Pattern of Tobacco Intake Among 16+ Years Inhabitants of a Village in Chittagong of Bangladesh

Sayeed Mahmud¹, Abu Zafar Mahmudul Haq²

¹Department of Community Medicine, Chittagong Medical College, Chittagong, Bangladesh ²Department of Business Administration, City University, Dhaka, Bangladesh

Email address

sayeed12_cmc@yahoo.com (S. Mahmud), cityuniversity1215@gmail.com (A. Z. M. Haq)

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Abstract

This was a descriptive type of cross sectional study with a sample size of 298 selected by purposive sampling technique. Data collections were performed on 21st November, 2014, by direct interview with the help of piloted questionnaires containing closed and open questions. The overall aim of this survey was to find out the pattern of tobacco intake among 16+ years and explore the hazards of tobacco intake among the respondents of this study. Out of total respondents, 35.91% respondents were in the group of 31-45 years. Out of them 63.42% were male & 36.58% were female. 48.32% of the respondents were illiterate, 33.89% were primary or equivalent level educated while graduate and above were only 3.69%. It was found that 30.87% of the respondents were farmers and 34.56% were housewives. Most of the respondents (75.17%) belonged to middle class and only 2.35% were of upper class, 47.32% had nuclear type family, 39.26% and 13.42% had joint and extended type of family. It was found that 36.96% of respondents took smokeless tobacco while 47.10% took smoke producing tobacco. It was revealed that 33.33% of the respondents took 5-10 sticks per day and 29.38% took 11-25 sticks per day. Out of total respondents, majority 74.64% of the tobacco users were influenced by others. It was explored that 72.10% of the tobacco users were suffering from disease and 27.90% were in good health. Among the sufferers, most of them (34.67%) had been suffering from cough and cold, 17.59% were suffering from COPD. Among the tobacco users, 52.17% wanted to quit tobacco while 47.83% had no intention to quit it. Though among the respondents of Ayir Mangal village Anowara had idea about harmful effect of tobacco consumption but they were unable to quit it due to addiction habit and lack of mental strength. Related organizations and authority should come forward to halt the intake of these harmful substances.

Keywords

Tobacco Users, 16+ Years, Village, Bangladesh

1. Introduction

Bangladesh is a developing country with the population of 16 crore. Excessive use of tobacco is now a matter of concern in Bangladesh. Tobacco consumption among adults in Bangladesh has increased despite massive campaign and enactment of law. It is reported that a total of 41.3 million people in South Asian country are now in the habit of using tobacco (WHO 2009). Among them 68% respondents were males and 32% were females. The prevalence of tobacco use in rural areas is 55% and in urban areas 45%. Using of tobacco means consumption of tobacco either in the form of smoking or chewing (WHO 2009).

Tobacco consumption is an ancient practice in many Asian

countries (Gupta and Ray 2003). A large population of Bangladesh is in the habit of tobacco consumption without knowing the side effects (Efroymson et al. 2001; Wu et al. 2013). Tobacco contains nicotine which makes the heart beat faster and constricts the blood vessels. This may cause heart disease and makes the blood clot easily. Tar collects in the lungs and contains over a thousands of chemicals. According to WHO, tobacco is the single greatest cause to preventable death globally. The WHO estimates that tobaccos cause 50 million deaths over the course of 20th century (WHO 2011; IARC 2007).

The harmful effects caused by using tobacco include diseases affecting the heart and lungs; with smoking being a major risk factor for heart attacks, stroke, COPD, emphysema, cancer(lung, larynx, mouth, pancreatic). Inhaling second hand tobaccos cause the killing of 46,000 non-smoker people every year. Around 57,000 people die annually from tobacco related disease in Bangladesh, on an average 156 people per day (WHO 2007, 2011). The study had done to assess the use of tobacco among 16+ years inhabitants of Ayir Mangal village in Anowara Upazilla with the vision to explore socio-demographic characteristics of the respondents, types of tobacco intake, costs for the habit as well as sufferings of the people.

2. Literature Review

The English word tobacco originates from the Spanish and Portuguese word tabaco. The precise origin of the Spanish/Portuguese word is disputed but it generally thought to have originated, at least in part, from Taino, the Arawakan language of the Caribbean. In Taino, it was said to refer either to a roll of tobacco leaves (according to Bartolomé de las Casas, 1552), or to the tabago, a kind of Y-shaped pipe for sniffing tobacco smoke (according to Oviedo; with the leaves themselves being referred to as cohiba).

