Original Article

Pattern of tobacco consumption and related factors among the people residing in a rural area

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Abstract

This descriptive cross-sectional study was conducted with an aim to find out the pattern of tobacco consumption and its related factors in a rural area of Sripur upazilla under Gajipur district of bangladesh. The study was carried out from February 2010 to June 2010. Total sample was 361. Mean age of respondents was 39.01 years with standard deviation of ±13.54 years. Among them 85.04% and 14.96% were male and female respectively. Most (27.16%) of them were illiterate and 26.86% were able to write their name only. Maximum were businessman (25.48%) followed by day laborers (20.23%). Their mean monthly family income was 8,867.31 taka with SD of ± 7733.56 taka and 39.88% of them had monthly family income equal or below 5000 taka. The most frequent types of tobacco use among male was cigarette smoking (77.20%) and among female, consumption of jarda was 81.48%. The mean age of starting tobacco consumption was around 22 years and mean duration of consumption was nearly 17 years. Regarding causes behind tobacco consumption, majority (29.92%) answered 'addiction'. Mean daily expenditure on tobacco consumption was 24 taka. Maximum (90%) were known about harmful effects of tobacco consumption and regarding harmful effects they mentioned 'cancer' in 74.54% cases and 'tuberculosis' in 64.7%. The findings of this study suggest that, tobacco use is more prevalent among the poor, illiterate middle-aged segment of the population.

Key words : Tobacco Consumption, smoking, rural people

Introduction

People are taking tobacco in various forms or patterns for various purposes and the prevalence of tobacco consumption is raising alarmingly in most of the low and middle income countries. Immediate measures are required to decrease the tobacco consumption which can decrease the health hazard of many people. Tobacco is derived from the plant Nicotiana Tabacum. There are different types of tobacco e.g. smokeless tobacco and smoked tobacco. Smokeless tobacco includes tobacco with pan masala, tobacco with pan and betel quid, tobacco with lime.[1] Most common smoked tobacco includes cigarettes, hukkas, pipes and biri. Tobacco can also be chewed, "dipped" (placed between the cheek and gum), or sniffed into the nose as finely powdered snuff. The smoking was first introduced in Bangladesh during 1558 when the Portuguese landed in Chittagong port for trading.[1]

Factors associated with tobacco consumption are, 'influence from friends' (in various forms from insistence & persuasion to forced initiation). Other reasons include 'for the sake of fun', 'curiosity to try tobacco product', 'for style', 'when got tempted', 'stress/sadness/ depression / family problem', 'for passing time', & others. Current users reported that 'addiction' was the most common reason for the continuation of tobacco use.[1]

India is the second largest consumer of tobacco in the world after China.[2] The Global youth tobacco survey (GYTS), 2006 revealed that prevalence of current use of tobacco among 13-15 years old children is 14%.[3] The rate of tobacco smoking among teenagers is still higher than those of adults. The USA centre for disease control and prevention (CDC) found that 50% of high school students had tried cigarette smoking at some points. In 2008, more than 1 out of 4 kids aging 12 or older were current tobacco users. This comes out of about 71 million American teens. Globally tobacco use is significantly higher among men (47%) than women (12%).[4]

In developing countries, 80% of men and 9% women are smoker.[5] Smoking is generally five times higher among men than women.[6] Tobacco already kills one in ten adult worldwide. By 2030, perhaps a little sooner, the proportion will be one in six or 10 million deaths per year, more than any other single cause. A large number of diseases due to tobacco can involve almost all the organs of the body. In the world today every 10 seconds we are losing 1 person because of tobacco consumption habits.[2] The studies have shown that tobacco consumption has age variety of its onset, sex variety of its locality and class variety of its pattern of consumption.

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Data showed that among the general population of Bangladesh aged 30 years and above, tobacco related illness accounted for 16% of the total death. Deaths were due to bronchial carcinoma as well as cancer of lips, mouth cavity, larynx, pharynx, esophagus, gastric carcinoma, carcinoma of the pancreas, urinary bladder. Major cardiovascular diseases, respiratory diseases like COPD, tuberculosis, pneumonia and many others are also caused by smoking.[8]

Prenatal maternal smoking has been associated with low birth weight, chronic ischemia, hypoxia, hyper tonicity increased tremor and increased startle response in infants.[9] The USA centre for disease control and prevention (CDC) describes tobacco consumption as the single most important preventable risk factor to human health in developed countries and an important cause of premature death worldwide.

