

# **Smoking patterns, stances and awareness regarding anti-smoking legislation of medical students in Dhaka city, Bangladesh**

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## **ABSTRACT**

Globally every year cigarette smoking is known as universal and preventable cause of mortalities and morbidities among young people and students. In developing countries like Bangladesh the use of cigarette is increasing day by day. As students are very important segment of the society they should be educated with the consequences of smoking cigarette. A descriptive cross-sectional survey on 280 medical students of a selected medical college was carried out to determine their smoking patterns, stances and awareness regarding anti-smoking legislation in Dhaka city. The study was commenced from July to December, 2014. The frequency of smoking in the study was 63.2% and it was highest among final year students. More than fifty percent students smoked 1 to 5 sticks per day. Comprehensive plan with proper instructions and measures should be developed to educate healthcare providers regarding smoking hazards and provide counseling to large number of general public. Specific training and counseling should be a part of the required curriculum at medical schools to address these issues.

**Key words: smoking, adolescents, prevalence, knowledge, stance.**

## **INTRODUCTION**

Smoking has been identified and considered as the only greatest preventable cause of death in the globe, and up to 50% of all cigarette smokers may be died by their addiction. Globally the prime etiology of premature death is cancer and cardiovascular diseases which are related to smoking<sup>1</sup>. About 1.3 billion people are estimated as currently smokers, about 10 million of them may die by 2030 (up from 4.8 million in 2006) for their tobacco use<sup>2</sup>. Most of these deaths occur in low- and middle-income countries. If not vital measures taken, tobacco use could cause more than one billion deaths in the 21<sup>st</sup> century<sup>3</sup>.

Puberty and early adulthood (15-24 years) is the most vulnerable time of tobacco use<sup>4</sup>. Every day, about 4800 teenagers smoke their first cigarette; of them about 2000 will be regular smokers<sup>5</sup>. Globally, approximately 150 million adolescents smoke. About 50% young smokers will be killed by tobacco-related diseases in later life. Adolescent smokers are more susceptible to immediate health problems, such as respiratory and non-respiratory, alteration in serum cholesterol and dependence and withdrawal of nicotine in the developed economics, the cigarette rate is declining but the opposite is occurring in the 3<sup>rd</sup> world and particularly in South east Asia<sup>6</sup>.

While the rate of cigarette smoking is decreasing in the developed economies, the reverse is happening in the Third World and in South-east Asia in particular<sup>7</sup>. Leading World Health authorities have laid emphasis on the prime importance of taking part and developing positive attitude of health professionals in implementing national and international tobacco control measures<sup>8</sup>. They motivated doctors to be role models and provide their patients with tobacco interventions<sup>9, 10</sup>. The same is expected from medical students because they are the future doctors. Their parts are very important in tobacco control since their smoking habits, knowledge, and attitude to smoking will influence their future practice as doctors<sup>11</sup>. Cigarette smoking is still widespread among medical students and prevalence varies from place to place often reflecting that of the society in which they live<sup>12</sup>. They have to be non smokers to present themselves to be convincingly effective.

Significant cigarette smoking trend seen among the students of different medical colleges of Bangladesh, but inadequate data not representing the real scenario. To develop a comprehensive plan to educate the health service providers about the smoking hazards and to counsel the people largely, we needed to assess what percentage of the medical students' smoke, in spite of having much better knowledge of smoking hazards than general people. Besides, we intended to study different variables e.g. age group, gender, age of starting smoking, number of cigarettes smoked per day, reason for continuation of smoking, knowledge about the dangers of smoking, attitudes towards smoking, therefore the reasons that have contributed to resolution of the pandemicity can be distinguished.

## **MATERIALS AND METHODS**

A descriptive cross-sectional study was conducted among medical students at Dhaka Community Medical College, Moghbazar, Dhaka. The medical students were in first year to final year during the study period (2009-2014 academic sessions). An initial pilot study was carried out among medical students (who were not included in the study) to test the performance of the questionnaire and estimate the response rate. The

results showed the questionnaire to be reliable; a focused group discussion following data collection showed that the questions were easily understood and did not require modifications. The initial sample size was 233 with 5% error rate at 95% confidence interval (CI). Considering the response rate (75%) the sample size was increased to 280 students. A stratified random sampling approach was used based on five strata (first year to fifth year students respectively) to select the number of participants from each class level. The number of students to be recruited from each level was calculated based on students' number in the level as a fraction of the total number of students in the college multiplied by the desired sample size. A questionnaire was designed for collection of demographic data of the participants. These instruments were self-administered and pre-tested before commencing of the study. The researchers were all involved in the process of data collection. They at first visited the various departments for beginning sensitizations and consents prior to initiation of the study. Selected respondents were approached on lecture classes in their departments and requested to fill the questionnaires, which took at least 10 to 15 minutes. The researchers gave necessary guidance when required and double-checked to ensure adequate information was given. This process was continued till the required sample size was met. The study was conducted from July to December, 2014 in which data collection period was about 2 months. Collected data were checked, verified & then entered into the computer. The analysis was carried out with the help of SPSS version-17 windows software program.