However, similar words in Spanish, Portuguese and Italian were commonly used from 1410 to define medicinal herbs which are believed to have originated from the Arabic tabbaq, a word reportedly dating to the 9th century, as the name of various herbs.

Tobacco intake is of two types

- Smokeless tobacco (SLT). Example Zarda, gul, sadapata etc
- With smoke tobacco. Example Cigarrete, biri, hukka etc

2.1. Prevalence of Tobacco Intake in Various Countries-Reports of Statistics Canada, December 2002

In December 2002, Statistics Canada published a report (https//en.wikipedia.org/wiki/prevalence_of_tobacco_consu mption) on smoking prevalence from 1985-2001. In that report they found from 1985 to 1991, prevalence of "current smoking" (which they defined as daily smokers and occasional smokers) declined overall, for both sexes and all age groups except for those aged 15 to 24. Even larger declines occurred from 1991 to 2001. While current smoking prevalence for youths did not significantly change from 1985 to 1994-1995, there was a significant decrease of 6 percentage points from 1994-1995 to 2001 (from 28.5% to 22.5%). Provincially, Newfoundland and Labrador, Nova Scotia, Quebec, Ontario, Saskatchewan, Alberta and British Columbia, experienced most of their declines in current smoking prevalence from 1994-1995 onwards.

2.2. Reports of Centers for Disease Control and Prevention, USA

In 2005, it was estimated that 20.9% (or 45.1 million) of all U.S. adults were current cigarette smokers. Of them, 80.8% (or 36.5 million) smoked every day, and 19.2% (or 8.7

million) smoked some days. The prevalence of current cigarette smoking also varied substantially across population groups. For instance, current smoking was higher among men at 23.9% than women at 18.1%. Among racial and ethnic groups, American Indians and Alaska Natives had the highest prevalence at 32.0%, followed by non-Hispanic whites at 21.9%, and non-Hispanic blacks at 21.5%. Asians at 13.3%, and Hispanics at 16.2% had the lowest rates (http://www.cdc.gov/datastatistics).

Smoking prevalence also based on education level, with the highest among adults who had earned a General Educational Development (GED) diploma at 43.2% and those with 9–11 years of education at 32.6%. Prevalence generally decreased with increasing education. Adults aged 18–24 years were at 24.4% and 25–44 years were at 24.1% had the highest smoking prevalence. The prevalence of current smoking was higher among adults living below the poverty line at 29.9% than among those at or above the poverty line at 20.6%.

In 2005, prevalence of current cigar smoking was 2.2% and current smokeless tobacco use was 2.3%. Prevalence of cigar smoking and use of smokeless tobacco were higher among men (4.3% and 4.5%, respectively) than women (0.3% and 0.2%)

2.3. GATS India Survey Report 2009-2010

GATS India was conducted in 2009–2010 as a household survey of persons age 15 and above (http://www.ncbi.nlm. nih.gov/PubMed/24004968).

A nationally representative probability sample was used to provide national and regional (North, West, East, South, Central and North-East) estimates by residence (urban and rural) and gender and state estimates by gender. The survey was designed to produce internationally comparable data on tobacco use and other tobacco control indicators using a standardized questionnaire, sample design, data collection and management procedures. GATS India was the first nationwide survey in which electronic handheld devices were used for data collection and management. A total of 69,296 interviews were completed among which 33,767 and 35,529 were of males and females respectively. Out of all completed interviews, 41,825 interviews were conducted in rural areas and 27,471 interviews were done in urban areas. The overall response rate was 91.8 % which ranged from the highest of 99.2% in Tamil Nadu to the lowest of 80.1% in Arunachal Pradesh.

2.4. Prevalence and Sociodemographic Determinants of Tobacco Use Among Adults in Pakistan: Findings of a Nationwide Survey Conducted in 2012

Out of 2,644 respondents (1,354 men and 1,290 women), 354 men and 4 women reported being current cigarette smokers. The weighted prevalence of current cigarette smoking was 15.2% (95% confidence interval [CI]; 11.2, 19.3) overall, 26.6% (95% CI: 19.1, 34.1) among males, and

0.4% (95% CI: -0.2, 1.0) among females. Among females, 1.8% (95% CI: 0.4, 3.1) used any smoked tobacco and 4.6% (95% CI: 1.8, 7.4) used any smokeless tobacco daily or on some days of the week. Among males, odds of current cigarette smoking decreased with increasing level of education (OR = 0.75; 95% CI: 0.68, 0.84) and increased with having a father who used tobacco (OR = 2.11; 95% CI: 1.39, 3.22) after adjusting for other socio demographic characteristics. Lower household income was associated with current cigarette smoking among rural males only (odds ratio [OR] = 0.67; 95% CI: 0.48, 0.92 per category increase in monthly household income (http://nccd. cdc. gov/ gtssdata /ancillary/downloadAttachment.aspx%3FID%3D964).

