



AN ASSESSMENT ON TOBACCO USE AMONG ADOLESCENTS OF SENIOR HIGHER SECONDARY SCHOOLS IN SOUTHERN REGION OF RAJASTHAN

Community Medicine

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ABSTRACT

AIMS: To estimate the level of tobacco use among school-going adolescents and also identify the factors that influence youth to use tobacco. Identification of the factors responsible for initiating tobacco use among adolescents will be useful for identifying the most effective interventions to prevent youths from taking up the tobacco habit.

METHODOLOGY: This was a cross-sectional study which was conducted in adolescent students of grade 10, 11 and 12 from Sen. Higher secondary schools within Udaipur city of Rajasthan. Total 455 participants were included in the analysis.

RESULTS: The majority (51.7%) of the respondents were of the age group 16-17 years. Major proportion of boys (76.2%) participated in the study. Pan masala and gutkha were the most commonly used smokeless tobacco products. The average age of initiating tobacco use was 12.38 years. Nearly Half (51.9%) adolescent students were living in the family where at least one member uses tobacco.

CONCLUSION: Immediate action to reduce adolescents' exposure to environmental tobacco smoke is necessary. Prohibiting tobacco use at school and monitoring the high-risk behaviour of adolescents in school is necessary.

KEYWORDS

Tobacco, Adolescent, Smoker, Students, Knowledge.

INTRODUCTION:

Adolescence is the period of physical, psychological and social maturation from the childhood to adulthood. The term "adolescent" refers to individuals between the age 10-19 years. There is growing recognition that because of a combination of biological, psychological and social factors, adolescents face many challenges and health risks such as unprotected sex, substance abuse, accidents and violence. The health of adolescent is profoundly associated with their behaviour and development process. Healthy development of adolescent depends upon several complex factors: their socio-economic circumstances; the environment in which they live and grow; the quality of their family, community and peer relationship; and available opportunities for education and access to health information and services. The young people of today are tomorrow's adult. Tobacco is a plant grown for its leaves, which are smoked, chewed or sniffed for a variety of effects. It is an addictive substance as it contains nicotine. In addition to nicotine. In addition to nicotine, tobacco contains over 23 known carcinogens and more than 4,000 chemicals.^{1,2}

However, by the year 2020, it is estimated that the global yearly death toll will double. In several countries, lung cancer has already surpassed breast cancer as the leading cause of cancer deaths among women³

METHODS & METHODOLOGY:

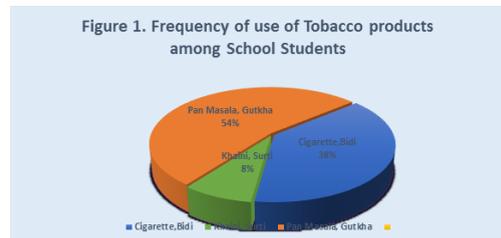
The framework of the study is based on the global youth tobacco survey (GYTS), designed and conducted by the world health organization (WHO) and centres for disease control (CDC). This was a school-based cross-sectional descriptive study. The study population is the adolescent students of grade Tenth, Eleventh and Twelfth from senior higher secondary schools. Multistage sampling was applied, total 455 participant included in the study. Sample size calculated by using formula $n = 4pq / L^2$ A Pre-formed, Pre-tested, Semi-structured questionnaire were given to students after taking the valid consent. Analysis was done using MS Excel 10 & SPSS V.17. Descriptive statistics applied. Significance attributed to P value < 0.05 and results were interpreted in the form of tables, graphs wherever necessary.

RESULTS:

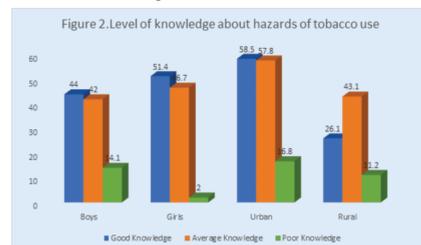
Total Four hundred and Fifty-five (455) adolescents participated in study among them the majority 312(68.6%) of the respondents were of the age group 16-17years. Major proportion of boys 347(76.2%) and only girls 108(23.8%) participated in the study. Major proportion of respondent belong to eleventh grade 191(42%)and tenth and twelfth respondent are nearly equal in proportion. About three fifths 275(60.4%) of the respondents were from urban schools and two fifths

180(39.6%) were from rural schools. Most of them were Hindu 338(74.3), followed by Muslim 114(25%), Sikh 3(0.7%) and no Christian participated in study.

Of the total respondents, nearly half 188(41.3%) of adolescent students ever used any tobacco product. Pan masala and gutkha were the most commonly used smokeless tobacco products. About half (52.8%) boys and more than half (58.3%) girls ever used pan masala or gutkha. Prevalence of ever tobacco use by type of tobacco products in boys and girl's data are highly significant with P value (< 0.001).(Figure 1.)