## RESULTS

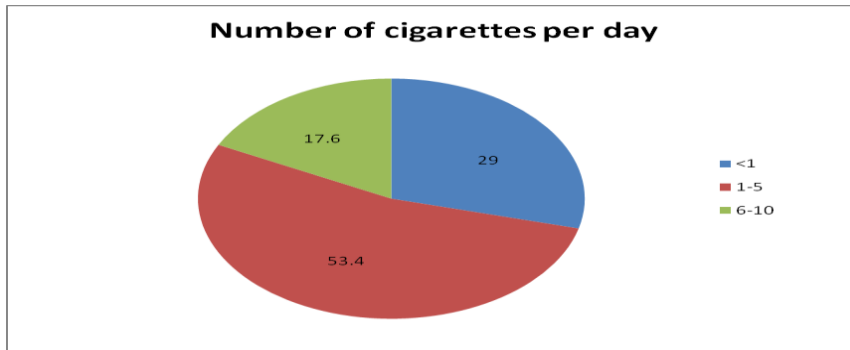
Out of 280 male medical students, 177(63.2%) were current smokers and 103(36.8%) were nonsmokers and 12% of nonsmokers were past smokers. Among 177 smokers, 12% had started smoking in school, 48.5% at intermediate level and 36% in medical college. All the smokers smoked in hostel, among them, those who also smoked at home were 9.1%. The prevalence of smoking in each year was 31.8%, 54.3%, 51.6%, 70.1% and 77.4% respectively but the 5<sup>th</sup> year MBBS students were utmost (Table 1).

**Table 1:** Demographic distribution of participants (n=280)

Year	No. of smoker	No. of non-smoker	Total population	Prevalence rate %
1 <sup>st</sup>	07	15	22	31.8
2 <sup>nd</sup>	19	16	35	54.3
3 <sup>rd</sup>	32	30	62	51.6
4 <sup>th</sup>	54	23	77	70.1
5 <sup>th</sup>	65	19	84	77.4

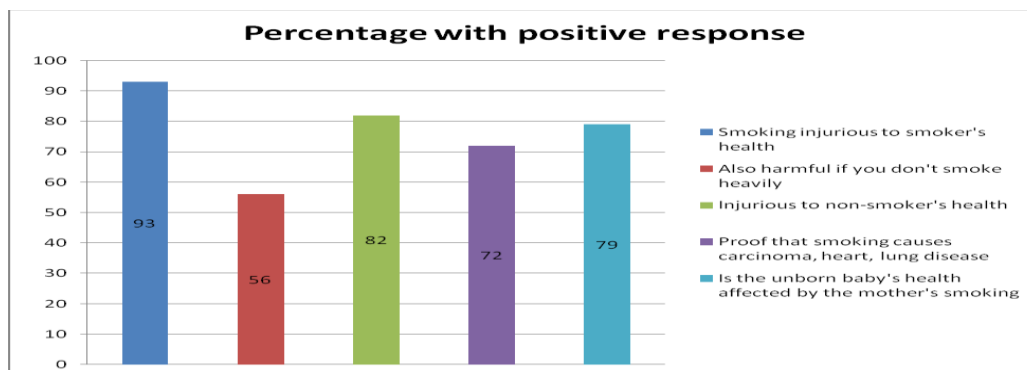
<b>Total</b>	<b>177</b>	<b>103</b>	<b>280</b>	<b>63.2</b>
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A total of 63.2% male undergraduates were smokers of which more than fifty percent smoked 1 to 5 sticks per day compared with near thirty percent smoked less than one a day (Figure1).