2.5. Global Adult Tobacco Survey Bangladesh Report 2009

The report has revealed that the use of tobacco among adults has increased from 37% in 2004 to 43.3% in 2009, despite a massive campaign and enactment of law. The World Health Organization (WHO) conducted the study in association with the Health and Family Welfare Ministry with technical support from US Centre for Disease Control and Prevention (CDC).

The study was conducted on 11,200 households. It was found that tobacco consumption was higher among males than females and more prevalent in the rural areas. At a dissemination program at Hotel Sheraton, it was said that a total of 41.3 million people in the country are now in the habit of using tobacco by means of smoking or chewing. Of these people, 58% are male and 28.7% are female. The prevalence of tobacco use in rural areas is 45.1% and 38.1% in urban areas.

The study revealed that 45% of the adult populations are exposed to second-hand smoke in public places and males are more exposed than females. An estimated 1% percent of the national income in terms of gross domestic product (GDP), is spent on the purchase of cigarettes and 0.4% percent on biris (http://www.who.int/ tobacco/ surveillance/ global_adult_tobacco_survey_bangladesh_report_2009).

2.5.1. Patterns and Predictors of Smokeless Tobacco Use Among Adults in Bangladesh: Findings from the International Tobacco Control (ITC) Bangladesh Survey

A total of 5522 respondents were interviewed in the Wave 3 of ITC, BD Survey; 72% were recruited in Wave 1. Overall, two-thirds (66.4%) of the sample was from non-tribal, non-border areas outside Dhaka and a greater proportion (59.6%) of the sample was male. Most respondents were married (82.1%), Muslim (83.3%), and had at least one child in their home who was 14 years of age or younger (72.6%). Of the respondents, 36% were non-smokers and 20% were current SLT users (http:// www. nebi. nlm.nih. gov/ Pme / articles / PME4090160/ 9 July, 2014).

Characteristics of the ITC Bangladesh Wave 3 sample (unweighted), Bangladesh 2011 (N=5522).

2.5.2. Pattern of SLT Use

SLT use was significantly higher in women (23.1%) than men (16.5%) and among those who were illiterate (31.9%) than having 1–8 years (21.5%) or 9 or more years (8.6%) of education. SLT use increased significantly with age: 36% of adults aged 55 and older used smokeless tobacco compared to only 8.5% of adults younger than 25. SLT use was also higher among those who lived in a Dhaka slum (29.9%) and among those living in non-tribal/non-border areas outside of Dhaka (20.3%). Smokeless tobacco use by demographic characteristics among Bangladeshi residents (weighted), Bangladesh 2011.

2.5.3. Attitudes Toward SLT Use

Bangladeshis held differing opinions and attitudes towards SLT use. Bangladeshis who believed smokeless tobacco was less harmful than smoked tobacco (cigarette or bidi) were significantly more likely to be current SLT users. Likewise, Bangladeshis who believed that society approves of smokeless tobacco use were significantly more likely to use SLT (40%) than those who believed society disapproves of SLT use (16%). A significantly higher percentage of respondents (43%) who agree that it is acceptable for women to use SLT currently use SLT themselves compared to only 16% of those who do not agree. A significantly higher proportion of those who believed that SLT use is addictive were current SLT users (20%) than those who did not believe so (9%).

2.5.4. Predictors of Current SLT Use

The multivariable model revealed the following predictors of SLT use: being female (OR=1.96, 95% CI: 1.18-3.24), being aged 25-39 (OR=2.30, 95%CI: 1.49-3.54) or aged 40-54 (OR=3.67; 95% CI: 1.76-7.65) or aged 55 and above (OR=4.25; 95% CI: 2.27-7.95), being a resident of a Dhaka (OR = 5.86;95% slum CI: 3.73 - 9.21) or non-tribal/non-border areas outside Dhaka (OR=3.42; 95% CI: 1.94-6.03), being illiterate (OR=3.37; 95% CI: 1.99-5.71), holding positive opinion towards societal approval of SLT use (OR=5.84; 95% CI: 3.38-10.09), holding positive opinion towards SLT use by women (OR=2.63; 95% CI: 1.53–4.54), believing that SLT is addictive (OR=2.96; 95%) CI: 1.51-5.81), and believing SLT is less harmful than bidi (OR=2.22; 95% CI: 1.36-3.62). In addition, people who believed that SLT was less harmful had 2.12 times greater odds of using smokeless compared to people who thought smokeless was more harmful than cigarettes (p=0.014)(omnibus test). From the above research works, prevailing situation of tobacco intake at different regions of the world are revealed. Actual situation what may be it is an addiction and due to this, people cannot escape from it.

