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Original Article

Smoking Pattern in Students of a Selected Medical College in Bangladesh

Rukhsana Parvin[1], Noortaj Begum [2], Md. Aminul Haque Khan[3]
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Abstract

Background*: Smoking is a recognized harmful factor for general health. The prevalence of smoking is gradually increasing among the young people. Medical students are also vulnerable in this arena. Worldwide studies revealed that students start and continue smoking during their school and college periods.* ***Objectives****: To determine the current tobacco use among medical college students and to find out the risk factors associated with smoking and also to assess the knowledge of students regarding smoking.* ***Materials and Methods****: This cross-sectional study was conducted among medical students of different educational levels (first year to fifth year) in Enam Medical College, Savar, Dhaka during the period January to March 2012. An anonymous, pretested, self-administered study questionnaire was distributed among the subjects. Data collected included smoking habits, demographic factors such as age, gender, parents' occupation and monthly income. Study subjects were categorized as smokers, non-smokers and ex-smokers. Smoking-related knowledge was assessed and opinion regarding cessation of smoking was documented. The data were entered into the computer and statistical analyses were done using GraphPad Prism version 6.01.* ***Results****: Among the study subjects 290 were male and 202 were female. There were 79 (27.24%) smokers, 199 (68.62%) non-smokers and 12 (4.13%) ex-smokers among male and 197 (97.52%) non-smokers, 4 (1.98%) smokers and 1 (0.49%) ex-smoker in female. Regarding age, 196 (39.83%) students were below 20 years of age and 296 (60.16%) were more than 20 years of age. Most of the smokers (43.37%) are from affluent families. Influence of friends (44.57%) is the major reason of smoking followed by depression (27.71%). About 37.34% smokers have family members who are currently smoking. Regarding quitting smoking, 66% intended to stop smoking. The reasons for no intention to stop smoking include lack of incentive followed by addiction. There are significant differences among study subjects regarding smoking related knowledge.* ***Conclusion****: Even medical students are not fully aware of health consequences due to smoking and this lack of knowledge may lead to increase the number of smokers among students. Appropriate anti-smoking measures should be taken to create awareness about smoking and its health consequences and to reduce the incidence of smoking among the students.*

Key words*: Medical students; Smoking; Knowledge regarding smoking*

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Introduction

Smoking is an important risk factor for development of several noncommunicable diseases such as hypertension, diabetes mellitus, dyslipidemia etc. It is one of the leading preventable causes of premature death, disease and disability around the world.[1] About 4.9 million deaths occurring annually can be attributed to smoking. This may increase to 10 million by the year

1. Associate Professor, Department of Medicine, Enam Medical College & Hospital, Savar, Dhaka
2. Assistant Professor, Department of Biochemistry, Enam Medical College, Savar, Dhaka
3. Professor, Department, Biochemistry, Enam Medical College, Savar, Dhaka
Correspondence *Rukhsana Parvin, Email: rukhsana_parvin@yahoo.com*

2020. If the current tobacco use epidemic continues, more than 70% of these deaths are likely to occur in developing countries.[2]

According to WHO, health professionals can have a significant influence (positive or negative) on the smoking habits of a community.[3] Doctors who smoke tend to be more permissive, less inclined to advise their patients against tobacco use, and show a passive attitude towards smoking.[4] Medical science students, such as doctors, nurses, pharmacists or health administrators can play a central role in preventive programs due to their appropriate knowledge and attitudes.[5] The college years are a formative period when many young adults experiment with new ideas and behaviors that can have an impact on the rest of their lives. So medical schools can use the opportunity to reach students during their undergraduate years and address the subject of smoking.[6] A multi-country survey (1986–1989) showed that medical students themselves lack adequate knowledge about smoking-related diseases and tobacco cessation techniques.[7]

We designed this study to determine the current use of tobacco among medical students in Enam Medical College Hospital to find out the risk factors associated with smoking and to assess their attitudes and knowledge regarding smoking.

Materials and Methods

This cross-sectional study was conducted among medical students of different educational levels (first year to fifth year) in Enam Medical College, Savar, Dhaka during the period January to March 2012. An anonymous, pretested, self-administered study questionnaire was distributed among the subjects. A modified version of the standard World Health Organization (WHO) questionnaire was used for this survey.[8] Ethical approval was obtained from the appropriate authority. Total 492 students completed the questionnaire.

