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Self-reported tobacco use, reasons for starting, awareness about its hazards and willingness to quit the habit among undergraduate students of Dharwad city

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Conflicts of Interest: Nil

Abstract

Background: Tobacco is the most important cause of preventable morbidity and premature mortality. Despite the facts, that the harmful effects of tobacco consumption are widely known, majority of the people start tobacco consumption during adolescence and approximately 50% of them become addicted to it. Even today very little is known about the factors which are driving the adolescence towards tobacco consumption. Hence a survey is done for the tobacco usage among the college students of the Dharwad city.

Methods: A cross sectional study was conducted by selecting 800 college students. Samples were selected by simple random sampling technique. Self-administered questionnaire was used for data collection.

Results: The overall prevalence of tobacco use among college students was 27%. Highest percentage of tobacco use was found among the B.Com students. 38.50% of subjects reported the reasons for starting their habits - relieve stress and to pass their time.

Conclusion: These findings from Dharwad suggest that tobacco use starts at young age. As many users develop dependency this raises important concerns regarding consequences for oral health.

Keywords: Adolescents, tobacco chewing, smoking, Factors.

Introduction

India is second largest producer of tobacco and second leading seller in the world, Most of the tobacco produced in India is used within the country. (1-3). The variety of forms in which tobacco is used is unique to India it include, pan (piper betel leaf filled with sliced areca nut, lime, catechu, and other spices chewed with or without tobacco), pan- masala or gutkha (a chewable tobacco

containing areca nut), mishri (a powdered tobacco rubbed on the gums as toothpaste) and cigarette smoking. Tobacco is one of the many drugs which people can become addicted to. The nicotine in cigarette smoke is known to have an addictive effect. It acts as stimulant and relaxant by releasing glucose from the liver and epinephrine (adrenaline) from the adrenal medulla. By reducing the appetite and raising the metabolism, some smokers may lose weight as a consequence.(4-7).Tobacco use is the most important cause of preventable morbidity, disability and premature mortality. Epidemiological research over the past several years has confirmed the harmful effects of tobacco use. According to the World Health Organization, tobacco kills more than five million people in the world, which is more than the mortality due to tuberculosis, HIV/AIDS, and malaria combined. India also has one of the highest rates of oral cancer in the world, it is estimated that one million deaths occur due to tobacco every year. If left unchecked, it is projected that the mortality due to tobacco consumption will rise to 1.5 million by 2020. (8, 9)

Despite the facts, that the harmful effects of tobacco chewing and smoking are widely known, many young people start smoking during adolescence, (10-12) largely because they believe that smoking will boost their social acceptability and image. Adolescent's need to gain social approval from peers can lead to smoking, as can their desire to appear like adults. Family influences also play a role; adolescents whose parents or siblings smoke are more likely to use tobacco. Once adolescents have experimented with smoking, approximately 50% continue to smoke and become addicted. The earlier a person begins to use tobacco, the more difficult it is to quit. Early adolescent users are more likely to remain smokers for the rest of their lives, more likely to smoke heavily, and more likely to die prematurely than those who begin smoking at a later age. In addition, the earlier an individual begins smoking, the greater his or her risk of developing the numerous illnesses associated with smoking. (9, 13)

Tobacco consumption and drug addiction are very actual problem among the youth and mostly among the adolescents. The number of adolescents continuing to smoke remains a major public health problem in India. With the overwhelming evidence of tobacco-related health problems in India and the world, there is a need to do all that we can to stem the tide of onset during adolescence and develop effective treatment programs for those adolescents and young adults who are habituated to smoking. No data concerning the factors affecting tobacco usage among college students of Dharwad has been gathered since so many years; therefore an attempt has been made to study factors responsible for tobacco usage among college students of Dharwad.

Materials and Methods

This present study was conducted to assess the prevalence of tobacco usage among undergraduate students of Dharwad city.