3. Objectives & Methodology

To explore the pattern of tobacco use among the 16+ years inhabitants of Ayir Mangal village, Anowara Upazilla, Chittagong.

Specific objectives are

-To get idea about the type of tobacco using by the inhabitants.

-To find out the period of tobacco using by the inhabitants.

-To explore the expense of tobacco use.

-To find out the diseases among the tobacco users.

-To identify the socio-demographic characteristics of tobacco users.

3.1. Methodology

This was a descriptive study; cross sectional in nature. This study was conducted in Ayir Mangal village, Anowara. The study was conducted from November 2014 to June 2015. Villagers were above 16 years in Ayir Mangal village, Anowara. It is possible to collect data from only 298 people. The study was conducted by following non-probability type of purposive sampling. Prestructured questionnaire contain both structured and unstructured questions. After introductory conversation, verbal consent was taken from the respondents regarding documentation of data containing the purpose of the study.

3.2. Data Analysis & Data Collection Technique

The relevant data after collection the questionnaire were verified for its consistency. The data were analyzed by relevant scientific instruments according to the objectives of study. The survey team was comprised by the students of Community Medicine, Chittagong Medical College. The team was divided into 10 subgroups, each subgroup composed of 3 students. Then the subgroups with the help of few local guides divided and moved to different sites of the village Ayir Mangal. Each of the students had directed to collect at least 10 questionnaires individually on the basis of availability of the respondents. The data were collected from the villagers within the stipulated time.

3.3. Inclusion Criteria & Exclusion Criteria

All the villagers above 16 years, irrespective of gender were included in this study. Villagers that were not available during data collection and those who were less than 16 years of age were excluded from the study.

General variables are age, gender, religion, educational status, occupation, marital status, type of family, number of family members and socio economic status of the respondents.

Specific variables are tobacco intake, tobacco intake type, category of smokeless tobacco, category of smoke producing tobacco, tobacco intake duration, number of sticks per day, pack year of cigarette taking, smokeless tobacco intake per day, costs for tobacco, relation with habituated family members, influence on tobacco intake habit, type of influencing person, suffering from any disease, diseases in 1 year, aggravating factors of diseases, tobacco quit attempt, tobacco quit intention, knowledge on harmful effects, tobacco continuation reasons, blood pressure.

3.4. Operational Definition of Respondents

Family member who were asked for information collection during the survey were the respondents in this study.

Illiterate means people who can neither read nor write, even his or her name. They can only give left thumb impression that can put their signature but never went to school.

Primary means person who completed primary school and could read Bangla. (Up to class V).SSC means person who passed SSC examinations. HSC means person who passed HSC examination. Graduate indicates person who completed their graduation from university or college.

3.5. Socio-economic Status (SES)

Socio-economic status can be defined as the position that an individual or family occupies with reference to the prevailing average standard of cultural and material possessions, income and participation in group activity of the community.

SES was measured by using the scale of Rahman, et al. (2008)

In this scale, scoring system was used to quantify the socio-economic status as follows:

Table 1-A. Socio-economic status (SES).

Ser	Category	Score
1.	Monthly income	
	<3000	01
	3000 - 5000	02
	5000-10,000	03
	> 10,000	04
2.	Type of house	
	Thatched	01
	Tin	02
	Brick build	03
3.	Assets	
	None	00
	Simple belonging	01
	Cultivable land:	
	<5 Bighas	02
	5-10Bighas	03
	> 10 Bighas	04
4.	Type of latrine	
	Unsanitary	00
	Sanitary	01

Adding the individual scores, an aggregate score for SES was computed. Based on this score, which range from 2 to 12, a family could be classified into the followings:

Table 1-B. Aggregate Score for SES.

