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Tobacco uses among adolescents in urban area of Bangladesh: A study in Dhaka city

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Abstract

One of the most significant avoidable causes of mortality and sickness across the world is the use of tobacco products. Tobacco-related illnesses claim the lives of around four million people around the globe each year, which is equivalent to one death occurring every six seconds. According to the present trajectory, by the year 2030, there will be 10 million deaths annually, with one death occurring every three seconds. The risk of developing a tobacco addiction is high among college students. This study aimed to estimate the prevalence of tobacco use (including both smoked and smokeless tobacco products) among adolescents attending higher secondary schools in the city of Dhaka, as well as to identify the perceived variables that impact the decision of these adolescents to begin using tobacco. This was a descriptive cross-sectional study conducted among 10 higher secondary schools and colleges in Dhaka city to assess their knowledge of health hazards and the practice of tobacco use. Findings revealed that the average age of starting tobacco use was 14 years. About 90% of adolescent students-initiated tobacco use before 15 years of age. Most of the adolescent students, 60%, had a satisfactory level of knowledge regarding health hazards. The majority, 80%, were consuming tobacco in the form of cigarettes. A greater part, 41.86%, were spending less than Tk.100 to buy cigarettes weekly. Almost more than half of the students thought that tobacco users were more attractive and smarter, and they smoked because of one of their family members in the present study.

Keywords*: Tobacco use, Adolescents, Health hazards, Prevalence*

1. Introduction

According to the World Health Organization (2009), tobacco smoking is a leading cause of avoidable mortality as well as a serious danger to public health across the world. Tobacco and alcohol use and sales are major contributors to serious health issues worldwide. Nearly six million people die every year from tobacco-related diseases, according to the World Health Organization (WHO). By 2030, this number is projected to exceed ten million. It is becoming an increasingly pressing issue in emerging nations' public health systems. In 2010, almost 47% of males and 12% of women smoked cigarettes globally, according to WHO figures. According to the World Health Organization, smoking should be regarded as a global epidemic since it causes the deaths of 5 million people annually. Roughly 1.1 billion people smoke cigarettes. Not to mention the additional 100 million women and 700 million men who call emerging nations home. About 440,000 people die every year in the US from smoking-related illnesses, which results in 5.6 million years of lost productivity, $75 billion in direct medical expenses, and $82 billion in lost output. Adolescent cigarette smoking has been characterized as a "gateway" substance to the use of illegal drugs. Tobacco use often begins in early adolescence, a developmental period that is decades apart from the adult-onset health problems and mortality linked with smoking. Since many adult smokers started when they were teenagers, it's clear that teen smoking is a major issue in public health. It is also essential because of its link to respiratory

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health impacts, including the development and worsening of asthma. In addition to increasing the likelihood of cardiovascular disease, smoking is a leading cause of cancers of the mouth, throat, kidney, esophagus, bladder, cervix, breast, and stomach. Premature mortality from coronary heart disease is caused by tobacco smoking in 73% of cases. South Asian smokers (those from Sri Lanka and Bangladesh) had a 2.61-fold increased risk of acute myocardial infarction compared to non-South Asian persons, with a population attributable risk of 43%, according to research on cardiovascular risk factors. Smoking causes over 57,000 fatalities and 1.2 million tobacco-related diseases annually in Bangladesh, according to an epidemiological study conducted in 2004. Among those aged 30 and above, tobacco use is responsible for 16% of all deaths. A more recent study that used data from 2010 found that smoking is responsible for around 25% of all deaths in males aged 25 to 69, resulting in an average loss of 7 years of life per smoker. According to this research, the number of fatalities caused by tobacco has been on the rise. It highlights the importance of regulating tobacco use and draws attention to the rapidly increasing health and economic costs of tobacco use in Bangladesh.

With a current smoking rate of 44.7% among men, Bangladesh is among the top ten nations globally for this metric. This nation made history on May 10, 2004, when it signed the World Health Organization's Framework Convention on Tobacco Control (WHO FCTC), making it the first signatory in the world. The ratification became official on March 15, 2005, when the Tobacco Control Act (TCA) was passed. The goal of these tobacco control initiatives is to lower smoking rates or, failing that, to prevent the possible increase in smoking prevalence that has been noticed in specific demographics.

About 52 million people, or one-third of the world's population, are teenagers. Physical, mental, and social development from infancy into maturity occurs throughout adolescence. The term "adolescent" is used to describe people who are in the age bracket of fifteen to nineteen. Adolescents confront several obstacles and health concerns, including unprotected sex, drug misuse, accidents, and violence, due to a mix of biological, psychological, and social variables. Students are among the youngest and most vulnerable members of this demographic when it comes to substance abuse. Teens are particularly vulnerable because of their growing number of options, growing autonomy from their families, peer pressure, rising scholastic demands, lack of knowledge about the risks to their health, allure of fame and fortune, and the widespread availability of harmful substances. When teens start using it, it's typically just for fun; after a while, they begin to rely on it, and it gets harder for them to cut back. Many people report that adolescence is one of the most difficult periods of their lives. A time of "growing up" is upon us. Personal factors (such as age, sex, personality traits, values, self-image, stress, anxiety, depression, etc.), social factors (such as family, school, peers, media influence, etc.), and belief about smoking (such as positive attitudes, perceived positive benefits, and norms about smoking, etc.) are among the numerous risk factors for adolescents to start smoking. The common perception is that people turn to drug addiction as a means of coping with the tensions brought on by regular problems at home and in their everyday lives. In line with this theory, teens whose ideal self-image is similar to that of a normal smoker are more prone to smoke, suggesting that this is a way for these insecure adolescents to express themselves. Since many parents in Bangladesh fail to acknowledge that their children are maturing and that their own conduct towards them requires improvement, adolescence is frequently a trying time for young people in this country. Prematurely engaging in risky behaviors is associated with adolescents whose parents reported poor levels of support, love, monitoring, and family control and conflict.

Anxiety and tension are common among family members whose living conditions are unhealthy and unsatisfactory.

Perceived well-being is higher among adolescents who have favorable connections with their parents. Teens who have trouble communicating with their parents often turn to smoking as a coping mechanism.

Tobacco consumption is on the rise in both low- and middle-income nations. Bangladesh offers more than 50 distinct tobacco-related compounds. Sulpa, Cigarettes, Biri, Jarda, Pan Masala, and hookah are among the most popular varieties. It would appear that many college students experiment with various tobacco products during this period, putting themselves at risk of developing a nicotine addiction that might last a lifetime. Tobacco addiction is more common among college students since this is a time of change for them. Implementing a strategy at this stage is crucial for three reasons. To begin with, it would aid those who had not yet started smoking tobacco in continuing not to do so. Second, individuals who have begun smoking would cut down before developing a serious addiction. Thirdly, research has demonstrated that the negative health consequences of tobacco usage are proportional to the quantity (amount) ingested and the length of time that tobacco products are used. Those who cease using tobacco products early are less likely to get mouth cancer and other disorders.

1.1 Objectives of the study

1.2 General objective:

The predominant goal of the research was to find out how many high school students in Dhaka City, Bangladesh, use tobacco products (both smoked and smokeless) and what variables affect their decision to start using them.

1.3 Specific objectives:

The study's stated goals were as follows:

- Assess the extent to which and what kinds of tobacco products are used by higher secondary school students in Dhaka City, Bangladesh.
- Assess the level of knowledge on the health hazards of tobacco use.
- Determine the students' perception regarding tobacco use.
- Determine the age at which these students initiate tobacco consumption.
- Determine the students' level of exposure to environmental tobacco smoke and pro-tobacco advertisements in the media.

1.4 Research questions:

The following were the research questions of the study:

1. Are teenage tobacco usage patterns influenced by the smoking habits of friends and family?
2. Is there a correlation between teenage pupils' exposure to tobacco smoke in the surroundings and their usage of tobacco products?
3. Is there a relationship between teenage pupils' perceptions of the health risks of tobacco use and their usage of tobacco products?