Students were explained the purpose of the study and confidentiality was assured. Data collected included smoking habits, demographic factors such as age, gender, parents' occupation and monthly income. Study subjects were categorized as smoker, non-smoker and ex-smoker. Smokers were defined as respondents who were currently smoking, non-smokers as who never smoked and ex-smokers were defined as respondents who used to smoke before and currently not smoking. Smoking habit was assessed as: age of starting smoking and quantity of smoking. Students were also asked about reasons of smoking, presence of smokers in the family and smoking cost. Students' intention to quit smoking was also addressed. Smoking-related knowledge was assessed and their opinion regarding cessation of smoking was documented.

The data were entered into the computer and statistical analyses were done using GraphPad Prism version 6.01. The association between dependent and explanatory variables was assessed using χ^2 test. Statistical significance was set at $p<0.05$.

Results

In this study total population were 492. Among them 290 were male and 202 were female. All respondents completed questionnaire, giving a response rate of 100%. The high response rate minimized the risk of bias due to the population not being representative of the target population. There were 79 (27.24%) smokers, 199 (68.62%) non-smokers and 12 (4.13%) ex-smokers among male and 197 (97.52%) non-smokers, 4 (1.98%) smokers and 1 (0.49%) ex-smoker in female. Regarding age, 196 (39.83%) students were below 20 years of age and 296 (60.16%) were more than 20 years of age.

Table I shows occupation and monthly income of the parents of the study subjects. There are no significant differences in term of occupations and monthly income of parents among the three groups of study subjects.

Table I: Distribution of study subjects according to occupation and monthly income of the parents

Variables	Smokers (n=83)	Non-smokers (n=396)	Ex-smokers (n=13)	p values
According to occupation of father				
Businessman	39	202	8	0.7366
Service holder	36	150	4	
Doctor	5	32	0	
Others	3	12	1	
According to occupation of mother				
Housewife	81	373	13	0.3076
Others	2	23	0	
According to monthly income of parents (BDT)				
<50000	19	86	1	0.7852
50000–100000	36	162	7	
>100000	28	124	5	
Not mentioned	-	24	-	

Chi-square test was done to analyze data

Table II shows the age of starting smoking in study subjects. There is no significant difference in starting age between smokers and ex-smokers. Table III shows number of sticks taken by the smokers daily.

Table II: Distribution of study subjects according to age of starting of smoking

Age of starting (years)	Smokers (n=83)	Ex-smokers (n=13)	p value
<16	7	3	0.2484
16–20	64	9	
>20	12	1	

Chi-square test was done to analyze data

Table III: Number of sticks taken by the study subjects

Number of sticks/day	Smokers (n=83)
1–5	48
6–10	22
11–15	6
16–20	4
>20	3

Table IV shows distribution of study subjects according to reasons of smoking. Influence of friends (44.57%) is the major reason followed by depression (27.71%). Regarding quitting smoking, 66% intended to stop smoking, but rest denied. The reasons for no intention to stop smoking include lack of incentive (3), addiction (15) and others (12).

Table IV: Distribution of study subjects according to reasons of smoking (n=83)

Reasons	Smokers Number (%)
Influence of friends	37 (44.57)
Influence of family	0 (0)
Influence of teachers	4 (4.81)
Depression	23 (27.71)
Others	19 (22.9)

Table V shows distribution of study subjects according to presence of smokers in family. There is no significant difference in term of presence of smokers in family among the three groups. Table VIII shows distribution of study subjects according to smoking cost in three groups. There is no significant difference in smoking cost among these groups.

Table V: Distribution of study subjects according to presence of smokers in family

Presence of smokers in family	Smokers (n=83) N (%)	Non-smokers (n=396) N (%)	Ex-smokers (n=13) N (%)	p value
Yes	31 (37.34)	135 (34.09)	3 (23.07)	0.6233
No	52 (62.65)	247 (62.37)	10 (76.92)	
Not mentioned		14 (3.53)		

Chi-square test was done to analyze data

Table VI: Distribution of study subjects according to smoking cost

Smoking cost (BDT)	Smokers (n=83)	Ex-smokers (n=13)	p value
<500	13	5	0.1308
500–1000	28	4	
>1000	42	4	

Chi-square test was done to analyze data

Table VII shows distribution of study subjects according to smoking-related knowledge. There are significant differences among study subjects regarding harmful effect of smoking and effect of nicotine on health.

