

Original Research Article

Study of prevalence of smoking and smokeless tobacco habits among college students

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Abstract: Tobacco use is increasing rapidly in children and adolescents in recent years. Various research studies had predicted that tobacco related diseases will be spreading at their fastest rate in future years. The aim of this study was to evaluate the prevalence of tobacco habits among college students. The Materials and methods were in this cross-sectional study was done using specially prepared questionnaires. The study participants were from the various colleges of the nearby cities including of age group of 15-26 years. Total 11 colleges were visited for this study. Out of which 4 were government colleges and 7 were private colleges. The study participants were selected on basis of simple random sampling method until required sample size is reached. The Results were in this study, tobacco smoking habits was present in 261 (5.8%) students, among which 172 (65.90%) were male students and 89 (34.09%) were female students. While smokeless tobacco habits were observed in total 315 (7.0%) students. Out of which 198 (62.85%) were male students and 117(37.15%) were female students. In Conclusion the Tobacco habits were more prevalent in male students as compared to female students. Smoking tobacco habits were more commonly seen among private college students than government college students. But it was reversing in case of smokeless tobacco habits, which were more prevalent among government college students as compared to private, college students.

Keywords: Tobacco habits, College students, Smokeless tobacco

INTRODUCTION:

Use of tobacco in human beings is known since 600 AD. Columbus who came to know about tobacco from the Caribbeans during his historical journeys introduced it in Europe. The Portuguese introduced tobacco for the first time in India. Also the harmful effects of tobacco and its various products have been recognized since last 1000 years. Historically, three contemporary rulers, King James I of England, Shah Abbas of Persia and the Mughal emperor Jahangir of India in 16th century had noticed the harmful effects of tobacco and tried to ban it [1].

Use of tobacco is a medical addictive condition. Once addicted to tobacco smoking of any form, most smokers find it difficult to quit even when they develop smoking related diseases. Smoking is an important cause of morbidity and mortality with approximately four million smokers dying per year from smoking related diseases. Statistically, each year of smoking after the age of 40 reduces the smoker's estimated healthy life period by about 3 months. Along

with, smokers will have more diseases and die earlier than nonsmokers. At the same time, there has been an alarming increase in smoking among young adults since the early 1990s [2].

Tobacco appears to be as old as human civilization. Today, tobacco is cultivated commercially in more than 120 countries and is consumed in almost all countries of the world. China is the world's leading producer of tobacco followed by India, Indonesia, Brazil and United States [3, 4].

Cigarette smoking, a major risk behavior adversely affecting public health, has reached epidemic proportions. Having crossed its peak in developed countries, the tobacco menace is showing an upward trend in developing countries. Smoking and health are intimately related and thus, smoking among future health care personnel such as medical students is an important issue [5].

India is the second largest producer and third largest consumer of tobacco in the world. India's Tobacco Board is headquartered in Guntur, Andhra Pradesh. The National Survey on Drug Use and Health estimates that each day, over 4,000 people under the age of 18 years try their first cigarette. This amounts to more than 730,000 new smokers every year [6].

Tobacco in general is used as smoking and smokeless tobacco forms. Tobacco smoking is usually done in the form of cigarettes, cigars and pipe tobacco [3].

This study was done to study the prevalence of the tobacco smoking and smokeless tobacco habits among college students.

MATERIALS AND METHODS:

This cross-sectional study was done using specially prepared questionnaires. The study participants were from the various colleges of the nearby cities including of age group of 15-26 years. Total 11 colleges were visited for this study. Out of which 4 were government colleges and 7 were private colleges. The study participants were selected on basis of simple random sampling method until required sample size is reached. The questionnaires of this particular study were validated by doing pilot study. Approval of local ethical committee was taken before start of the study and informed consent was obtained from each of the participants.

Demographic information regarding the age, sex, education, parental education level, occupation and socioeconomic status was collected. Information regarding smoking and use of smokeless tobacco among students were recorded using a specially prepared questionnaire. The students were asked to assemble in a classroom and explained the purpose of the study. The questionnaire was then administered and was collected after they had completed answering all questions.

Descriptive statistics was used to analyze the data. Statistical analysis was performed using IBM SPSS statistics version 20.

RESULTS:

Demographical distribution:

Total 4500 students were participated in this particular study. Out of these 2344 (52.09%) were male students and 2156 (47.91 %) were female students. 2921 (64.91%) were belonging to the private institutions and 1579 (35.08%) were belonging to the government institutions. The distribution of the college students according to age was shown in table 1 and graph 1.