2. Methods and materials

The study was carried out in Dhaka, which is one of the urban areas and the capital city of Bangladesh. About 222 higher secondary schools and colleges in Dhaka city 10 are selected for the research study. They are:

1. BAF Shaheen College Dhaka, 2. Ali Ahmed High School and College, 3. Bir Shrestha Munshi Abdur Rouf Rifles College, 4. Gulshan Commerce College, 5. Ideal Commerce College, 6. National Ideal School & College, 7. Milestone College, 8. Dhaka Imperial College 9. Dhaka Residential Model College 10. National Ideal College

The study population was adolescent students of higher secondary schools and colleges in Dhaka, Bangladesh. The study design was a college-based cross-sectional descriptive study. The duration of the study was four months-from March to May 2016. Usually, adolescents between 13-19 years are taken as adolescents. But in my study, the adolescents were included who were 15-20 years old, as I interviewed the respondents who were studying in higher secondary school students of grades XI & XII. Due to limitations of time and resources, as well as this research work, I had chosen a purposive method for sample size determination. I randomly selected 200 adolescents from 10 higher secondary schools in Dhaka, Bangladesh. Simple random sampling was used for the sample. With the students' permission and at their leisure, we used a self-administered structured questionnaire to gather data. After outlining the study's goals, we verbally got the college administration's approval. The college administration was asked to remain outside of the classroom as students filled out the survey due to the delicate nature of the subject. The survey included a one-class duration of around 45 minutes. We wanted our students to be honest, so we told them that any information they gave us would be private. They were made aware that their involvement was entirely optional and that they might withdraw at any moment. The pre-testing results allowed for the development of revised items and questions. We gathered the completed surveys, verified their accuracy and clarity, and then produced the results. For this data, we resorted to Windows-only MS Office 2007 and SPSS-17. Tables and graphs served as the means of data presentation. Frequency tables were used to provide descriptive statistics. Cross tables were used to demonstrate the associations, and test data were included in the table footnotes. Bar and pie charts were created to understand the descriptive data better.

2.1 Limitations and scope of study

This research may not be representative of the country's teenage pupils' experiences as it only looked at Dhaka. The study's findings are applied in similar situations in different districts of Bangladesh and neighboring countries with related interests.

2.2. Operational definitions

The following operational definition was utilized for the purpose of the study: **Tobacco use:** The usage of tobacco products, whether smoked, chewed, or sniffed, includes biri, pan masala, hukka, and all other forms of tobacco.

Current user: Someone is considered current if they have used a tobacco product within the last seven days before completing the survey.

Never user: Someone who has never used any tobacco product as of the day they filled out the survey is considered a never user.

Ever user: Any person who has ever smoked is considered a user.

Experimented tobacco: A person is considered to have experimented with tobacco if they have ever used any tobacco product, even only once, as of the questionnaire's completion. **Exposure to pro-tobacco advertisement:** Being bombarded by tobacco advertising Hoarding boards, newspapers, magazines, radio, television, and other forms of electronic media, as well as athletic events, are considered to be sources of pro-tobacco advertising for students if they saw such messages in the 30 days before to the survey.

Exposure to environmental tobacco smoke: If a student says they were in a public location, such as a park, a public transport, or someone's house, within the 30 days before the survey, they are considered to have been exposed to environmental tobacco smoke.

2.3 Understanding the dangers of smoking

Good knowledge

Acquired expertise Smoking poses at least three serious health dangers to students, including but not limited to the following: i) Heart attack, ii) Respiratory illness, iii) Premature birth, iv) Lung cancer, v) Delayed injury healing, and vi) Stroke.

Some knowledge

The student who could report at least two major risks of smoking among i) Heart attack, ii) respiratory disease, iii) Small baby, iv) Cancer of the lung, v) delayed injury healing, and vi) Stroke

Poor knowledge

The student who could report only one major risk of smoking among i) Heart attack, ii) respiratory disease, iii) Small baby, iv) Cancer of the lung, v) delayed injury healing, and vi) Stroke

3. Conceptual framework

Social and environmental variables, including one's understanding of the negative health effects of tobacco use, one's attitude towards tobacco use, and the smoking habits of one's friends and family, have a significant impact on a person's decision to smoke. Factors that contributed to the start of tobacco smoking among young people include exposure to both ambient tobacco smoke and pro-tobacco advertising.

3.1 Variables

Independent Variable	Dependent Variable
• Socio–demographic factors. • Knowledge and perception regarding the harmful effects of tobacco use. • Exposure to pro-tobacco advertisement. • Tobacco use by family members. • Tobacco use by friends • Exposure to environmental tobacco smoke.	Health effects of tobacco consumption among adolescent students

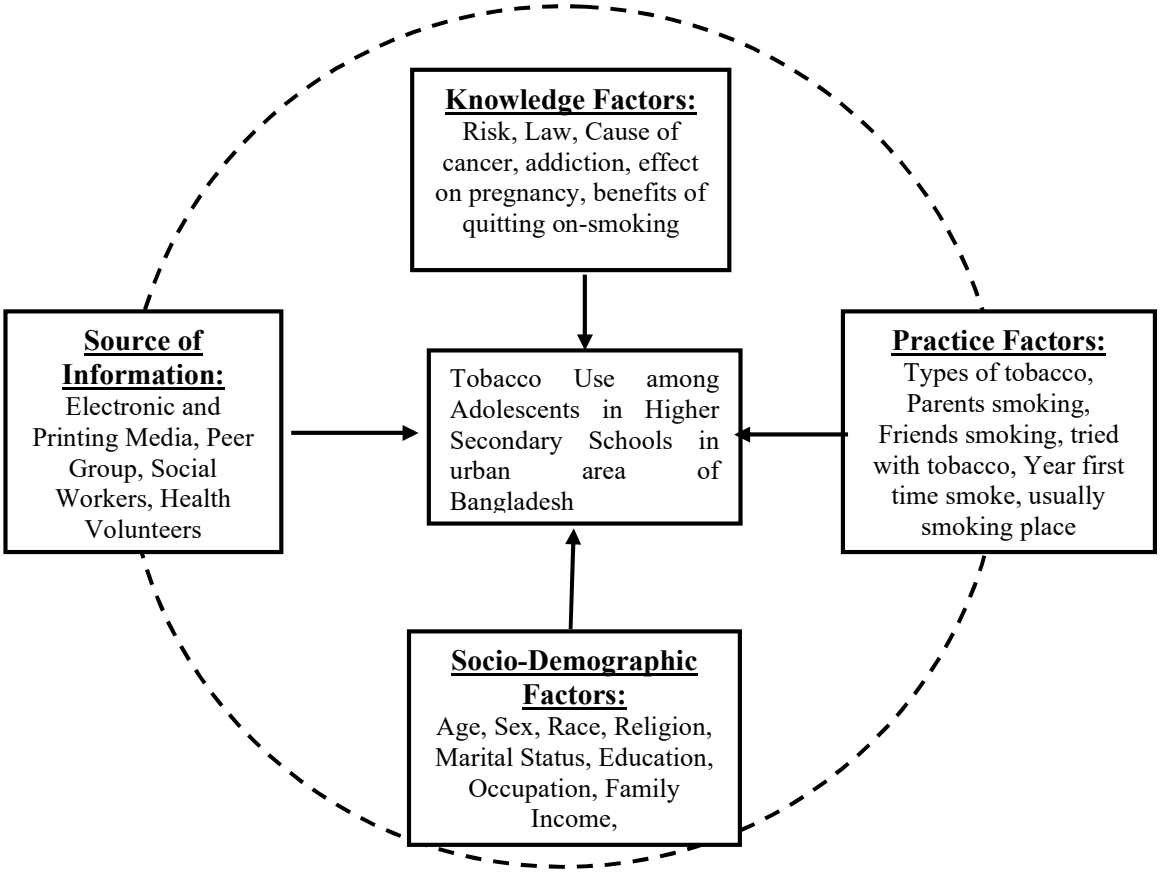
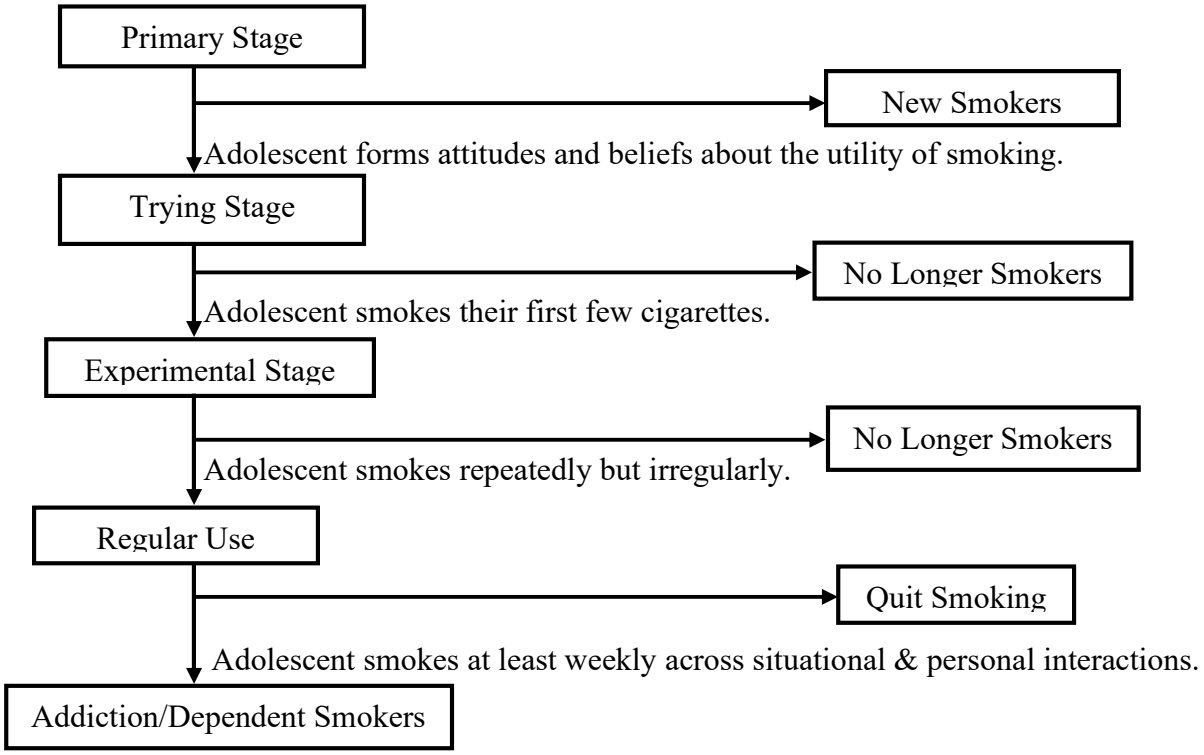


