Original Article

KNOWLEDGE OF SLUM-DWELLING ADULT WOMEN REGARDING HARMS OF TOBACCO USE

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ABSTRACT

Background: Tobacco use has become one of the major causes of premature deaths in developing countries including Bangladesh. Incidence of tobacco consumption among the women in developing country is increased day by day. The objective of this study was to assess the knowledge of slum dwelling adult women regarding harms of tobacco use.

Materials & Methods: This descriptive type of cross-sectional study was conducted in selected urban slums of Dhaka North City Corporation from 1st January 2021 to 31st December 2021. Total 300 slum dwelling adult women was selected by convenience sampling technique. Data were collected through face to face interview using a pre-tested semi structured questionnaire.

Results: In the study, the mean age of the respondents was 32 ($\pm$ 6.96) years where maximum (44.3%) within the age group of 20-29 years. Majorities (97%) of the respondents were muslim and 93.7% were married. Among them 29% women were completed primary education. Most (59.3%) of the respondents were home maker and majority (96.0%) of them were came from nuclear family. The study showed that most (56%) of the respondents consumed smokeless tobacco (Jarda, Sada pata, Gul) and only 1.7% respondents consumed smoking tobacco (bidi). Majority of the women knew that tobacco use can cause different types of cancer but many of them did not know that tobacco use had detrimental effects on reproductive health of women. Television (44.3%) was the main source of the information about harms of tobacco use. The mean knowledge score of the respondents was 7.8 ($\pm$2.4). Association between most of the socio-demographic variables and the respondent's knowledge score regarding harms of tobacco use was found statistically significant ($p < 0.05$).

Conclusion: This study revealed that the educational levels of most of the slum women were low and they had the lowest mean knowledge score regarding harmful effects of tobacco use. Health educational programs and awareness campaigns should be conducted among slum dwelling women of urban community to increase their knowledge on harmful effects of tobacco use.

Keywords: Tobacco, Knowledge, Slum dwelling adult women, Harms of tobacco use.

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INTRODUCTION

The incidence of tobacco use among women across the world is indeed quite high, it threatens to undermine not only women's physical and mental health but also their economic and social development and the risk of premature death for ten millions of women worldwide is almost doubled by a single cause tobacco use.[1] Tobacco consumption results in both health and economic costs that are massive and growing; smoking kills one in ten people worldwide and one in two long-term smokers dies from the habit; on 2030, smoking is expected to be the single significant cause of death worldwide, resulting in one in six deaths and killing ten million people, where Bangladesh is already experiencing an increasing number of cancer cases; there was a 10-fold increase of cases between 1960 and 1980 and the Bangladesh Cancer Society estimates that a significant proportion of all cancers in Bangladesh are related to tobacco.[2] Tobacco consumption has

severe consequences on women's health, there are greater risks of stillbirth, neonatal death and sudden infant death syndrome among women tobacco users, tobacco consumer women are more likely to experience primary and secondary infertility; women who smoke have an increased risk of cardiovascular disease, chronic obstructive pulmonary disease, cancer, bone density etc. Tobacco consumption also causes periodontal disease, gall bladder disease, peptic ulcer, some form of cataract etc.[1] Women have health risks and effects of smoking that are specific to their gender; the problems distinctive to their gender affect to their reproductive and non-reproductive function and the health risks of smoking among women are mainly osteoporosis, infertility, cervical cancer and pregnancy related problems (miscarriage, low birth weight, ectopic pregnancy, perinatal mortality etc.[3] Smoking is the leading cause of coronary heart disease among women, for women younger than 50 years, the majority of coronary heart disease is attributable to smoking and cigarette smoking is an initial cause of chronic obstructive pulmonary disease (COPD) among women, and the risk increases with the amount and duration of smoking; approximately 90% of mortality from COPD among women in the United States can be associated to cigarette smoking.[3] Tobacco consumption is an important modifiable risk factor common to major non communicable diseases (NCDs) like cancer, cardiovascular diseases, chronic respiratory diseases and diabetes, causing one in six of all NCDs deaths.[4] About six million people die from tobacco use each year, both from direct tobacco use and second hand smoke; by 2020, this number will increase to 7.5 million, accounting for ten million deaths; data from several studies indicate that tobacco smokers have 2-3 fold higher relative risk of coronary heart disease (CHD), 1.5 times for stroke, 1.4 times for chronic obstructive pulmonary disease (COPD) and 12 fold risks for lung cancer.[4] Data from the Global Adult Tobacco Survey (GATS) show that the prevalence of tobacco use is highest among the least educated and the poor and decreases as education and income increase; these data show that in 2009 and 58% of Bangladeshis lacking a formal education used tobacco compared to only 19% of those who completed high school.[5] Tobacco use is higher among people living in rural areas of countries in South and Southeast Asia compared to residents of urban areas and its use is also more prevalent in urban slums found that in 2009, 60% of people living in Dhaka's urban slums used tobacco at least weekly, significantly higher than the national average of 43%.[6] The International Tobacco Control(ITC) Bangladesh Survey revealed that the prevalence of tobacco uses among slum-dwellers was much higher (78.8%) as compared to the rest of the urban population; studies conducted in neighboring countries like India also pro-claimed higher rates of tobacco usage within their slum population.[7] In Bangladesh, the poorest people live in slums and account for about one-third of the urban population; this urban slum dwellers are not only economically disadvantaged, but live in overcrowded settlements with low levels of sanitation and hygiene, open garbage disposal, lack of proper healthcare facilities and so on, which readily contribute to ill health and disease and these factors, along with changing behavioral norms related to non-communicable disease (NCD) risk factors in developing countries, make the slum dwellers a high-risk population for tobacco use and development of non-communicable diseases.[7] One of the main reason attributed to the late diagnosis of the mortality due to tobacco use has been the lack of slum people's knowledge about the harmful effects of tobacco use and thereby their late movement towards health facilities to seek treatment especially among the slum population.[8] Hence the present study was conducted to assess the knowledge regarding the harms of tobacco use among slum dwelling adult women in our country.