Profile of the study area

The present study was conducted in the various degree colleges of Dharwad. Dharwad is the district headquarters situated in northern part of Karnataka and it is the administrative centre for Dharwad district. Dharwad district has an area of 4265 Km2 and a population of 1,604,253 of which 54.97% is urban and 45.03% is rural. There are 5 degree colleges in Dharwad city.

Study population

The present study was conducted among the students of various degree colleges of Dharwad.

Sampling

This college based cross sectional study was conducted in 5 degree colleges of Dharwad. Total 800 students were selected from various colleges, and 160 students were

selected from each college by applying simple random sampling to select students in each year of the study. Students from each year of the study were selected proportionally to their class size.

Organizing the survey

1. Obtaining permission from the concerned authorities:

The required official permission for the study was obtained from the college principals of the respective colleges for collection of information.

2. Scheduling

The present study was conducted in October - November 2010. A detailed schedule of the survey was prepared well in advance and the concerned authorities were informed regarding place, date and timings.

Implementing the survey

Data collection

Data were collected using a pre tested, anonymous, self administered questionnaire during October-November 2010. The questionnaire was administered by the investigator and took 15-20 minutes for each class. The students were briefed about the purpose of the study, requested to fill in the questionnaire honestly and were reassured about the anonymity and confidentiality of the information and participation was totally voluntary. The data was collected included age, sex, name of the college, place of living, monthly family income, tobacco use, age of initiation, type of product used, reasons for starting adverse habits, awareness of tobacco related diseases, willingness to quit the habit.

Statistical analysis

The data was entered into the computer (MS-Office, Excel) and subjected to statistical analysis using the statistical package – STATA 9.2. Chi square test was used to test association between various variables.

Results

A cross-sectional study was carried out to assess the prevalence of tobacco usage among undergraduate students of Dharwad city. The study group consisted of 800 undergraduate students from 5 different colleges of Dharwad city.

Table 1: Distribution of study subjects according to tobacco usage

Among the 800 study subjects, 574 (71.75%) had no smoking or chewing habits, 109(13.63%) were smokers, 58 (7.25%) were tobacco chewers and 59(7.38%) were both tobacco chewers and smokers. (Graph 1)

Distribution of study subjects according to education and smoking habit

It was observed that, highest percentage of subjects who were smokers belonged to B Com type of education (39.05%) and lowest percentage belonged to the BA education group (9.42%). These finding was found to be statistically significant. (Table 1)

Distribution of study subjects according to education and chewing habit

Among the 800 study subjects, highest percentage of subjects who were tobacco chewers belonged to the other education group (20.37%) and lowest percentage of subjects belonged to the BA education group (13.45%).Statistically significant association was found between various education groups and chewing habit. (Table 2)

Distribution of study subjects according to stay and smoking habit

Among the 800 study subjects, highest percentage of subjects who were smokers belonged to the category of staying independent (24.26%) and lowest percentage of subjects (19.32%) were found to be staying with their parents. However, these findings are not statistically significant.

Distribution of study subjects according to stay and chewing habit

Highest percentage of subjects who were chewers reported to stay independently (17.28%) and lowest percentage of subjects (13.26%) were found to be staying with their parents. These findings were found to be statistically not significant.

Distribution of study subjects according to monthly family Income and smoking habit

Out of 800 study subjects, greater percentage of subjects (25.57%)who were smokers were belonging to income group of 10,001-20,000 and lowest percentage of subjects (9.76%) were belonging to income group of 40,001-50,000. Statistically significant association was found between monthly family Income and smoking habit. (Table 3)

Distribution of study subjects according to monthly family Income and chewing habit

More percentage of subjects (18.52%) who were chewers were belonging to income group of 10,001-20,000 and less percentage of subjects (8.16%) were belonging to income group of 30,001-40,000. It was found that there was no statistically significant association between monthly family income and chewing habit. (Table 4)