Figure 1: Possible interactions shown in the conceptual framework

3.2 Problem statement

Various kinds of tobacco use are linked to an increased risk of chronic illnesses, including cardiovascular disease, respiratory disease, periodontal disease, and malignancies of the mouth, throat, and other organs. To lessen the prevalence of smoking and, by extension, chronic illness risk, anti-smoking initiatives should be launched in Bangladesh. To establish the necessity of a tobacco control program, it is necessary to quantify the prevalence of tobacco use in a certain community. It is also important to determine what influences people to smoke and what could prevent them from doing so. There was a lack of data on cigarette usage among Dhaka city's upper secondary school pupils while this study was being planned. Also missing was information about the depth of understanding regarding the negative impacts of tobacco usage on health. The same holds true for Bangladesh; there has been a lack of research on the elements that might lead high school and university students to start smoking.

The study designed the possible interactions shown in the conceptual framework shown in Figure 1.



3.3 Factors which influence cigarette smoking

It has been noted that several variables contribute to teenage smoking at a certain age. Headen et al. (1991), Christophi et al. (2006), Sreeramareddy et al. (2008), and O'Loughlin et al. (2009) all found that the smoking status of parents and teachers affected when early adolescents started smoking. Several factors, including the presence of smoking peers (Headen et al. 1991, Yang et al. 2003, Christophi et al. 2006), peer pressure (Headen et al. 2009), and exposure to cigarette advertisements can influence older adolescents to start smoking (Covey and Tam 1990, Headen et al 1991, Ali and Dwyer 2007, Sreeramareddy et al. 2008, Christophi et al. 2009, O'Loughlin et al 2009). Various research have shown that there are age-specific variables that impact cigarette smoking. Some factors include having pocket money (Christophi et al., 2006) and being male (Headen et al., 1991; Sreeramareddy et al., 2008; Stickley and Carlson, 2009). In addition, having a sibling who smokes (Sreeramareddy et al. 2008, O'Loughlin et al. 2009), being under stress, having poor self-esteem, and having poor academic performance are all factors. Having an item with a cigarette logo is another risk factor. Lastly, the rebellious attitude of adolescents is another factor.

3.4 Factors which influence the use of smokeless tobacco (chewing tobacco)

To determine the parameters linked to the lifetime use of smokeless tobacco among 1025 students, a cross-sectional study was conducted in three medical schools of Pakistan: one in the northern area and two in the southern region. Being a man, a boarding student, a smoker, and the college's location were the criteria that were mentioned (Imam et al. 2007). Also, research among

American and French youths has linked smokeless tobacco use to having a smoking relative or friend (Roberta and Dexter 1988; Hall and Dexter 1988; Slama et al. 2009) as well as to having parents or siblings who smoke cigarettes or use other types of tobacco.

3.5 Worldwide patterns and Bangladesh

In Bangladesh and other developing nations, tobacco consumption is on the rise. More than three million people died per year throughout the world in 1990 due to tobacco-related causes. Approximately 4 million people die each year, or around 11,000 people every day, according to current estimates. Worldwide, 1.2 billion individuals, or about one-third of the adult population, smoke cigarettes now. Forecasts indicate the figure will surpass 1.6 billion by the year 2025. Predictions show that the number of fatalities caused by tobacco would increase to 8.4 million in 2020 and 10 million in 2030. The increase in deaths caused by tobacco will not be evenly distributed, though. Developed regions can expect a 50% rise, from 1.6 to 2.4 million deaths, while Asia will see a nearly fourfold increase, from 1.1 million in 1990 to an estimated 4.2 million in 2020. As a result, 70% of these deaths will occur in developing countries by 2030. Nearly 20% of the global population smokes cigarettes, with an additional 800 million individuals in developing nations (WHO, 1999). Approximately 200 million women, or one-third of the global adult population, smoke cigarettes. On a worldwide scale, 12% of women and 47% of men smoke. Developed and developing nations, as well as countries within the same region, have different smoking rates. In affluent nations, the smoking rates are 42% for men and 24% for women, but in underdeveloped nations, the numbers are 48% for males and 7% for women. Tobacco use is rising at a rate of about 2% per year globally, with the most rapid increase seen in poorer nations and Eastern Europe.12 Cigarette usage in emerging nations rose 2.5% annually per capita between 1971 and 1991. Cigarette consumption increased by 1.8% in Southeast Asia and 3% in Western Pacific regions. Although teen boys are more likely to use tobacco products than girls and women, the latter two demographics are seeing an uptick in usage. About 5.5 million individuals use smokeless tobacco every day, with an additional 6 million using it at least once a week, according to global estimates.