Prevalence of smoking tobacco:

Tobacco smoking habits was present in 261 (5.8%) students, among which 172 (65.90%) were male students and 89 (34.09%) were female students. While smokeless tobacco habits were observed in total 315 (7.0%) students. Out of which 198 (62.85%) were male students and 117(37.15%) were female students. From both these observations it was found that tobacco habits were more prevalent in male students as compared to female students. Both tobacco smoking and smokeless tobacco habits were seen in 31 (0.06%) students. Smokeless tobacco habits were more prevalent than smoking tobacco habits. (Table 2, Graph 2)

When the tobacco habits in private and government college students were compared it was observed that smoking tobacco habits were more commonly seen among private college students [149(57.08%)] than government college students [112(42.92%)]. But it was reverse in case of smokeless tobacco habits, which were more prevalent among government college students [172(54.61%)] as compared to private college students [143(45.39%)]. (Table 3, Graph 3)

Table 1: Distribution of the college students habits according to the age.

Age in years	Smoking tobacco	Smokeless tobacco	Both habits	Total
15-16	31	42	4	77
17-18	39	34	3	76
19-20	49	52	3	104
21-22	55	59	6	120
23-24	42	61	8	111
25-26	45	67	7	119
Total	261	315	31	607

Table 2: Distribution of the college students according to the tobacco habit present and sex

Tobacco habit	Males	Females	Total
Tobacco smoking (cigarette, bidi, etc)	172 (65.90%)	89 (34.09%)	261 (5.8%)
Smokeless tobacco	198 (62.85%)	117 (37.15%)	315 (7.0%)
Don't have any habit	1994 (50.55%)	1950 (49.44%)	3944 (87.6%)
Having both habits	20 (0.08%)	11 (0.05%)	31 (0.06%)
Total	2344 (52.09%)	2156 (47.91%)	4500

Table 3: Distribution of the tobacco habits according to the private or government institutions

Tobacco habit	Private college students	Government college students	Total
Tobacco smoking (cigarette, bidi, etc)	149 (57.08%)	112 (42.92%)	261
Smokeless tobacco	143 (45.39%)	172 (54.61%)	315
Don't have any habit	2614 (66.27%)	1279 (32.42%)	3944
Having both habits	15 (48.38%)	16 (51.62%)	31
Total	2921 (64.91%)	1579 (35.08%)	4500

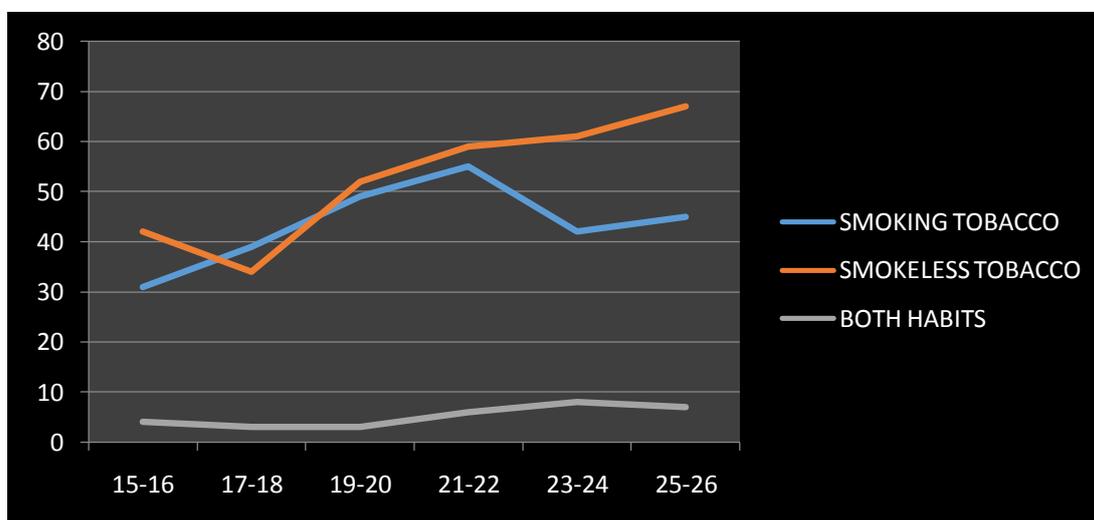


Fig 1: Graph showing distribution of the college student's habits according to the age