Distribution of study subjects according to education and both habits

Among the 800 study subjects, highest percentage of subjects (29.63%)who were single users (chewers/smokers) were belonging to other education group and lowest percentage of subjects (9.42%) were belonging to BA education group. Highest percentage of subjects (11.24%) who used both chewing and smoking form of tobacco were belonging to B Com education group and lowest percentage of subjects (4.33%) were belonging to BSC education group. Moreover, these findings were found to be statistically significant. (Table 5)

Distribution of study subjects according to stay and both habits

Among the 800 study subjects, highest percentage of subjects (24.63%) who were single users (chewers/smokers) were independent and lowest percentage of subjects (18.94%) were staying with parents. Highest percentage of subjects (8.46%) who were both users (chewers/smokers) were independent and lowest percentages of subjects (6.82%) were staying with parents. No statistically significant association was found between stay and both habits.

Distribution of study subjects according to income and both habits

Among the 800 study subjects, highest percentage of subjects (24.58%)who were single users (chewers/smokers) were belonging to income group of 10,001-20,000 and lowest percentage of subjects (13.16%) were belonging to income group of 50,000 and above. Highest percentage of subjects (10.53%) who were both users (chewers/smokers) were belonging to income group of 50,000 and above and lowest percentages of subjects (2.04%) were belonging to income group of 30,001-40,000. No statistically significant association was found between income and both habits.

Distribution of study subjects according to reasons for starting the use of tobacco

Out of 226 tobacco users, highest percentage of subjects (38.50 %) reported that to relive the stress they started with habit of tobacco use (chewing/smoking). This was followed (30.53%) with the reason to pass their time through tobacco use. (Table 6)

Distribution of study subjects according to awareness and habits

Out of 226 subjects who were tobacco users, highest percentage of subjects (92.04%) were aware of adverse affects of habits and lowest percentage of subjects (7.96%) were not aware of adverse affects of habits. No statistically significant association was found between awareness and habits. (Graph 2)

Distribution of study subjects according to their willingness to quit habits

Out of 226 subjects who were tobacco users, highest percentage of subjects (71.24%) were willing to quit their habit and lowest percentage of subjects (28.76%) were not willing to quit their habit. No statistically significant association was found between habits and their willingness to quit habits. (Graph 3)

Discussion

The prevention of tobacco use in young Indians appears as the single greatest opportunity for preventing non-communicable disease in the world today as it is home to one sixth of the global population. Tobacco use is a major public health concern and has been identified as the single most important cause of preventable mortality and morbidity worldwide. Tobacco use usually begins in early adolescence on average by age 14 and in almost all cases before adulthood. By the time they reach age eighteen, about two-thirds of the young people try smoking, and many quickly become dependent.

Every day our nation's youth are bombarded with commercial messages encouraging the use of tobacco. They are easily influenced by these factors, take to tobacco thinking it is a macho habit, but they don't realize the long-term implications. Thus, there is an urgent need to face this challenge and curb its use. Hence, the study was conducted to assess tobacco use among college students of Dharwad city.

The present study consisted of 800 undergraduate students from 5 different colleges of Dharwad city.

Tobacco usage: In the present study, highest number of subjects 71.75% had no smoking or chewing habits, 13.63% were smokers, 7.25% were tobacco chewers and 7.38% were both tobacco chewers and smokers. The marked predominance of tobacco chewing or smoking in the present study is consistent with findings obtained from previous studies by Jayakrishnan R, Geetha S (2011)[12], Nino Mirzikashvili (2003)[13] Kebede Y (2002)[14], Global Youth Tobacco Survey– Delhi [15]Ramakrishna GS, Sankara Sarma P (2005)[16], Naresh R. Makwana, Viral R. Shah,(2007)[17], **Shafquat Rozi Zahid A, Butt** and **Saeed Akhtar** (2007)[18], Khalid M. Almutair (2010).[19]

Education and smoking habit: In the present study, it was observed that, highest percentage of subjects who were smokers belonged to B Com type of education (39.05%) and lowest percentage belonged to the BA education group (9.42%). These finding was found to be statistically significant.