3.6 Trends in tobacco usage among Bangladeshis

Out of all adults in Bangladesh who are 15 and older, 44.7% use tobacco products, including cigarettes, bidi, hukka, sulpa, chewing tobacco (pan masala, sada, dry tobacco leaves, etc.), and 38.4% smoke tobacco. The use of smokeless tobacco products, such as pan masala and sada, was shown to be 5.5 times lower than smoking cigarettes, bidi, hukkha, and sulpa. The cigarette usage rate among males is 58.1%, about double that of girls' 31.6%. The percentage of people who use both smoked and smokeless tobacco products is 5%. Worldwide, 45.8% of Bangladeshis smoke cigarettes, compared to 34.4% in urban areas, according to a 2000 World Health Organisation report on tobacco economics in the nation. In comparison to the literate population, the prevalence of tobacco usage is greater among the illiterate (55.2%). For example, 77.4% of uneducated boys and 49.4% of educated boys smoke tobacco, but only 44.3% of uneducated girls and 12.5% of educated girls do the same. Both boys and girls in Bangladesh are less likely to use tobacco products of any kind if they are literate. Literate people are far less likely to smoke (29.7% vs. 49.1%), and this holds true even for those who use smokeless tobacco products.

There is a strong correlation between smoking and other unhealthy behaviors, including heavy drinking and drug usage, and an increased risk of lung and heart problems. Nearly three-

quarters of men in Bangladesh smoke cigarettes, biri, or other tobacco products, according to the 2000 Demographic and Health Survey. Among males aged 15–19, 36.7% smoke cigarettes, bidi, or tobacco, whereas 87.4% do the same among men aged 50–54.

3.7 How Young People Use Tobacco

Tobacco use among young people is on the rise in many industrialized nations despite a marked decline in the incidence of tobacco use among adults during the previous 20 years. Similarly, the marketing strategies employed by multinational tobacco businesses are largely responsible for the increasing rates of tobacco use among young people in emerging nations. Adolescence and childhood are the most common starting points for tobacco use. Therefore, when thinking about who should do research on the topic of tobacco use initiation, teenagers are a good choice. As they enter puberty, teenagers strive to forge deeper connections with their classmates, develop a clearer sense of who they are apart from their parents, and break free from parental influence and identification.

Many young people see starting to smoke cigarettes as a "rite of passage" before becoming adults. Teens get a false sense of maturity when they smoke, as it is considered a behavior more appropriate for adults and taboo for kids. To make themselves look older, some teenagers try smoking. Some young people view smoking as a soothing, enjoyable, and even useful habit. A loyal "best friend" through good times and bad, cigarettes are a common metaphor. Many people view smoking cigarettes as a social activity. People see it as a means to connect with others and feel like they belong.

4. Result and discussion

This cross-sectional study was conducted to explore the level of knowledge, health effects, and current practice of tobacco consumption among students of higher secondary school and college in Dhaka city, Bangladesh. The study's overall results have been presented in Tabular, Graphic, and Narrative form, thereby interpreting the results under the following main headings.

4.1 Socio-demographic, Socio-cultural, and Socio-economic backgrounds:

Table 1: Distribution of respondents by age groups (n=200)

Age (in years)	Number of adolescents (f)	Percentage (%)	Average
15-16	10	5.0	16.97
16-17	60	30.0	
17-18	110	55.0	
18-19	15	7.5	
19-20	5	2.5	
Total	**n=200**	**100.0**	**SD = ±1.09**

Source: Based on survey data

Table 1 reveals the age distribution of respondents. The mean age was 16.97 years, and the median was 17.27 years, with a minimum age of 15 and a maximum age of 20. The analysis of age group showed that 55% (n=110) were in age group of 17-18 years old followed by 30% (n=60) were in age group of 16-17 years old, 7.5% (n=15) were in age group 18-19 years old, 5% (n=10) were in age group 15-16 years old and least 2.5% (n=5) were in age group of 19-20 years old.

Figure 1: Distribution of respondents by current grade level of study (n=200)

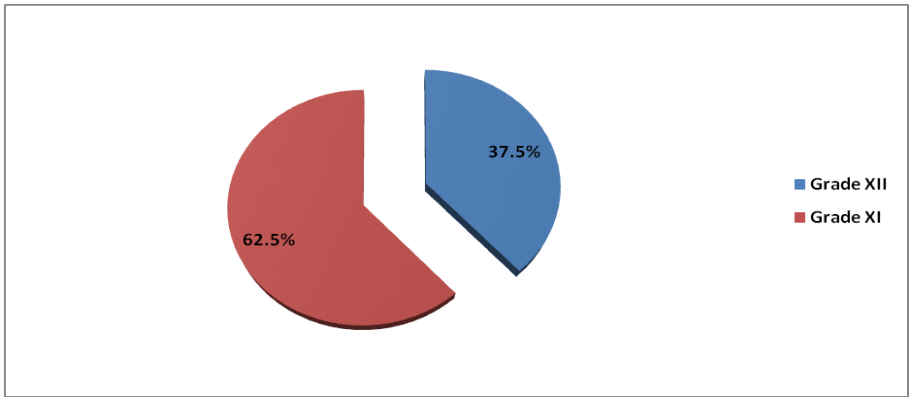


Figure 1 reveals the distribution of respondents by their grade level. The analysis shows that 62.5% (n=125) of respondents were studying in Grade XII, and 37.5% (n=75) were studying in Grade XI.

Figure 2: Distribution of respondents by religion. (n=200)

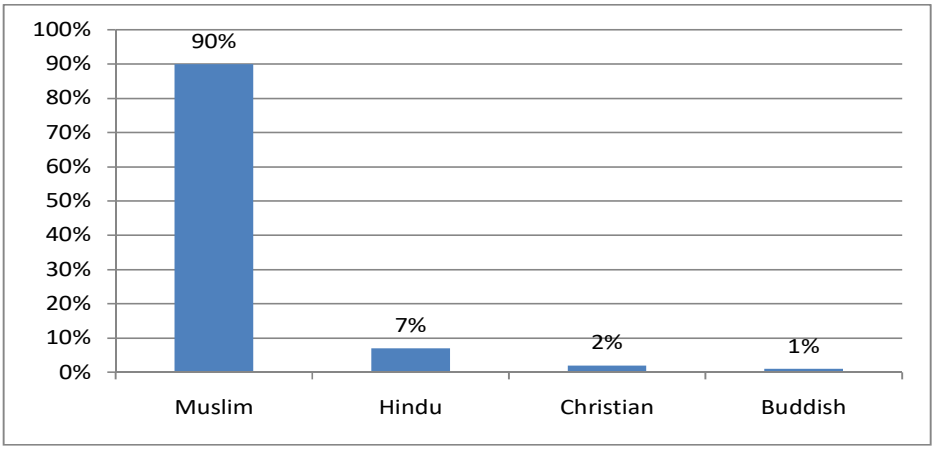


Figure 2 reveals the distribution of respondents by their religion. Among the total majority, 90% were Muslims, 7% were Hindus, 2% were Christians, and 1% were Buddish.

Figure 3: Distribution of respondents by marital status. (n=200)

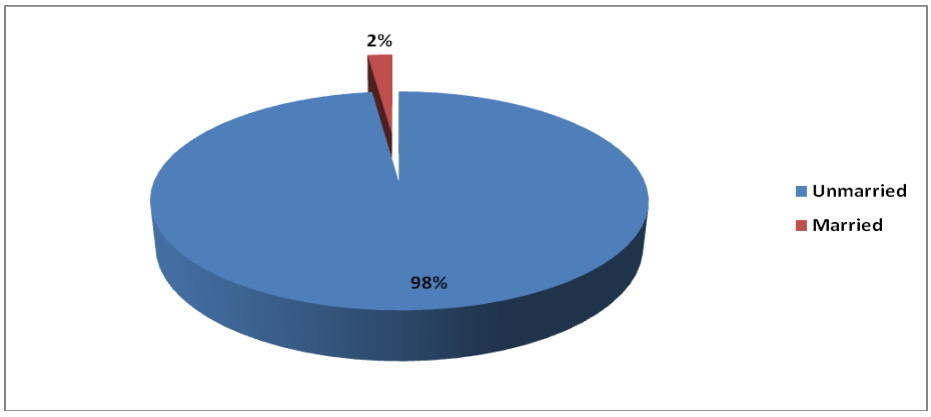


Figure 3 reveals the distribution of respondents by marital status. Among the total majority, 98% were unmarried, and 2% were married.