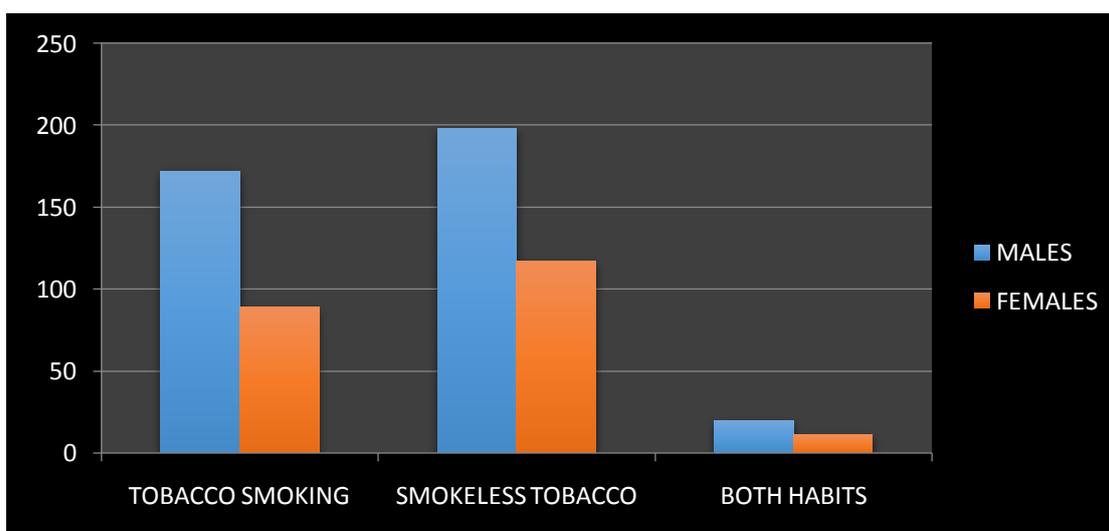


Fig 2: Graph showing distribution of the college students according to the tobacco habit present and sex

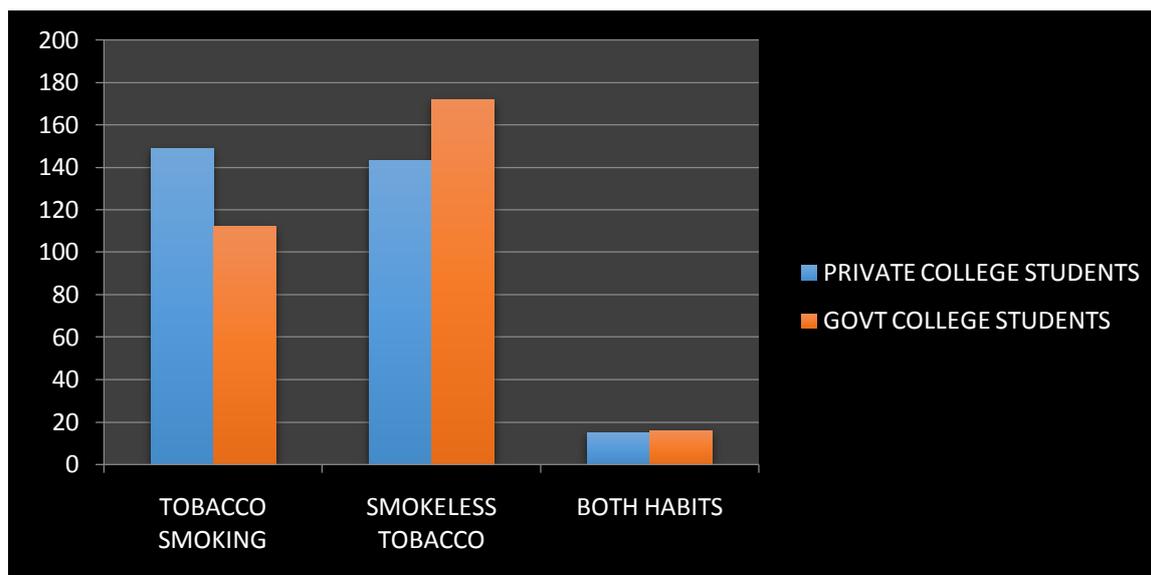


Fig 3: Graph showing distribution of the tobacco habits according to the private or government institutions

DISCUSSION:

Tobacco is by far the most important risk factor for oral cancer and precancer (Sham, 2003). Adverse effects of smoking may cause complications resulting in premature deliveries, spontaneous abortion, perinatal mortality and low birth weight. The magnitude of risk for developing tobacco associated diseases is related to the quantities consumed as well as the amounts of tar and nicotine present in the tobacco products; nicotine being the main agent responsible for addiction to tobacco [2, 7].

Tobacco is the leading preventable cause of death and more than five million people die globally from the effects of tobacco every year-more than that of HIV/AIDS, malaria and tuberculosis [8].

The reasons to smoke are mostly psychological. Experimentation with smoking as a symbol of adult behavior is common in adolescence. It is suggested that three factors are associated with young people smoking: peer pressure, following the example of sibling and parents, and employment outside home. If a child's older sibling and both parents smoke, the child is four times as likely to smoke as one with no smoking model in family.⁶ Tobacco use is a leading cause of preventable deaths world over, more so in developing countries [9].

Tobacco smoking reduces life expectancy, increases overall medical costs and contributes to loss of productivity during the lifespan of an individual [10].

There has been a dramatic increase over the past decade in the numbers of college-age smokers. Several studies report that the prevalence of smoking increases from the first year to the final year among

university students, which underlines the fact that the early years at university are important for targeting anti-smoking activities. Students who enter college as non-smokers are 40% less likely to begin smoking if they live in a smoke-free campus [11, 12, 13, 14].