Education and chewing habit: Highest percentage of subjects who were chewers belonged to other type of education (20.37%) and lowest percentage belonged to the BA education group (13.45%). Possible explanation for the highest percentage of smoking habit among the BCom students and highest percentage of chewing habit among the other type of education students could be an influence of some enforcing factors like inappropriate classroom behavior or failing college performance, poor social skills or affiliation with deviant peers, and a perception that smoking and chewing tobacco is acceptable within peers, college, or community environments.

Family income and smoking habit: Out of 800 study subjects, greater percentage of subjects (25.57%)who were smokers were belonging to income group of 10,001-20,000 and lowest percentage of subjects (9.76%) were belonging to income group of 40,001-50,000. Statistically

significant association was found between monthly family Income and smoking habit.

Family income and chewing habit: Above table shows that, more percentage of subjects (18.52%) who were chewers were belonging to income group of 10,001-20,000 and less percentage of subjects (8.16%) were belonging to income group of 30,001-40,000. It was found that there was no statistically significant association between monthly family income and chewing habit. This could be due to increased financial demands within low income group, which may lead to stressful situation which ultimately land them in to adverse habits like smoking or chewing.

Reasons for starting the use of tobacco: In the present study, highest percentage of subjects (38.50%) reported that to relive the stress they started with habit of tobacco use (chewing/smoking). This was followed (30.53%) with the reason to pass their time through tobacco use. Studies conducted by Gupta P A(1996)[1,] Kebede Y(2002)[14], Gelaw Y, Abraham H (2004)[20] showed that, majority of subjects started their habit to keep alert while reading, for relaxation and peer pressure.

Awareness of adverse effects of habits Out of 226 subjects who were tobacco users, highest percentage of subjects (92.04%) were aware of adverse affects of habits and lowest percentage of subjects (7.96%) were not aware of adverse affects of habits. This result was quite to similar to study done by Kebede Y (2002)[14] and global youth tobacco survey in Delhi (2005)[15].

Willingness to quit habits: Out of 226 subjects who were tobacco users, highest percentage of subjects (71.24%) were willing to quit their habit and lowest percentage of subjects (28.76%) were not willing to quit their habit.

As, evidence from the results of present study usually tobacco use starts at the early stages of life which if left unrecognized or uninterrupted may lead to sequential events of tobacco related morbidity and mortality. Thus there should be targeted intervention by identifying the population under risk of tobacco use through various health education programmes, implementation of rigid policies for banning the tobacco use and selling of these products in and around college campus. Health education also should target head of institution/teachers who can create awareness among the students and also to encourage tobacco users to quit their habit.

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Table 1: Distribution of study subjects according to education and smoking habit

Type of Education	No	%	Yes	%	Total	%
BA	202	90.58	21	9.42	223	27.88
BCom	103	60.95	66	39.05	169	21.13
BSc	253	84.33	47	15.67	300	37.50
Others	74	68.52	34	31.48	108	13.50
Total	632	79.00	168	21.00	800	100.00
Chi-square 68.06245			df=4		p=0.00000	

Table 2: Distribution of study subjects according to education and chewing habit

Education	No	%	Yes	%	Total	%
BA	193	86.55	30	13.45	223	27.88
BCom	136	80.47	33	19.53	169	21.13
BSc	268	89.33	32	10.67	300	37.50
Others	86	79.63	22	20.37	108	13.50
Total	683	85.38	117	14.63	800	100.00
Chi-square 20.61438			df=4		p=0.00038	

Table 3: Distribution of study subjects according to monthly family Income and smoking habit

Monthly family Income vs smoking						
Income (INR)	No	%	Yes	%	Total	%
Up to 10,000	219	77.94	62	22.06	281	35.13
10,001-20,000	221	74.41	76	25.59	297	37.13
20,001-30,000	82	87.23	12	12.77	94	11.75
30,001-40,000	42	85.71	7	14.29	49	6.13
40,001-50,000	37	90.24	4	9.76	41	5.13
≥50,000	31	81.58	7	18.42	38	4.75
Total	632	79.00	168	21.00	800	100.00
Chi-square 13.42359			df=5		p=0.01973	