Figure 4: Distribution of respondents by parent's education (n=200)

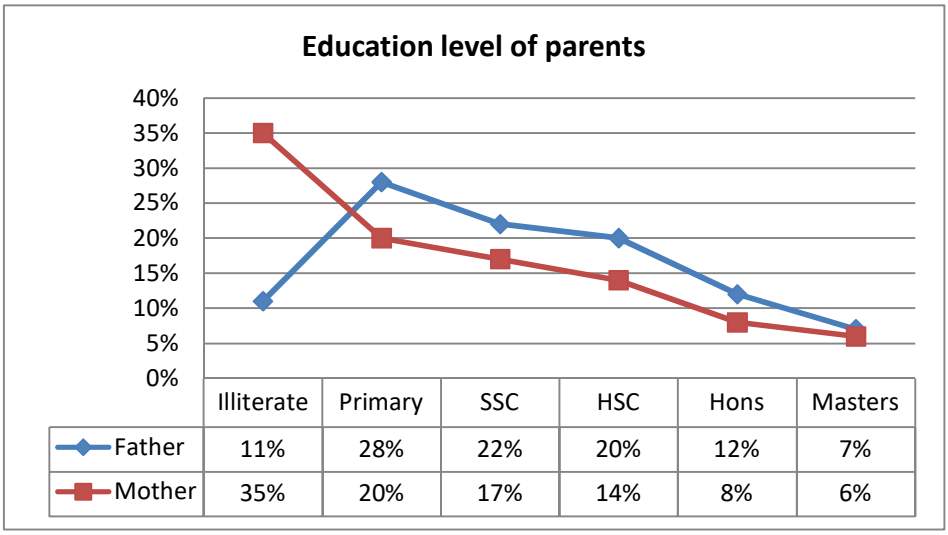


Figure 4 shows that the majority, 28%, of the fathers of the respondents had a primary level of education, followed by 22% who obtained an SSC level of education, 20% who were of HSC level of education, 11% who were illiterate, 12% who were Honors, and the least 7% who were of master's level. Likewise, analysis shows the majority, i.e., 35% of mothers were illiterate, followed by 20% were of primary level of education, 17% were of SSC, 14% HSC, and 8% Hons. level, and the least, i.e., 6%, were at the Master's level.

Table 2: Distribution of respondents by father's occupation (n=200)

Occupation of Father	Number	Percentage (%)
Unemployed	4	2
Service*	70	35
Retirement	2	1
Business	74	37
Labor	40	20
Others	10	5
Total	**200**	**100**

Source: Based on survey data

Table 2 shows the occupations of the parents of the respondents. The analysis of the father's occupation of respondents shows that the majority, 37%, were in Business, followed by 35% in services, 20% in labor, 1% had retired from their service, 2% were unemployed, and the remaining 5% were in other occupations.

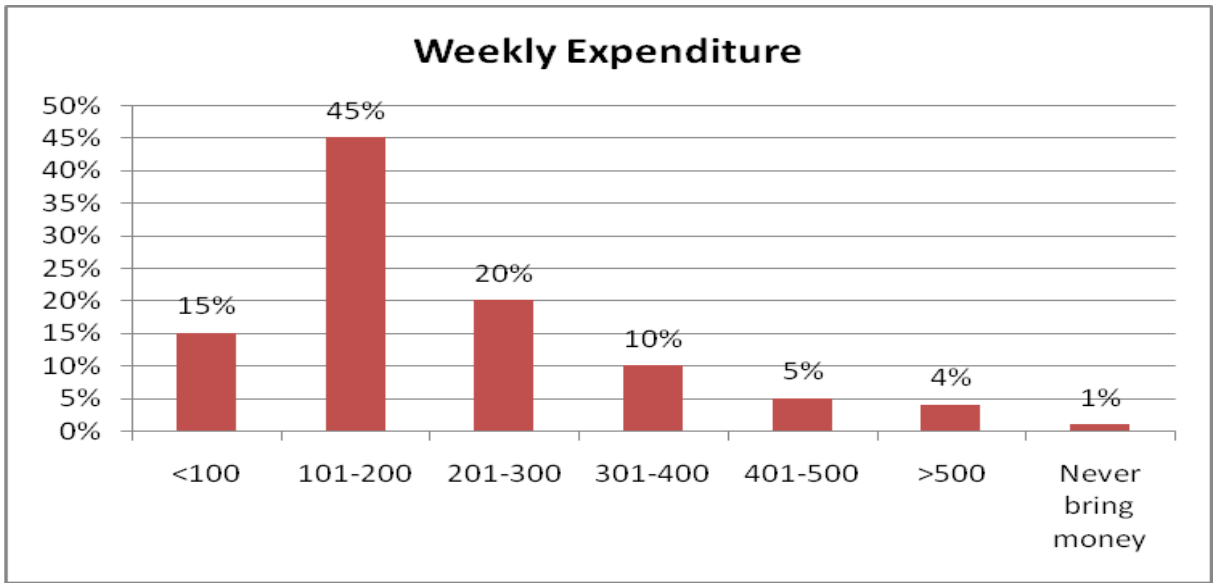
Table 3: Distribution of respondents by mother's occupation (n=200)

Occupation of Mother	Number	Percentage (%)
Unemployed	50	25
Service*	16	8
Retirement	4	2
Housewife	100	50
Business	20	10
Labor	8	4
Others	2	1
Total	**200**	**100**

Source: Based on survey data * Service means both Government & Private Job.

The analysis of the mother's occupation of respondents shows that the majority, 50%, were housewives, followed by 25% who were unemployed, 10% who were businesspeople, 8% who were in services, 2% who had retired from their service, 4% who were laborers, and the remaining 1% were in other occupations.

Figure 5: Distribution of respondents by weekly expenditure (n=200)



Mean weekly expenditure =165.25

Figure 5 reveals that 15% of respondents spent less than Tk.100, followed by 45% of the respondents spending between Tk.100-200; 20% spent Tk.200-300; 10% spent between Tk.300-400; 5% spent between 400-500; 4% spent more than Tk.500, and the rest 1% of students never brought money to school.

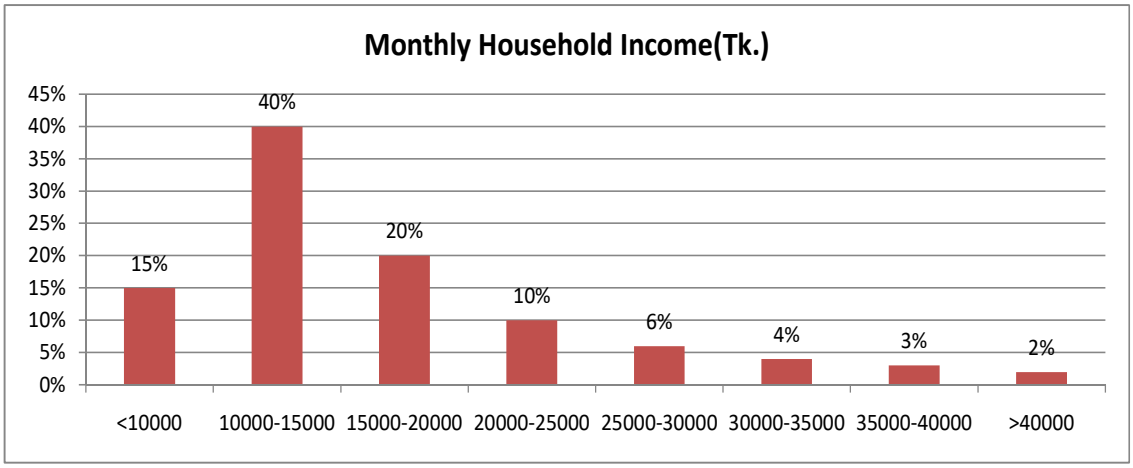
Table 4: Distribution of respondents by accompanying at home (n=200)

Person(s) respondent staying with	Number	Percentage (%)
Father	18	9
Mother	8	5
Mother/Father & Brother/Sister	156	78
Other family members	12	6
None of the above	6	3
Total	**200**	**100**

Source: Based on survey data

Table 4 shows that the majority of respondents, 78%, were staying with their Mother/Father and brother/Sister, followed by 9% living with their father, 5% staying with their mother, 6% living with other family members, and the rest, 3% staying alone or with non-family members as friends.