About half of Bangladeshi men and one-fifth of women use tobacco in either smoking or smokeless form. The rural people of Bangladesh have less knowledge about ill effects of tobacco consumption and they are ignorant of existing law 'Smoking and Tobacco Products Usage (Control) Act, 2005.[10,11]

Study of tobacco consumption and its health cost is necessary to facilitate evidence based policy decisions. This study has been designed to know the pattern of tobacco consumption with special emphasis on the identification of those socio-demographic groups who are more prone to tobacco consumption and to know tobacco related health consequences in people residing in rural area of Bangladesh. It may also help to create an effective awareness programme to discourage the tobacco consumptions to protect people from the devastating consequences of tobacco usage.

Methods

This descriptive type of cross sectional study was conducted in Bhagmara and Potka village of Sreepur upazila under Gazipur district, during the period from February 2010 to June 2010. The people aged 11 years or more of either sexes who were willing to participate in the study were the study population. The sample size was 361. Here convenient sampling technique was applied. Data were collected in a structured questionnaire which includes all the relevant information.

After collection of data, they were edited and processed manually. Then they were checked and verified for any omissions, errors or irrelevancies. Finally data were entered in and analyzed by computer. Results were presented in tables, graphs and charts afterwards.

Results

Out of 361 respondents, the highest 99 (27.42%) persons were found between the age group of 21-30 years and the least 23 (6.36%) were found above the age of 60 years. Among them, 309 (85.04%) were male and 54 (14.96%) were female. Again, 351 (97.23%) were Muslim and only 10 respondents (2.77%) were Hindu. Among the respondants, 297 (82.27%) were married. Majority (27.16%) of the respondents were illiterate and only 1.11% respondents were graduate. Total 97 (26.9%) respondents were able to write name only and the rest were educated in educational institute at different level.

Regarding occupation, majority (25.48%) were businessmen and 20.23% were day laborers. Agricultural workers, service holder, house keepers, self employed and students comprised the rest. 12.47% were engaged in other works such as driving, rickshaw-pulling, furniture making, coil making, tailoring, decorating, sweater making and machinery works . Majority (39.88%) were from poor family (monthly family income less than taka 5,000). Only 4.72% were in the rich income group (monthly family income taka more than 20,000).

Most (65.65%) of the tobacco users were found to consume cigarette, 130 (36.01%) were found to consume jarda, 69 (19.11%) were found to consume bidi, 4.99% were found to consume sada pata, 4.71% gul, 0.83% hubble bubble and only 1 respondent (0.28%) were found to consume quid. Among 307 male respondents, cigarette smoking (77.20%) got the highest percentage, where as most (81.48%) of the female consumed jarda.

Among the respondents, 57.89% were found starting tobacco consumption between 11-20 years and 1.94% were found starting tobacco consumption at or after 51 years of age.(Table-I) Majority (31.02%) were found consuming tobacco for 6-15 years and only 4(1.11) were found consuming tobacco between 46-55 years.

Most (93.63%) of them were found consuming tobacco regularly and 6.37% were found irregular consumer of tobacco. The mean frequency of tobacco consumption per day was 9.94 ± 8.6 times.

Maximum numbers of respondents were found consuming tobacco every where which was 195 (54.02%) and minimum 38 (10.53%) were found consuming tobacco during travelling. At work place, consumption of tobacco was found among 22.99% and at home it was

Table – I : Distribution of respondents according to age of starting tobacco consumption

Age of starting (years)	Frequency	Percentage
≤ 10	17	4.71
11 - 20	209	57.89
21 - 30	78	21.62
31 - 40	37	10.25
41 - 50	13	3.6
≥ 50	7	1.94
Total	361	100

16.90%. Majority (29.92%) used to consume tobacco from addiction, 103 (28.53%) persons were found consuming tobacco for better feeling, 75 (20.78%) persons consumed to relieve tension, 34(9.42%) persons consumed by getting inspiration from friends and relatives, 22(6.09%) persons consumed from false belief, 7 (1.94%) persons consumed for recreation, 6 (1.66%) persons consumed from frustration and 3 (0.83%) were found consuming tobacco to decrease hunger and out of their curiosity for each.