Table 4: Distribution of study subjects according to monthly family Income and chewing habit

Monthly family income vs chewing						
Income(INR)	No	%	Yes	%	Total	%
Up to 10,000	243	86.48	38	13.52	281	35.13
10,001-20,000	242	81.48	55	18.52	297	37.13
20,001-30,000	86	91.49	8	8.51	94	11.75

30,001-40,000	45	91.84	4	8.16	49	6.13
40,001-50,000	35	85.37	6	14.63	41	5.13
≥50,000	32	84.21	6	15.79	38	4.75
Total	683	85.38	117	14.63	800	100.00
Chi-square 8.373508 df=5 p=0.13685						

Table 5: Distribution of study subjects according to education and both habits

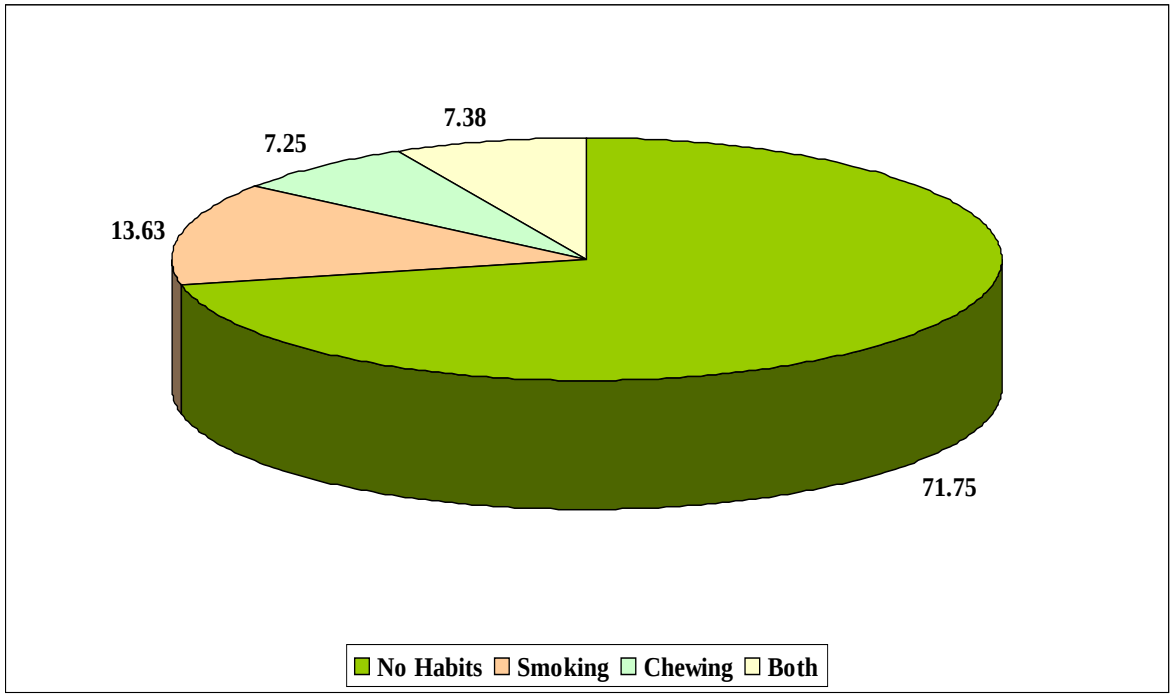
Education vs both habits								
Type of education	No	%	Single	%	Both	%	Total	%
BA	187	83.86	21	9.42	15	6.73	223	27.88
BCom	89	52.66	61	36.09	19	11.24	169	21.13
BSc	234	78.00	53	17.67	13	4.33	300	37.50
Others	64	59.26	32	29.63	12	11.11	108	13.50
Total	574	71.75	167	20.88	59	7.38	800	100.00
Chi-square 88.3681 df=8 p=0.00000								