Figure 6: Distribution of respondents by monthly household income (n=200)



Mean family income =18250

Figure 6 reveals the monthly household income of the respondents. The mean family income was Tk.18250, with a minimum household income of 15% had less than Tk.10000, and 2% had a maximum household income of more than Tk.40000. The analysis shows that 40% respondents had family income between Tk.10000-15000, 20% respondents had family income between Tk.150000-20000 and 10% had family income in between Tk.20000-25000.

4.2 Knowledge of respondents regarding tobacco consumption:

Figure 7: Distribution of respondents by their level of knowledge (n=200).

Figure 7 reveals the distribution of respondents by their level of knowledge about tobacco consumption. This analysis of respondents' level of knowledge shows that 60% had satisfactory knowledge regarding tobacco consumption, followed by 10% who had good knowledge, and the rest, 30%, who showed poor knowledge.

Table 5: Distribution of respondents by level of knowledge and their smoking habit (n=200)

Knowledge	**Smoking Habit**				**Total**	
	Yes		No		Number	%
	Number	%	Number	%		
Good	6	30	14	70	20	10
Satisfactory	40	33.33	80	66.67	120	60
Poor	40	66.67	20	33.33	60	30
Total	**86**	**43**	**114**	**57**	**200**	**100**

Source: Based on survey data

This result shows that only 10% of students had good knowledge regarding health hazards related to smoking, but 30% of them still smoke. On the contrary, around 60% of students had satisfactory knowledge regarding health hazards, but 33.33% of them are smokers. The remaining 30% had poor knowledge regarding health hazards, but 66.67% of them were smokers.

4.3 Practice of respondents regarding tobacco consumption

Figure 8: Distribution of respondents by tobacco consumption (n=200)

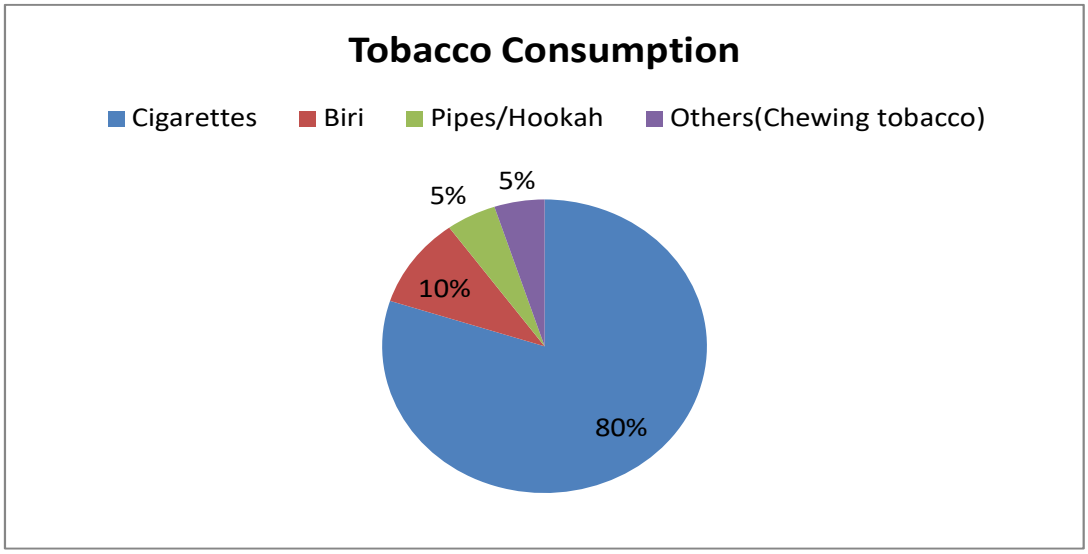


Figure 8 shows that the majority, 80%, were consuming tobacco in the form of cigarettes, followed by 10% who were smoking biri, 5% who were smoking Pipes/Hookah, and 5% who were consuming other forms of tobacco (Chewing tobacco).

Figure 9: Distribution of respondents by smoking habits, if yes (n=50)

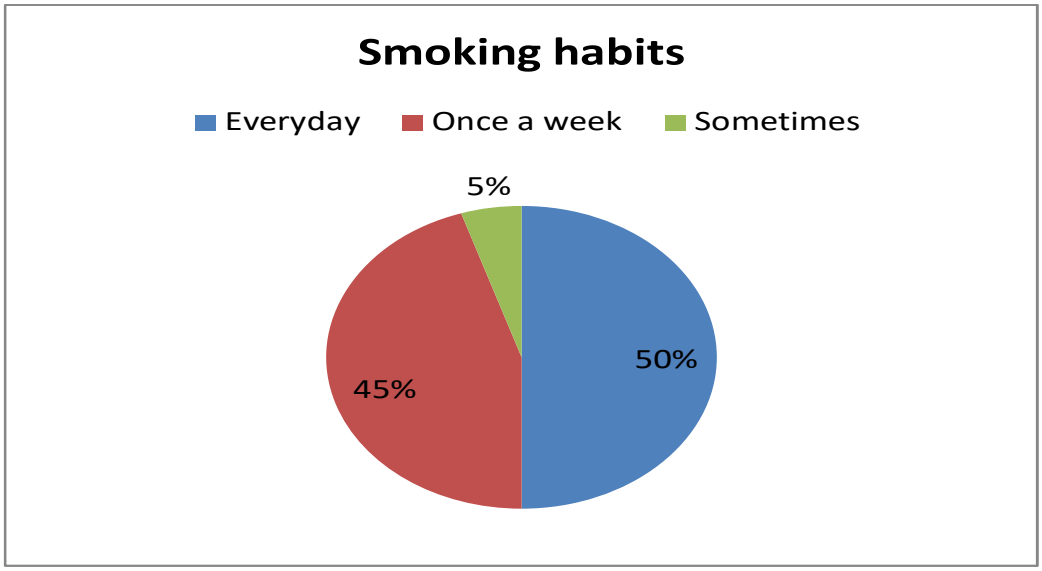


Figure 9 shows that the majority, 50%, were smoking every day, followed by 45% who were smoking once a week, and the remaining 5% were smoking sometimes.

Table 6: Spending money for buying cigarettes in a week, if yes (n=86)

Expenditure on cigarette	Frequency (n)	Percentage (%)	Mean
Tk.<100	36	41.86	**150.0**
Tk.100-200	24	27.91	
Tk.200-300	16	18.6	
Tk.300-400	10	11.63	
Total	86	100.0	**SD = ±103.4**

Source: Based on survey data

Table 6 shows that 41.86% of respondents spent less than Tk.100.0, followed by 11.63% spending greater than Tk.300.0; 18.6% spent between 200 and 300, and 27.91% spent between Tk. 100 and 200 for buying cigarettes in a week.

Table 7: Smoking starting age, as per responses by the smokers (n=86)

Initiating of tobacco use	Frequency (n)	Percentage (%)	Mean starting
Before 15 years of age	50	58.14	**14.0**
After 15 years of age	36	41.86	
Total	86	100.0	SD = ±1.25

Source: Based on survey data

Table 7 shows that the majority, 58.14%, initiated smoking before 15 years of age, and 41.86% started smoking after 15 years of age. The mean age of starting smoking was 14.0, the maximum age of starting smoking was 17, and the minimum age of starting smoking was 13.