Table VII: Distribution of study subjects according to smoking related knowledge

Variables	Smokers (n=83)	Non-smokers (n=396)	Ex-smokers (n=13)	p values
Smoking is harmful for health				
Yes	78	395	13	<0.001
No	5	1	0	
Smoking is banned in public				
Yes	76	379	12	0.2687
No	7	17	1	
Nicotine can cause cancer				
Yes	78	396	13	<0.001
No	5	0	0	

Chi-square test was done to analyze data

Forty seven smokers and 373 non-smokers stated that price of cigarettes should be increased. Twelve (14.45%) smokers and 40 (10.10%) non-smokers had smoking-related health problems. Fifty seven smokers and all non-smokers suggested that help is needed to stop smoking.

Discussion

In this study 16.9% of study subjects reported themselves as smokers. This is consistent with the study done in medical students in Riyadh, Saudi Arabia where the prevalence is 18%.[9] Similarly it was 22% among Iranian dental students.[10] In a review study of smoking in dental students in 19 countries, the prevalence was between 3% in Canada and 47% in Greece.[11]

In this study there were 79 smokers and 12 ex-smokers among 290 males and 4 smokers and one ex-smoker among 202 females. Male are predominant (27.24%). This is consistent with the study done in Turkey and Casablanca where prevalence of smoking among healthcare students were high in male students (28.3% and 16% respectively).[12,13]

In this study it was found that smokers and ex-smokers are from affluent families which was based upon their parents' occupation and monthly income. This may suggest that smokers can easily smoke as they do not have any financial constraint.

In our study, most of the smokers (n=71) started smoking at the end of school tenure and beginning of college life. This was consistent with another study which found that most of the smokers started smoking prior to university.[14] In contrast, in the study done by AlSwailem et al[15] it was found that current smokers started smoking after starting university.

In this study, 44.6% smokers mentioned that influence of friends was the major reason of smoking. A study done among medical students in Saudi Arabia found strong association of smoking and influence of close smoker friends.[16] AlSwailem et al[15] also found association between smoking and influence of friends. In our study, second reason of smoking was depression (27.71%). Several studies stated that stress played an important role for starting smoking.[17-19]

In our study we did not find any association between smoking and presence of smokers in family members. About 62.65% study subjects did not have any smokers in family. AlSwailem et al[15] also did not find any association between presence of smoking family members and smoking habits. In contrast, Dar-Odeh et al[20] reported significant association between students and parental smoking habits.

Smoking-related knowledge is important as it plays a great role to assess tobacco as risk factor and to take measures for control and prevention of smoking-related diseases. About 94% of smokers admitted that smoking is harmful for health and nicotine can cause cancer. This is consistent with the studies done by Saji et al[21] and Xu et al[22]. In our study there is statistically significant difference in knowledge about adverse health effects of smoking among smokers, non-smokers and ex-smokers groups. It is inconsistent with the study done by Merdad et al[16] who found no statistically significant findings between smokers and non-smokers in their knowledge about the harmful effects of smoking.

In this study 66% smokers intended to stop smoking. Memon et al[23] found that 47% of smokers wanted to stop smoking. Raina et al[24] revealed in a study that 53.3% cigarette users expressed the desire to stop smoking. All these studies indicate that there is a positive attitude towards quitting.

We have some limitations in this study. The findings of this study cannot be generalized to the whole population as it was conducted on a small sample. Our study was based on self-reported information on smoking, so there are chances of under-reporting of smoking status among the study subjects.

It is a matter of great concern that tobacco consumption is gradually increasing among the students of schools and colleges. Depression due to lack of healthy recreational activities, stressful social circumstances, peer pressure, less parental supervision and inadequate knowledge about risks of health due to smoking have a major contribution for involvement in such an injurious habit. Promotion of more anti-smoking campaign and establishment of smoking counseling centers in the academic institutions are necessary to increase awareness regarding smoking among the young generation.

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