Ser	SES	Score
1.	Lower class	02-04
2.	Lower Middle class	05-07
3.	Upper Middle class	08-09
4.	Upper class	>10

4. Results & Discussion

Bangladesh is one of the largest tobacco consuming countries in the world. People here intake tobacco whether smoked or smokeless. Men are much more likely to smoke than women. Most female smoker smoke biri, while men are more likely to smoke manufactured cigarettes, although many consume biris. In contrast, smokeless tobacco use rates among women are slightly higher than men in this study.

Tobacco smoking and other forms of tobacco intake impose a large and growing public health burden globally as well as in Bangladesh. It imposes considerable economic costs, both on account of health care expenses incurred to treat the disease caused by tobacco use and from the lost productivity resulting from tobacco-related illness and premature death. This survey was conducted in order to explore the pattern of tobacco intake. This descriptive cross study was carried out on 16+ years' inhabitants of Ayir mangal village of Anowara, Chittagong. The study revealed number of facts like age, gender, religion, occupation, educational status of the respondents, tobacco intake habit, type, category of smokeless and smoked tobacco intake, duration, daily and monthly cost, types of disease suffering due to tobacco intake, knowledge on harmful effect etc.

From the study, it was found that 35.91% respondents were between 31-45 years age group and 27.85% were between 46-60 years age group. 18.79% respondents were also found in between 16-30 years & 14.77% were in between 61-75 years age group while only 2.68% were in the 76-90 age group.

Regarding religion of the respondents, 99.32% were Muslims and only 0.68% was followers of Hinduism. Among the total respondents, 34.56% were housewives, 30.87% were farmers, 8.39% were day labour, 5.37% were teacher, 4.03% were service holder & 2.01% were garments worker & driver, 4.03% were Jobless & 8.73% were related to other occupations.

From the study, it was found that 48.32% respondents were illiterate, 33.89% were educated up to primary/equivalent level, 7.72% were up to secondary/equivalent level, 3.36 were SSC/equivalent pass, 3.02% were HSC pass and 3.69% were graduate. So it can be said that educational statuses of the respondents were not satisfactory. In Bangladesh adult literacy rate of population 16+ years is 56.9% (BBS 2014).

Regarding the gender of the respondents, 63.42% were male and 36.58% were female. Among the total respondents, 47.32% were of nuclear family, 39.26% and 13.42% were of joint and extended family respectively. Male and female ratio in Bangladesh is 1.002:1.000(BBS 2014).

In relation to socio-economic status of the respondents, 49.33% were from lower middle class family and 25.84% were from upper middle class family, where as 22.48% were belonged to lower class family. Only 2.35% were from upper class family. In this study we have found that most of the families of Ayir Mangal village had semi pacca house and well sanitary system. From the study, it was found that 92.62% of the respondents were habituated in tobacco intake, only 7.38% had no habit. Regarding the type of tobacco intake, 36.96% of the respondents took smokeless tobacco while 47.10% took smoke

producing tobacco. Another similar study was conducted among 217 diabetic patient who attended outpatient department, BIRDEM, Dhaka. From this study they found 51.2% were smoker, 18.4% were smokeless tobacco user, and 30.4% were non tobacco user. According to Global adult tobacco (GATS) Bangladesh 2009, current tobacco user among adult is 43.3%. Among them 27.2% were smokeless tobacco users while 23.0% were currently smokers.

In relation to category of smokeless tobacco intake we have found that 62.39% tobacco users took zorda and 35.04% took sadapata. Only 02.57% smokeless tobacco users took Gul.

Regarding the category of smoke producing tobacco intake, 50.31% took cigarette, 49.06% took biri. Only 0.63% were habituated with hukka (Table-4).

From the study it is revealed that 35.04% smokeless tobacco users took tobacco for 11-25 years, 32.48% for >25 years. 25.64% habituated for 1-10 years and 06.84% took tobacco for <01 year. In case of duration of smoke producing tobacco intake of the respondents 39.62% users took tobacco for 11-25 years, 23.90% for 1-10 years, 32.08% took for >25 years and 4.40% consume tobacco for <01 years.

According to the respondents, 33.33% took 5-10 sticks, 29.38% took 11-25 sticks, 27.68% took >25 sticks and 9.61% users took <5 sticks per day.

It is also found that the pack year of 28.02% respondents were >20, 27.39% were 5-10, 19.75% were 11-15, 16.56% were 16-20 and 8.28% were <5. From another similar survey by GATS Bangladesh 2009, overall 28.1% of persons smoked <5 cigarette per day, 27.5% smoked 5-9, 27.7% smoke 10-14, 14.9% smoke 15-24 and 18% smoked \geq 25 per day.