Table 6: Distribution of study subjects according to reasons for starting the use of tobacco

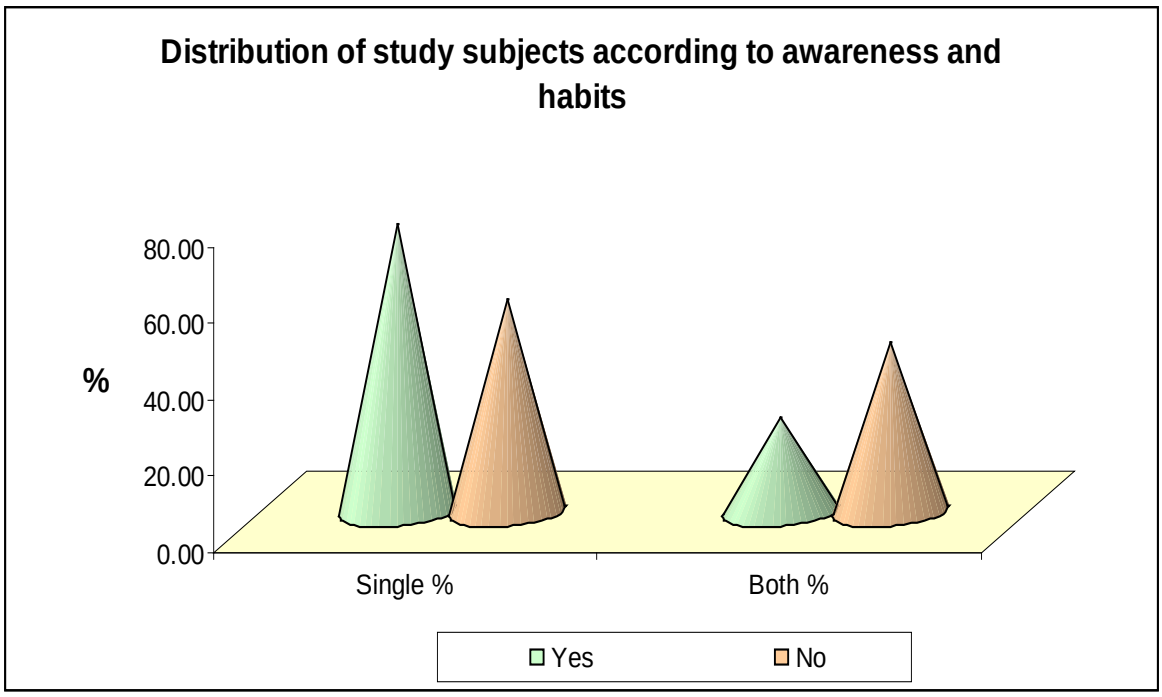
Reasons						
	Single	%	Both	%	Total	%
To relieve stress	62	37.13	25	42.37	87	38.50
For relaxation	39	23.35	16	27.12	55	24.34
For time pass	54	32.34	15	25.42	69	30.53
To keep alert	20	11.98	11	18.64	31	13.72
For curiosity	27	16.17	8	13.56	35	15.49
For style	17	10.18	8	13.56	25	11.06
Friends force	46	27.54	20	33.90	66	29.20
Influenced by famous people	8	4.79	3	5.08	11	4.87

Family members use them	5	2.99	1	1.69	6	2.65
Teachers also do that's why	0	0.00	2	3.39	2	0.88
For religious reasons	0	0.00	0	0.00	0	0.00
Everybody smoke that's why	3	1.80	1	1.69	4	1.77
To intermingle in smoking group	15	8.98	1	1.69	16	7.08
Other reasons	3	1.80	12	20.34	15	6.64
Total	167	100.00	59	100.00	226	100.00

Graph 1: Distribution of study subjects according to tobacco usage



Graph 2: Distribution of study subjects according to awareness and habits



Graph 3: Distribution of study subjects according to willingness to quit the habits