**Figure 1:** Distribution of the male respondents by number of cigarettes per day (n=177)

The study also dealt with the knowledge of the learners regarding the consequences of cigarette smoking. Figure 2 shows the response of participants about the injurious implications of cigarette smoking. More than ninety percent participants agreed that smoking was harmful to the smoker's health and of them more than fifty percent harmonized passive smoking as harmful. More than four-fifth respondents gave the same opinion that smoking was injurious to the health of non-smokers. About three-fourth respondents gave positive reply that smoking causes carcinoma and other diseases of heart and lung. Seventy-nine percent scholars identified that smoking of pregnant mother had bad impact on an unborn baby's health.



**Figure 2:** Knowledge about the dangers of cigarette smoking (n=280)

The approach of the students towards smoking and Government anti-smoking legislations was also draw out. They gave strong attitude towards increasing knowledge about adverse effect (70.5%) and community based public programmes (73.6%). When they were asked about the legislation, 34% said the current legislation was “not strong enough”, 30% believed it was “good as it is”, while 23% either had no opinion of it. More than two-third respondents agreed that raising excise taxes on all tobacco products would reduce the prevalence of smoking. Regarding banning of smoking in public places, 65% students had the same opinion. Less than one third under graduates were disagreed to decriminalize smoking advertisements and sponsorships. (Table 2).

**Table 2:** Attitudes of respondents towards smoking (n=280)

Questions	Response	Percentage
Increasing knowledge about tobacco related adverse effect	Agree	70.5 (68.0-73.1)
Raising excise tax	Agree	68.6 (66.0-71.2)
Ban on smoking in public places	Agree	65.0 (62.4-67.6)
Community based preventive programs and counseling	Agree	73.6(68.7-78.5)
Government legislation	Not strong enough	33.7 (31.2-36.4)
	No answer	22.8 (20.5-25.3)
	Good	30.2 (27.6-32.9)
Decriminalize smoking advertisements and sponsorships	Disagree	26.9( 24.6-29.2)

## DISCUSSION

Smoking causes death of 50% of its habitual consumers. Globally, significant variation in style of smoking cigarette seen among the medical students, ranging from The United States (3%) to Pakistan, (51.7%)<sup>13, 14</sup>.

Another study conducted among the students of Bannu Medical College, Pakistan where most students started smoking due to friends' influence from intermediate level before entrance in medical college<sup>15</sup>. One survey conducted in a important teaching hospital at Karachi, recognized that the time of a student's life after secondary to intermediate level when he is more susceptible to addiction and this finding corresponds with the present study<sup>16</sup>. The current study showed highest prevalence (77.4%) of smoking among final year students. Saeed AA and his colleagues<sup>8</sup> conducted a study in the Medicine faculty at King Fahad Medical City in Riyadh; KSA illustrated that tobacco smoking is highly established among male medical students. The findings are similar to those of past national studies; that manifested the trend is going on regardless of the period of survey, kind of institute, curriculum or the strategy of education. This current data were reported from studies conducted in Malaysia, India, Pakistan, Nepal, and Bangladesh<sup>17</sup>.<sup>18</sup>. More than fifty percent current smokers smoked 1 to 5 sticks per day compared with near thirty percent smoked less than one a day whereas in England in 2010 current smokers smoke on an average 12.7 stick each day<sup>19</sup>.

Ninety-four percent respondents agreed smoking was harmful to the health smokers and 58% agreed that it was also harmful even through the smoker not smoked much. The study done in Italy by Ficarra MG et al., in 2010, showed that 97.7% respondents recognized/admitted it an important risk factor of respiratory and 93.6% respondents did it for cardiovascular diseases and 95.3% respondents regarded passive smoking as harmful for health<sup>20</sup>. Some 87% respondents agreed smoking also harmful to non-smokers health. Salawu F et al<sup>21</sup> conducted a study among adolescents in a rural setting in northeast Nigeria where seventy-one percent agreed that smoking was dangerous to the smoker's health, but were ignorant of effects of second hand smoke. Sixty-nine percent students agreed that increasing taxes on all tobacco products would reduce the prevalence of smoking.

This cross-sectional study which have limitations of findings to the statements of involvements among current smoking status and exposure. Besides, smoking category depends on personal reporting and validity is tested by biochemical markers of smoking. This could cause miscalculation of authentic smoking picture. Because of reported increased smoking prevalence among medical student in the present survey, so it is proposed for interventional measures like cessation programs should be developed in the form of multi-sectoral approach, involving family members and friends, the role of smoking cessation clinics should be further improved for efficacious counseling and impact of a no-smoking policy in the study place.

## CONFLICT OF INTEREST

The authors declare that they have no competing interests.

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