It is found that 41.03% smokeless tobacco users took 5-10 times, 27.35% took < 5 times, 19.66% took 11-15 times, 11.96% took >15 times per day(Table-7). According to GATS Bangladesh. 2009. 30.9% users took <5 times/day, 37.01% users took 5-9/day, 18.9% took 10-14 times, 10.2% took 15-24 times and 3.01% took \ge 25 times per day.

Out of total who intake tobacco, 38.77% users spent Tk. 10-20 per day, 20.65% spent Tk. 21-30/day, 12.32% spent Tk < 10, 10.87% spent Tk. 31-40 and 9.06% spent Tk. 41-50 per day. 8.33\% users also spent >Tk.50 (1 US \$= BD Taka 80approx.) per day for taking tobacco.

In case of monthly cost, 38.77% respondents spent Tk. 301-600, 20.65% spent 601-900, 12.32% spent Tk <300, 10.87% spent Tk. 901-1200, 9.06% spent Tk. 1201-1500 and 8.33% users spent > Tk 1500 per month. (Table-8)

According to the respondents 52.68% family members had tobacco intake habit & 47.32% didn't intake tobacco. Among them in case of smokeless tobacco users, 19.61% were father of the respondents and 22.55% were mother of the respondents, 16.67% were brother, 1.96% were sister, 3.92% were grandfather, 5.88% were grandmother and 29.41% were others. (Table-8) In case of smoke producing tobacco users 32.5% were husbands, 31.25% were brothers, 28.75% were fathers, 3.75% were grandfathers, 2.5% were grandmothers and 1.25% were mothers. (Table-10)

Majority of the respondents 74.64% were influenced to take tobacco while 25.36% were not. According to them 56.31%

were influenced by friends, 14.08% were by cousin, 10.68% by fathers and 18.39% by others. Another similar survey was conducted among 550 respondents of rural community of Sreepur thana observed that friends were found to be as influencing factor in 47% cases whereas family in 28% cases.

Regarding the history of suffering from any disease within last 1 year, 72.10% were suffering from disease and 27.90% were in good health. In case of types of disease suffering by the respondents within last 12 months, 34.67% were from cough & cold, 17.59% were from chronic obstructive pulmonary disease (COPD), 6.54% were from mouth ulcer, 8.54% from dyspnoea, 6.03% from heart disease, 12.56% from HTN, 2.51% from ARI 1.0% from Peripheral Vascular Disease (PVD), 0.50% were from stroke and 10.05% were from multiple disease (Table-11). Another similar study which was conducted among bus driver of Dhaka by Goon and Bipasha (2014) found that about 34.4% respondent suffered from chest pain, 25.8% were from heart disease, 17.2% from pulmonary disease and 5.8% were from PVD. It is noted that 1 million death globally by COPD. Tobacco is a cause of COPD, lung cancer, cancer of the upper respiratory tract, frequent respiratory infections like cold and cough, interference on lung functions-decrease the FEV1.

According to the respondents who were suffering from disease within 12 months, the aggravating factors for worsening the disease were in case of 31.84% respondents smoking was the risk factor, 29.39% respondents got worsted by cold, 10.20% by exposure to fume and dust, 15.10% by exhaustion/physical activity, 2.45% by diurnal variation, 11.02% by others. (Table-12)

From the study it was revealed that 55.78% respondents took attempt to quit tobacco and 44.22% were not interested about exempting the habit.

It is interesting that most of the respondents (79.87%) were aware of bad effects of tobacco intake whereas 20.13% insensible about it. It is really encouraging 52.17% respondents wanted to quit tobacco. But it is a matter of sorrow that 47.83% had no intention to quit.

Regarding the reasons for continuing of taking tobacco, 39.86% mentioned that they took tobacco for relaxation, 25.36% for depression, 5.80% for smartness and 2.54% for more attention to perform some work. (Table-13)

From the study it is revealed that 62.04% respondents were normotensive, 32.56% were hypertensive and 5.40% were hypotensive. It is noted that cigarette smoking raises blood pressure by increasing plasma norepinephrine. Smoking is a leading cause of death from cardiovascular diseases which caused 1.17 million deaths in 2000. Two to three fold higher incidence of stroke, increase the risk of myocardial infection, ischemic heart disease and atherosclerotic vascular disease.