It is not just lung cancer or heart disease that causes serious health problems and death; there are some less publicized side effects of smoking like, psoriasis, cataract, hearing loss, tooth decay, chronic pulmonary obstructive diseases, osteoporosis, stomach ulcers, discolored fingers, deformed sperms, and Buerger's disease [15].

Health risks due to smoking result not only from direct consumption of tobacco but also from exposure to secondhand smoke. It was estimated that about six million people were dying annually from tobacco use and over 600,000 deaths due to exposure to second-hand smoke [6]. In 2012, the global prevalence of current tobacco smoking among adults was estimated at around 22%, with smoking rates varying widely across. Smoking prevalence in both high income and upper-middle-income countries is broadly similar, although slightly higher in high-income countries at 25% and middle-income countries at 22% [15, 16].

Due to high addiction potential of nicotine, tobacco use leads to chronic dependence which requires treatment. Only 5% of the world's population is estimated to have access to treatment for tobacco dependence. Existing tobacco cessation services in India, both in public and private sector are grossly inadequate. Proper efforts to control the addiction of smoking and chewing at early stage of life are lacking [17, 18].

The Global Tobacco Youth Study (GTYS), reported that smoking is the predominant form of tobacco use among adolescent children in developed countries while in developing countries the use of smokeless tobacco is equally prevalent [18, 19].

A noteworthy point was that in boys both smoking and chewing habits was increased with the advancement of age. Previous studies also found that positive relationship between years at school and an increased rate of smoking. Other important findings of the study is that less number of girls were addicted with smoking than boys. This difference may be attributed that tobacco use by girls is not culturally acceptable in our society. A similar study in Bihar, demonstrated that 8% of girls students were usually smoked and 49% of girls used smokeless tobacco. Though gender gap in tobacco use is narrowing globally which may be due to the globalization [20, 21].

The prevalence of smoking among health care providers has been shown to vary widely; Oral and dental effects of smoking include staining of teeth, reduction of ability to smell and taste, melanosis, smoker's palate, oral candidiasis and dental caries. Smoking also increases the severity of periodontal disease. Among men in industrialized countries, smoking is estimated to be the cause of 40-45% of all cancer deaths [2, 22].

Young people who smoke experience an early onset of cough, phlegm production and shortness of breath on exertion. The earlier a person begins to smoke the greater is the risk of diseases such as chronic bronchitis, emphysema, cardiovascular diseases and lung cancer. Because of the long delay between cause and full effect, people tend to misjudge the hazards of tobacco [6].

The WHO Framework Convention on tobacco control (WHO FCTC) [10] introduced the 'MPOWER' package of measures to assist in the country level implementation and management of tobacco control. It includes [23]:

1. Monitoring the epidemic and prevention
2. Protecting people from second hand smoke
3. Offering help to people who want to quit.
4. Warning people about the dangers of tobacco
5. Enforcing bans on tobacco advertising, promotion and sponsorship
6. Raising taxes on tobacco.

Recommendations [3]:

- To help prevent college students from initiating tobacco use irrespective of professional or non-professional, undergraduates or post graduates and to better

prepare them to become early adopters of a non-smoking culture, tobacco education programs and harmful effects of alcohol can be introduced into curricula.

- In addition, and probably more importantly, there must be strong policies that will affect the acceptability of smoking or any other form of tobacco use.
- College campuses, especially medical school campuses, should be smoke-free.
- On a broader societal level, tobacco control measures such as those outlined in the World Health Organization Framework Convention on Tobacco Control should be implemented.
- Develop -specific community programs to prevent initiation and maintenance of tobacco use.
- In developing tobacco control strategies, incorporate the changing cultural, psychosocial, and environmental factors that influence initiation and maintenance of tobacco use among girls and women of all ages as well as boys and men.
- Monitor patterns of tobacco use.
- Ensure that sex-disaggregated data and a gender analysis are included in surveillance systems, research, monitoring, and evaluation of tobacco control programmes.
- Due to the early age of onset of substance use found it is recommended that these interventions must target people as young as possible, and involvement of peers and role models would have a high probability of success [3].

CONCLUSION:

There is necessity for initiation of school or college based anti-tobacco campaigns and reinforcement of such programs during graduation courses. The community itself must monitor the implementation of tobacco control laws and the government must provide support to the community.

This study has demonstrated a high prevalence of tobacco usage among college students and a generally consistent finding obtained was that tobacco use was higher among males as compared to females. The findings highlight the need for preventive strategies aimed at young individuals, many of whom take up smoking as a habit, early in life. Dental public health efforts, therefore, need to include and emphasize the role of smoking and not only oral hygiene in primary preventive efforts.

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