Two hundred and forty (66.48%) respondents did not give any history of tobacco consumption of other family members whereas 121 (33.52%) respondents gave positive history of their family members. (Figure-1)

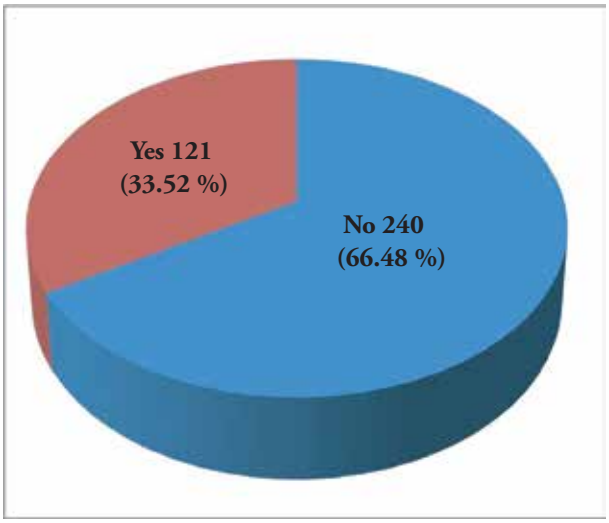

Figure - 1 : Tobacco consumed by other members of family

Majority (30.19%) were found spending 6 -15 taka daily for tobacco consumption and 13 (3.60%) were found spending 46-55 taka daily. The mean daily expenditure on tobacco consumption was 24.03 ± 5.853 taka.

Among 326 respondents, 243 (74.54%) were found known about cancer as harmful effect of tobacco consumption and only 1 (0.31%) was found known about buerger's disease. Moreover 64.72% were found known about tuberculosis, 36.50% knew about asthma, 20.86% knew about cardiovascular diseases, 12.27% about peptic ulcer, 8.59% about bronchitis, 7.06% about Stroke, 5.83% about hypertension and 3.99% identified some other diseases or symptoms such as, cough, chest pain, diabetes mellitus, toothache, bodyache and obstetrical problems as harmful effects.

Regarding harmful effects, they gathered information from multiple sources. Mostly (70.55%) from radio & TV, 89 (27.30%) from friends, 81 (24.85%) from other members of the family, 45 (13.80%) from news paper, 41 (12.58%) from poster and billboard and 30 (9.20%) from colleagues. Seventy nine respondents (24.23%) also got the information from various other sources like cautionary writing on cigarette packets, doctors, self assumption, self realization, from experience, parents, trainings, books, health workers, chest hospital, elderly people and medical centers.

Discussion

The prevalence of tobacco consumption in Bangladesh is ranged between 33.4% and 41% as found in other studies[12,13] This study did not go for finding out prevalence rate. Only the tobacco consumers were collected as samples.

In this study highest tobacco consumer was in 21-30 years age group. In a study conducted by Zohir S (2001)[14], the highest reported rate of tobacco consumption was among the people bearing age group 35-49 years. GATS (2008)[15] revealed that, 43.1% tobacco consumers were in the age group of 24-44 years. Comparing these results, we understand that tobacco is affecting the younger age group more and more.

Among the respondents, 27.16% were illiterate and 26.86% were able to write their names only. These two groups constituted more than half of the tobacco consumers in this study. The illiterate population were ignorant about the ill-effects of tobacco consumption as well as other health problems. Uddin G[16] also found that illiterate people were 3.3 times more tobacco users than the educated people. Another study by Yunus M[17]

showed that, irrespective of their gender, 44% of tobacco smokers were illiterate. These findings are consistent with those in our study.

Occupation may influence on tobacco consumption. In this study 25.48% of the respondents were small scale businessmen, 20.23% were day laborers, only 1.11% were students. According to a survey ontobacco taxation and poverty in Bangladesh by Ahmed S et al[18] 28.9% were rickshaw-pullers, only 2.8% were day laborers. On the other hand, a survey about tobacco use in a selected urban area in Bangladesh by Uddin G[16] revealed that among 399 tobacco consumers, 54 (70.4%) were laborers and only 32 (9.4%) were students.

In this study 39.88% of the tobacco consumers were poor, whereas only 4.72% were rich. Lack of health education and knowledge about harmful effects of tobacco consumption is the main reason for these above pictures. BIDS[19] field survey found that 45% of the tobacco consumers had monthly income less than 5000 taka.