Education has influence on smoking habit and cause variation in choice. Among the illiterate 138 respondents, 35.51% preferred biri and 39.13% had zorda consumption habit. But among 10 graduate respondents, 80% had cigarette habit and 10% had gul intake habit. Considering the education level of 80 cigarette smokers, 50% were of primary level educated. In case of 73 zorda and 41 sada pata intakers, 73.97% and 60.98% were of illiterate class, none found in

graduate level (Table-14)

Gender also reflects variation in choice of tobacco consumption. In Bangladesh, females have fascination for zorda, sadapata along with beatles, males are habituated in cigarette, biri. In this study out of 180 males 37.22% and 42.78% had habit of biri and cigarette but among the 96 females, 56.25% and 29.17% were zorda and sadapata intakers (Table-15). Tobacco consumption has harmful effects and respondents informed it from different sources. But the consumers expressed no determination to quit the consumption. This produces physiological, economic and environmental harm to the in takers living in surroundings.

5. Conclusion

From the survey it was found that tobacco intake is a traditional habit in the rural areas of our country, especially among the illiterate people which agrees with Hanifi et al. (2010). So it is not easy to make people quit from this habit. But analysis and result show an inspiring percentage of population, especially younger generation and literate people are being conscious of bad effects of tobacco intake. It is a matter of regret that about 50.0% tobacco users were illiterate and 35.06% were primary/equivalent passed while only 3.62% tobacco users had completed their graduation. So attempt should be made with the dream of progressive positive change in tobacco intake habit in our country with the help of education and motivation.

Recommendations

- 1. The study should be conducted over more respondent to generalize the result and findings.
- 2. If enough time can be given for the survey, other important aspects can be revealed.
- 3. Motivation should be given to the people before conducting the survey. So that they will show interest in it and language problem will overcome.
- 4. Counseling to prevent tobacco use should be done among 16+ years' children and adolescents.
- 5. Effective interventions should be taken for reducing tobacco use (smoked and smokeless) at work and home including public places.

Annexture 1. Basic Information of the Respondents

Table 1. Distribution of the respondents according to age.

Age group (years)	Frequency	Percentage (%)
16-30	56	18.79
31-45	107	35.91
46-60	83	27.85
61-75	44	14.77
76-90	08	02.68
Total	298	100.00

Table 2. Educational status of the respondents.

Educational Status	Frequency	Percentage (%)
Illiterate	144	48.32
Primary/Equivalent	101	33.89
Secondary/ Equivalent	23	07.72
SSC/Equivalent	10	03.36
HSC/Equivalent	09	03.02
Graduate/above	11	03.69
Total	298	100.00

Table 3. Occupation of the responding persons.

Occupation	Frequency	Percentage (%)
Farmer	92	30.87
Housewife	103	34.56
Service holder	12	04.03
Day labor	25	08.39
Garments worker	06	02.01
Driver	06	02.01
Teacher	16	05.37
Jobless	12	04.03
Other	26	08.73
Total	298	100.00

Table 4. Category of smoke producing tobacco intake.

Category	Frequency	Percentage (%)
Biri	78	49.06
Cigerrate	80	50.31
Hukka	01	00.63
Total	159	100.00

Table 5. Duration of smokeless tobacco intake of the respondents.

Duration (years)	Frequency	Percentage (%)
<01	08	06.84
1-10	30	25.64
11-25	41	35.04
>25	38	32.48
Total	117	100.00

 Table 6. Duration of smoke producing tobacco intake of the respondents.

Duration (years)	Frequency	Percentage (%)
<01	7	04.40
1-10	38	23.90
11-25	63	39.62
>25	51	32.08
Total	159	100.00

Table 7. Frequency of smokeless tobacco intake per day by the respondents.

Frequency of smokeless tobacco intake per day of the respondents	Frequency	Percentage (%)
<5	32	27.35
5-10	48	41.03
11-15	23	19.66
>15	14	11.96
Total	117	100.00

Table 8. Monthly cost of the respondents for taking tobacco.

Monthly cost (Tk)	Frequency	Percentage (%)
<300	34	12.32
301-600	107	38.77
601-900	57	20.65
901-1200	30	10.87
1201-1500	25	9.06
>1500	23	8.33
Total	276	100

Table 9. Relationship of habituated (smokeless) family members with the respondents.

Relationship of habituated family members	Frequency	Percentage (%)
Father	20	19.61
Mother	23	22.55
Grandfather	04	03.92
Grandmother	06	05.88
Brother	17	16.67
Sister	02	01.96
Other	30	29.41
Total	102	100.00

Table 10. Relationship of habituated(smoke producing tobacco) family members with the respondents.

