥ 18
@Including unemployed

Correct knowledge regarding hazards of passive smoking was present among 86.8% of the students and 63% students were aware of a law against smoking in public places. Government rules to keep a check on tobacco sale was reported by 53.6% of the students and 58.1% 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 3% of the students felt that using tobacco made one smart and cool. Also 2.4% of the students were of the opinion that smoking makes one more attractive.

The knowledge score was poor among 35.8% of the students and significantly less among the females (p = 0.006). 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

Among adolescents, social bonding, social learning, lacking refusal skills, risk-taking attitudes and intentions have been highlighted as important attributes for tobacco use in studies in both developed and developing countries.[8] A study done in United States, found that the most influential predictors of the habit of smoking were alcohol, marijuana, and other drugs, involvement with violence, learning problems, a history of sexual intercourse, frequent hanging out with friends and having friends who smoke.[9]

A study done by Horn et al.[10] and Chassin et al.[11] showed that inadequate knowledge about tobacco and health, tobacco use among family and friends, favorable attitude towards tobacco use were important determinants of tobacco use among adolescents. 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. [12]

In our study, the mean knowledge score for the study participants was 14.57 ± 4.0. Males had significantly better knowledge compared to females (p = 0.006) 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.[4] 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 unfavorable 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 socio economic status was associated with lower awareness of harms of nicotine.[13] Although a survey done in India (2013) has documented low parental supervision and parental attitude favorable to smoking were risk factors for the uptake of the habit among adolescents.[12]

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 60% of the students knew about the various legislations for tobacco control. The attitude of the students regarding these tobacco control policy was favorable. Around 90% of the students agreed that tobacco products should not be sold near educational institutes and should not be sold to under 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.[14]

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.[15] 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 whereas smoking among friends did not have any relation. The 2013 survey done in India also observed parental attitude favorable to smoking as a significant risk factor for the uptake of the habit.[12]

In the present study 13.2% of the students believed that smokers had more friends and 3% of the students believed that these people were cool and attractive. A study done by Mpabulungi et al[16] and Saji et al[17] 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 themselves grown up individual, friends/peer pressure, to increase self-confidence and to relieve stress.[18] Such unfavorable attitudes have a strong predisposition towards the habit of smoking and should be addressed at an earlier age.[19]

## CONCLUSION

The knowledge of the students is relatively inadequate which can lead to unfavorable attitudes towards tobacco use. This clearly indicates that the above discussed correlates needs to be addressed so that education imparted to these students has a positive impact and prevents them from taking up these habits in the future.

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