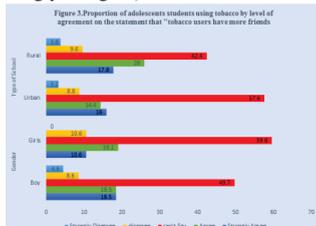


Less boys were using tobacco among those with good knowledge (24.7%) than those with some knowledge (37.1%) or poor knowledge (38.3%). On the other hand, more girls were using tobacco among those with good knowledge (10.0%) than those with average knowledge (30.0%) or poor knowledge (60.0%). Association of adolescent students using tobacco by their level of knowledge about hazards of tobacco is not significant



Nearly one third (35.40%) of adolescent students agreed that tobacco users have more friends. More boys (37.6%) than girls (29.7%) thought that tobacco users have more friends. Only more than one tenth (12.5%) of adolescents disagreed with the statement that tobacco users have more friends. Nearly half of rural (43.8) school students agreed

(including both agree and strongly agree) than urban school students (30.4) and only (12%) urban school students disagreed (including both disagree and strongly disagree) with the statements.



The average age of initiating tobacco use was 12.38 years. Initiation of tobacco use was earlier by a few months among girls (12.23 years) than boys (12.39 years).

DISCUSSION

Prevalence of tobacco use

Boys were 4.5 times more likely to use tobacco compared to girls. According to GYTS, 19% of boys and 8.3% of girls ever used any tobacco product in India⁴. The proportion of ever users may be higher among boys than girls as boys in Indian culture enjoy higher level of freedom regarding their individual behaviour than girls both from the family and society. Urban school students were 1.47 times more likely to use tobacco compared to Rural school students. Generally, students at Urban schools are from more affluent families than those at Rural schools. Thus, Urban school students may have more money to spend to purchase tobacco products than students at Rural schools, which may enable them to use tobacco more freely than Rural school students⁷.

About one third (38.8%) adolescent students used tobacco in smoking form like cigarettes or bidis. A substantial proportion (53.2%) of adolescent students were using pan masala and gutkha of different brands available in the market. As some of the products like mouth fresheners and processed betel nuts, which does not contain tobacco, are available in the market in similar packaging. Thus, students are not aware what product really contain tobacco and which does not. Thus, they use pan masala unknowingly. During fieldwork, most of the students expressed that they were not aware that pan masala or gutkha were also tobacco products and harm them, though this information was not systematically collected in this study. Adolescent students were using pan masala or gutkha without knowing the ingredients and hazards, as mouth freshener or as processed betel nut. In addition, pan masala and gutkha were convenient to hide from their parents and teachers, as use of these products is usually not allowed in younger age by their parents and teacher. In comparison to other tobacco products, use of surti or khaini was less common (8.0%) among adolescent students. The use of non-smoking tobacco products is increasing in India as they were easily available everywhere, easier to use than those smoked products and less expensive than cigarettes.

AGE OF INITIATION

The average age of initiating tobacco use was 12.38 years (12.39 for boys and 12.23 for girls). Less than one in ten (7.7%) adolescent students initiated tobacco use before 10 years of age. Peer pressure was the main reason for initiating tobacco use by adolescents along with Experimental use. Though the proportion of girls using tobacco was less than boys, girls initiated tobacco earlier than boys.

The proportion of adolescents initiating tobacco before they are 10 years of age was lower in this study (7.7%) compared to the GYTS in the Central Development Region of India. Results from the GYTS showed that 23.1% of adolescent students initiated smoking before they were 10 years of age in India and the median value of the proportion from all countries covered by the GYTS was 23.9%⁵. Youth are perhaps experimenting sooner with smokeless tobacco products than cigarettes, thus the age of initiating tobacco use among them is lower than the age of first smoking.

Overall prevalence of consumption of tobacco among boys was 50.2% and among girls it was 23.3%. The mean age of initiation of tobacco use was 12 years.⁶

The initiation of tobacco starts at an early stage (14-18 years) therefore for the prevention and control of this social evil it is important to understand the magnitude of the problem in the young age group^{7,8,9}.

Knowledge regarding the hazards of tobacco use

Although a majority (88.8%) of adolescent students claimed to have knowledge of the hazards of tobacco use, the results showed that about one tenth (11.2%) of the respondents in fact had poor knowledge, and were unable to recall even one of the main health hazards of tobacco use. Higher proportions of girls had good knowledge about the hazards of tobacco use compared to boys. The proportion of adolescent students having poor knowledge was significantly lower among urban school students than rural school students. The difference may be due to the better educational activities and restrictions to use tobacco in urban school than in rural schools.

Perceptions regarding tobacco use

Nearly one third (35.4%) of the respondents thought that adolescents who use tobacco have more friends and about two fifth (41.4%) thought that adolescents who use tobacco are more attractive. These perceptions may have developed among adolescent students from the information received from their peers. The GYTS results in India showed that 34.1% of adolescent students think that boys who smoke have more friends and 19.7% of adolescent students think that girls who smoke have more friends. Similarly, 21.1% of adolescent students think that smoking makes boys more attractive and 14.7% think that smoking makes girls look more attractive. All these results were higher than the median value of all GYTS countries⁴.

CONCLUSION

School based educational programs focusing on all forms of tobacco (both smoked and smokeless) should be planned and implemented. Special attention and culturally- appropriate education programs should be targeted at the adolescent students as well as their parents. Different intervention programs should focus on different aspects like, programs to discourage the uptake of tobacco among the young students between 9-13, and cessation programs for the older students. Tobacco use by close friends and family members were strong influencing factors for tobacco use of adolescent students. A substantial proportion of adolescent students are being exposed to the tobacco use behaviour of family members and friends, creating an environment to develop more tobacco users in the future. Parental counselling is necessary to inform them about the influence of their tobacco use on their children.

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