Among multiple forms of tobacco product, cigarette smoking (65.65%) was in the peak followed by jarda (36.01%), bidi (19.11%), sada-pata (4.99%) and gul (4.71%). Females mainly consumed smokeless tobacco, among which Jarda (81.48%) was the most prominent form, whereas males consumed (77.20%) cigarettes more. A study by Yunus M[17] showed that males mainly used smoked tobacco e.g. cigarette and bidi while females used smokeless tobacco e.g. betel nut with quid and dried tobacco with or without lime. According to different studies in Europe, America & Australia, it has been found that prevalence of smoking among women is increasing along with women empowerment.[20]

In this study more than half (57.89%) of the respondents started tobacco consumption at the age group of 11-20 years. This indicates that tobacco is easily available in the community and this age is emotionally vulnerable. 93.63% of the respondents in this study consumed tobacco regularly. This is because tobacco is cheap, easily available, consumption is socially acceptable and is addicting. Our finding is supported by findings of Yunus M[17] who found that 93% of the respondents were regular tobacco users.

A study done by Nichter M et al[21] carried out in India revealed that, 71.3% of tobacco consumers use tobacco more than 6 times a day. In this study, 59.28% of tobacco consumers use tobacco 6 times or more in a day. 54.02% of the respondents consume tobacco everywhere, 22.99% at their respective work places, 16.90% at home and 10.53% during traveling. These findings were quite different from findings of Ahmed S et al[22] who revealed that 50% people consumed tobacco along the roadside, 33% in workplaces, 5% at homes and 12% consume tobacco everywhere.

Most (93.91%) of the respondents bought tobacco products from the shop. This finding was more or less similar to those found by Rahman M[23] who observed that 83% respondents buy tobacco products from nearby shops.

Bhojani UM[24] found in India that, addiction (31.1%), pleasure (18.8%), friends (18.8%), likings (12.5%) and to overcome tension or boredom (12.5%) influenced tobacco consumption. In a study done by Uddin G[16] in Bangladesh found that people initiate smoking due to peer pressure (40.7%), imitation(37.3%), to relieve tension (7.6%) and without reason (14.4%). These were more or less similar to our study. Here 33.52% of the respondents had family influence. A survey in India by Rani M et al[25] showed that 28% of adolescent students reported at least one of their family members as a tobacco user. Similarly survey by Yunus M[17] in Bangladesh also found significant influence on tobacco consumption by their parents.

Daily expenditure for tobacco consumption depends on frequency of use, type of product, brand and cost. Islam MW[2] found that the average daily expenditure for smoking was 7.82 taka and Sen DK[26] found that average monthly expenditure was 215 taka. But our study found average daily expenditure was 24.03 taka.

90.30% respondents had knowledge regarding 2harmful effects of tobacco consumption. They obtained this knowledge from radio, TV, friends, family members, newspaper, posters, billboards, colleagues, doctors, health workers, cigarette packets and from personal experience. GATS in 2008[15] revealed that 49.8% respondents had noticed anti-smoking information in different media and other sources. Most of these respondents knew about cancer, tuberculosis, asthma as harmful effects of tobacco consumption. Some of them knew about peptic ulcer, cardiovascular disease, stroke, hypertension. Other studies support these findings. Islam MW[2] in Bangladesh showed that 88.6% smokers knew about the harmful effects of smoking, namely lung cancer(44%), heart disease(24%), tuberculosis(18%), ulcers of respiratory tract(14%).

From this discussion, we get the pattern of tobacco consumption in a rural population of Bangladesh. Mostly

poor, male and female of 21 to 50 years of age who have little education consume tobacco mainly by using cigarettes, bidis, jarda, etc. Social structure is the main factor which influence pattern of tobacco consumption. Therefore, it is the society who accepts or rejects tobacco consumption as part of culture.

The study was done on a selected population, from which by collecting information, an assumption on the current situation can be made. It is seen, though the media is doing its best in creating awareness among people; the rate of consumption of tobacco is still alarming. The harmful effect of tobacco just not only include health related issues but also the economic crippling of family, ultimately leading to hindrance in the path of development of society. The only way to prevent this is by active participation of both Government and society. To help this situation these type of studies can play vital role which should be done more. In this way we can made true the dream of prosperous new future for our country.

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