Figure 10: Availing of cigarettes, as per responses by the smokers (n=86)

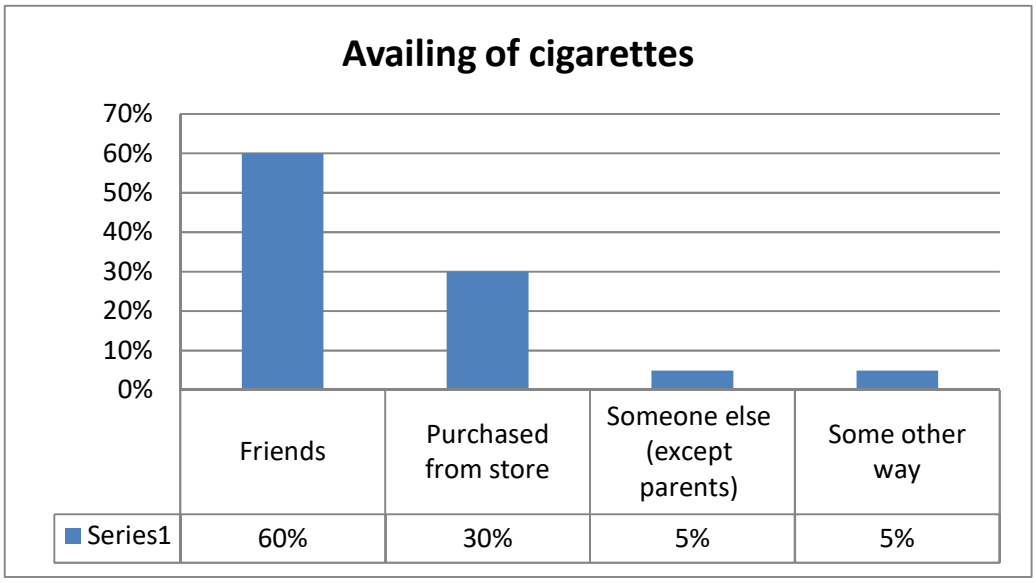


Figure 10 reveals that the majority, 60%, received cigarettes from friends, followed by 30% purchasing them from a store, 5% receiving them from someone else (not from parents), and the rest 5% picking them up from others.

Table 8: Anticipation of any health problem related to smoking (n=200)

Anticipated health problems related smoking	Frequency (n)	Percentage (%)
Yes	30	15.0
No	160	80.0
Unwilling to answer	10	5.0
Total	200	100.0

Source: Based on survey data

Table 8 shows that the majority, 80%, were not concerned about any anticipation of health problems related to smoking. This was followed by 15% (n=30) who anticipated, and the response of the rest, 5%, was unwilling to answer.

Table 9: Experience health problems in last 12 months related to smoking (n=46)

Characteristics	**Frequency (n)**	**Percentage (%)**
Trouble breathing or shortness of breath	5	10.87
Frequent cough	11	23.91
Getting tired in a short time	20	43.47
Pain or tightness in chest	25	54.34
Leg pain when walking	14	30.43
Total (Respondents in last 12 months)	**75**	

Source: Based on survey data ***Multiple Responses**

Table 9 shows that out of 75 respondents, the majority, 54.34%, experienced pain or tightness in the chest followed by 43.47 who experienced of getting tiredness in a short time, 30.43% were found to experience leg pain when walking, 23.91% suffered from frequent coughing and rest 10.87% were found to experience of trouble breathing or shortness of breath. Of 200 respondents, 62.5% said they had never experienced any health problem within the last twelve months.

Figure 11: Action taken for solving problems (n=46) [Multiple responses]

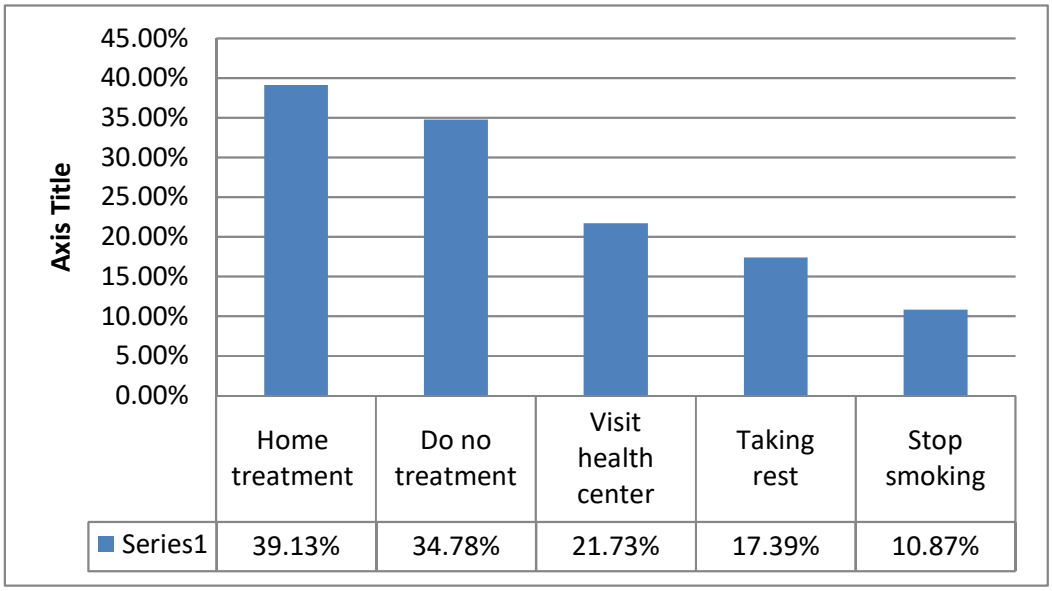


Figure 11 shows that the majority 39.13% were found to be doing home treatment followed by 34.78% did nothing to solve their problems, 21.73% were found to visit health institutions, 17.39% were found to be solved their problem by taking rest and rest 10.87% stopped smoking immediately after experiencing health problem(s) in last twelve months.

Table 10: Statement regarding peer pressure to smoke (n=200)

Peer pressure	Frequency (n)	Percentage (%)
Yes	80	40.0
No	120	60.0
Total	200	100.0

Source: Based on survey data

Table 10 reveals that the majority of respondents, 60%, were never offered a cigarette by their friends, and 40%, were offered a cigarette by their friends.

Table 11: Smoking habit of adult family members (n=200)

Adult smoker in family	Frequency (n)	Percentage (%)
Yes	60	30.0
No	132	66.0
Unwilling to respond	8	4.0
Total	200	100.0

Source: Based on survey data

Table 11 reveals that the majority, 66%, of respondents had no adult smokers in their family, followed by 30% of respondents who had adult family smokers, and the remaining 4% were found to be unwilling to respond.