Relationship of habituated family members	Frequency	Percentage (%)
Father	23	28.75
Mother	01	01.25
Grandfather	03	03.75
Grandmother	02	02.5
Brother	25	31.25
Sister	00	00
Husband	26	32.5
Total	80	100.00

Table 11. Types of diseases suffering within last 12 months.

Types of diseases	Frequency	Percentage (%)	
COPD	35	17.59	
Cough & Cold	69	34.67	
Dyspnoea	17	08.54	
Mouth ulcer	13	06.54	
Stroke	01	00.50	
Heart disease	12	06.03	
Hypertension	25	12.56	
ARI	05	02.51	
PVD	02	1.01	
Multiple	20	10.05	
Total	199	100.00	

Frequency	Percentage (%)	
78	31.84	
72	29.39	
25	10.20	
37	15.10	
06	02.45	
27	11.02	
199	100.00	
	Frequency 78 72 25 37 06 27 199	

Table 12. Aggravating factors for worsening diseases of the respondents.

Table 13. Reasons for continuation of taking tobacco.

Reasons	Frequency	Percentage (%)
Depression	70	25.36
Relaxation	110	39.86
Attention	07	02.54
Smartness	16	05.80
Others	73	26.44
Total	276	100.00

Table 14. Relationship between educational status and tobacco consumption.

Particulars	Biri**	Cigerrate**	Hukka**	Zorda***	Sadapata***	Gul***	Total
Illiterate*	49(35.51%)	10(7.24%)	00(0.00%)	54(39.13%)	25(18.12%)	00(0.00%)	138(100%)
	(62.82%)	(12.50%)	(0.00%)	(73.97%)	(60.98%)	(0.00%)	(50.00%)
Primary/Equivalent*	22(23.40%)	40(42.55%)	00(0.00%)	17(18.09%)	15(15.96%)	00(0.00%)	94(100%0
	(28.21%)	(50.00%)	(0.00%)	(23.29%)	(36.58%)	(0.00%)	(35.06%)
Secondary/ Equivalent*	04(20.00%) (5.13%)	14(70.00%) (17.50%)	00(0.00%) (0.00%)	01(05.00%) (1.37%)	00(0.00%) (0.00%)	01(05.00%) (33.33%)	20(100%) (7.25%)
SSC/ Equivalent*	02(28.57%)	03(42.85%)	00(0.00%)	01(14.29%)	01(14.29%)	00(0.00%)	07(100%)
	(2.56%)	(3.75%)	(0.00%)	(1.37%)	(02.44%)	(0.00%)	(2.54%)
HSC/ Equivalent*	01(14.29%) (1.28%)	05(71.42%) (6.25%)	00(0.00%) (0.00%)	00(0.00%) (0.00%)	00(0.00%) (0.00%)	01(14.29%) (33.33%)	07(100%) (02.54%)
Graduate/above*	00(0.00%) (0.00%)	08(80.00%) (10.00%)	01(10.00%) (100%)	00(0.00%) (0.00%)	00(0.00%) (0.00%)	01(10.00%) (33.34%)	10(100%) (03.62%)
Total	78(28.26%)	80(28.98%)	01(00.36%)	73(26.45%)	41(14.86%)	03(01.09%)	276(100%)
	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)	(100%)

*- See operational definition of the respondents;

- Tobacco consumption with smoke; *- Smokeless tobacco consumption

Table 15. Gender of the respondents and tobacco consumption.

Gender	Tobacco consumption							
	With smoke			Smokeless			T ()	
	Biri	Cigerrate	Hukka	Zorda	Sadapata	Gul	— Total	
Male	67(37.22%) (85.89%)	77(42.78%) (96.25%)	01(0.56%) (100%)	19(10.56%) (26.03%)	13(07.22%) (31.71%)	03(01.67%) (100%)	180(100%) (65.21%)	
Female	11(11.46%) (14.11%)	03(03.13%) (03.25%)	00(0.00%) (0.00%)	54(56.25%) (73.97%)	28(29.17%) (68.29%)	00(0.00%) (0.00%)	96(100%) (34.79%)	
Total	78(28.26%) (100%)	80(28.98%) (100%)	01(00.36%) (100%)	73(26.45%) (100%)	41(14.86%) (100%)	03(01.09%) (100%)	276(100%) (100%)	

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