Figure 12: Responses on pressure of smoker(s) in family, yes (n=50)

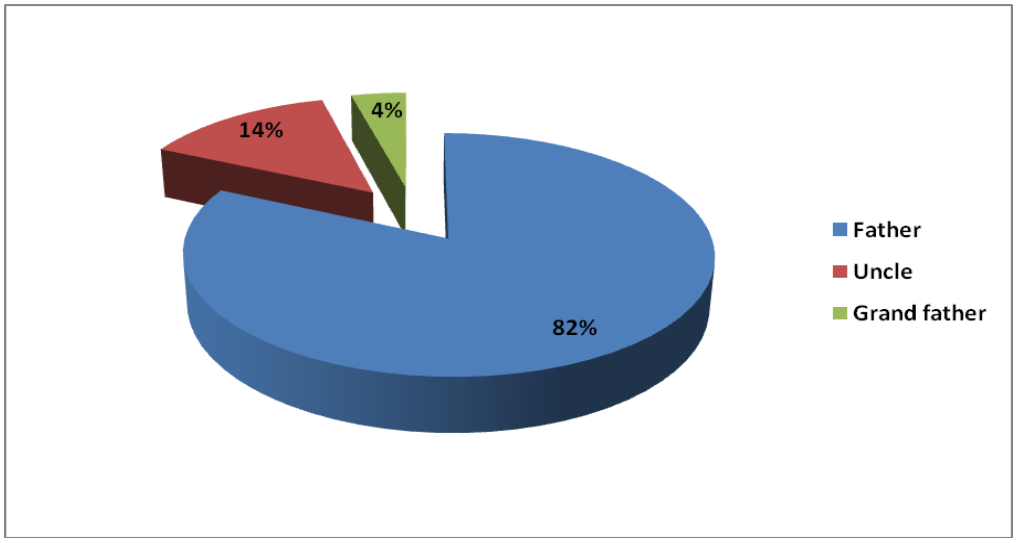


Figure 12 reveals that the majority, 82%, were found to be fathers who were smokers, followed by 14% of respondents whose uncles were smokers, and the remaining 4% of respondents whose grandfathers were smokers.

4.4 Information related factors regarding Tobacco consumption.

Table 12: Source of information regarding hazards of tobacco consumption (n=200)

Source of information	Frequency (n)	Percentage (%)
Hording Board	73	36.5
Magazine	42	21.0
Newspaper	46	23.0
Poster/leaflet	100	50.0
Television	138	69.0
Radio	132	66.0
Cigarette packet	102	51.0
Family Member	4	2.0
School (Teacher, Textbook)	50	25.0
Others (Friends, Film hall, & Internet)	4	2.0

Source: Based on survey data ***Multiple responses**

Table 12 shows that among the total respondents, the majority of them, 69%, had got information regarding health hazards of tobacco consumption from electronic media television; 66% were found to be getting information from radio; 51% were found to be getting information from cigarette pocket 50% from poster/leaflet; 36.5% were found to be getting information from hoarding board; 25% were found to be getting information from college teachers 23% from newspapers; and so on.

4.5 Findings

This study clearly indicates that substance use is becoming a concern among adolescent students. This cross-sectional survey of tobacco was conducted to explore knowledge, behavior, health hazards, practices, and factors influencing tobacco consumption among adolescent students of

Dhaka, Bangladesh. The study clearly indicates that tobacco abuse is becoming a concern among adolescent students. The major findings of the study were:

1. Almost 90% of respondents were Muslim because Bangladesh is a religious country.
2. The average age of students was about 17 years.
3. More than 90% of respondents were less than 18 years of age.
4. The average family income was Tk.18250.
5. The average age for initiating tobacco use was 13 years.
6. About 90% of adolescent students-initiated tobacco use before 15 years of age.
7. Most of the adolescent students (60%) had satisfactory knowledge regarding health hazards.
8. The majority, 80%, were consuming tobacco in the form of cigarettes.
9. The majority, 41.86%, were spending less than Tk.100 to buy cigarettes in a week.
10. Most of the students, 54.34%, experienced pain or tightness in the chest.
11. One-fourth (25%) of students reported that at least one of their family members (father, grandfather, and uncle) uses tobacco products.
12. The majority of them, 69%, had received information regarding the health hazards of tobacco consumption from electronic media television, and 25% were found to have received information from college teachers.

5. Recommendations

Because young people today will shape our country's destiny. It is critical to foster an atmosphere where teenagers may reach their greatest potential and receive the help they need to grow into healthy, responsible adults. To develop and execute all-encompassing anti-substance use programs that protect children from a variety of risks, it is necessary to have a firm grasp of the elements that influence drug use. The following suggestions are given in light of the study's main conclusions:

- It is important to address the issue of tobacco consumption in teenagers under the age of 15 and to establish programs to help them quit.
- A college-based program that raises awareness about the dangers of tobacco use, whether through counselling, peer-based interactive learning, or other means. It is important for parents to be involved in these programs as well, since they have the power to shape the minds of their children and teenagers.
- Teens should know that they are responsible for contributing to the country's development and prosperity, and they should do their part to prevent tobacco use.
- Since staying with smokers encourages students to smoke, smoker family members should also be made aware of the facts.
- Counseling and health education programs may help to raise the level of awareness of the risks of tobacco use and can change the perception, behavior, and practice regarding tobacco consumption.

6 Conclusion

The results of this study demonstrated that a large percentage of college students use tobacco products, whether smoked or not. The majority of tobacco users smoked cigarettes. The majority of those who start smoking do so before the age of fifteen. A large number of pupils are witnessing their parents' and friends' tobacco use, which fosters an environment where more people may start smoking in the future. Few students had a solid understanding of the dangers of

tobacco usage; over half believed that smoking makes one smarter and smoked to fit in with their peer group. People who do not smoke were deprived of their freedom to live in smoke-free areas and were exposed to secondhand smoke in public places.

References

Ali, M. M., & Dwyer, D. S. (2007). The effects of advertising on adolescent tobacco use. *Journal of Health Economics, 26*(5), 935–951.

Christophi, C. A., Savvides, E. C., Warren, C. W., Demokritou, P., & Connolly, G. N. (2006). Main determinants of cigarette smoking in youth. *Preventive Medicine, 43*(2), 106–111.

Covey, L. S., & Tam, D. (1990). Depressive mood, the single-parent home, and adolescent cigarette smoking. *American Journal of Public Health, 80*(11), 1330–1333.

Government of Bangladesh. (2005). *Tobacco Control Act (TCA)*. Ministry of Health and Family Welfare.

Hall, R. L., & Dexter, D. E. (1988). Smokeless tobacco uses and peer influence. *Addictive Behaviors, 13*(4), 387–391.

Slama, K., Karsenty, S., & Hirsch, A. (2009). Peer influence and smokeless tobacco use. *Tobacco Control, 18*(3), 218–221.

Headen, S. W., Bauman, K. E., Deane, G. D., & Koch, G. G. (1991). Parental and peer influences on adolescent smoking. *Journal of Behavioral Medicine, 14*(2), 123–140.

Imam, S. Z., Nawaz, H., Sepah, Y. J., Pabaney, A. H., Ilyas, M., & Ghaffar, A. (2007). Use of smokeless tobacco among medical students in Pakistan. *Eastern Mediterranean Health Journal, 13*(4), 917–924.

National Institute of Population Research and Training (NIPORT). (2000). *Bangladesh Demographic and Health Survey 2000*. NIPORT.

O'Loughlin, J., Dugas, E. N., O'Loughlin, E. K., Karp, I., & Sylvestre, M. P. (2009). Incidence and determinants of cigarette smoking initiation in young adults. *American Journal of Epidemiology, 170*(5), 585–597.

Roberta, G., & Dexter, D. E. (1988). Smokeless tobacco use among adolescents. *Journal of School Health, 58*(7), 280–283.

Sreeramareddy, C. T., Kishore, P. V., Paudel, J., & Menezes, R. G. (2008). Prevalence and correlates of tobacco use among adolescents in South Asia. *Journal of Adolescent Health, 43*(3), 246–253.

Stickley, A., & Carlson, P. (2009). Risk factors for adolescent smoking in Russia. *European Journal of Public Health, 19*(2), 157–163.

World Health Organization (WHO). (1999). *The world health report 1999: Making a difference*. WHO.

World Health Organization (WHO). (2004). *WHO Framework Convention on Tobacco Control (FCTC)*. WHO.

World Health Organization (WHO). (2009). *Tobacco: A leading cause of preventable death*. WHO. *(Note: If this refers to a specific report, include the title and URL if available.)*

Yang, G., Ma, J., Chen, A., Zhang, Y., Samet, J. M., & Taylor, C. E. (2003). Smoking among adolescents in China. *Tobacco Control, 12*(3), 294–301.