METHODS

Study design & setting: This was a cross-sectional study conducted from 1st January, 2021 to 31st December, 2021 among slum dwelling adult women reside in two selected urban slums (Korail and Saattala slum) in Dhaka North City Corporation (DNCC). The sample size was 300 and the respondents had been selected from slum dwelling adult women (18 years and above) by convenience sampling method.

Data collection technique and instrument: Data were collected through face to face interview using a pre-tested semi structured questionnaire. The relevant socio-demographic data along with the habit of tobacco use of the respondents were collected and recorded. Knowledge of the respondents regarding harms of tobacco use was assessed using 12 knowledge related questions. Each of the question had response with 'yes' and 'no' where 'yes' was considered as correct answer and 'no' as incorrect answer. In each question, score was '1' for correct answer and '0' for incorrect answer and total knowledge score was calculated by summing the scores of 12 questions.

Data analysis: Computer based statistical analysis were carried out with appropriate techniques and systems. Quantitative data were expressed as frequency, percentage, mean and standard deviation and qualitative data were expressed as frequency distribution and percentage. For inferential analysis: Independent sample t test, One-way ANOVA test was

done. All the statistical analysis was performed by using Statistical Packages for Social Sciences (SPSS® version 23) for Windows®.

Ethical consideration: Ethical clearance for the study was obtained from the Institutional Review Board (IRB) of NIPSOM. Before preceding the data collection, the detail of the study was explained to each of the respondents and informed written consent was obtained.

RESULTS

In this study, the mean age of the respondents was 32 (± 6.96) years. The maximum (44.3%) respondents were within the 20 to 29 years age group. Majorities (97%) of the respondents were Muslim and 93.7% were married. Most (59.3%) of the respondents were home maker and majority (96%) of them were came from nuclear family. Most (29%) of the respondents had educational qualification up to class V and majority (43%) of them had monthly family income from BDT 10001-16000/- in BDT. (Table-1)

Table 1. Socio-demographic characteristics of respondents (n=300)

Variables	Frequency	Percentage (%)
Age group		
20-29	133	44.3
30-39	103	34.3
40-49	64	21.4
Religion		
Islam	291	97.0
Hinduism	9	3.0
Marital status		
Married	281	93.7
Single	3	1.0
Widow	16	5.3
Educational Qualification		
No formal education	40	13.3
Can write name only	85	28.3
Up to class V	87	29.0
Class VI to S.S.C	59	19.7
H.S.C	29	9.7
Occupational status		
Home maker	178	59.3
Housemaid	59	19.7
Garments worker	19	6.3
Small business	44	14.7
Family type		
Nuclear family	288	96.0
Joint family	12	4.0
Monthly family income (in BDT)		
5000-10,000	96	32.0
10,001-16000	129	43.0
> 16000	75	25.0

Tobacco consumption among the respondents:

Table-2 shows majority (96.4%) of the respondents consume smokeless tobacco (SLT) like jarda followed by gul (30.4%) and sada pata (17.3%). Only 1.7% respondents smoke tobacco such as bidi.

Table 2. Distribution of the respondent according to different forms of tobacco consumption

Different forms of tobacco consumption *	Frequency	Percentage (%)
Smoking Tobacco		
Bidi	5	1.7
Smokeless Tobacco		
Jarda	162	96.4
Gul	51	30.4
Sada pata	29	17.3

*Multiple Response (n =300)

Knowledge regarding harms of tobacco use:

Among 300 respondents majority knew that use of tobacco can cause different types of cancer like lung cancer (98.3%), oral cancer (90.0%), stomach cancer (77.7%) and liver cancer (77.3%). Most (70.7%) of the respondents knew that smoking tobacco can cause bronchial asthma. Most (77.3%) of the respondents did not know about the harmful effect of tobacco on reproductive health of women. But majority (79.3%) of the respondents knew that tobacco use is harmful for pregnant women and also her unborn child. (Table-3)

Table 3. Knowledge regarding harms of tobacco use

Harmful effects of tobacco*	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Lung Cancer	295	98.3%	5	1.7%
Oral Cancer	270	90.0%	30	10.0%
Stomach Cancer	233	77.7%	67	22.3%
Liver Cancer	232	77.3%	68	22.7%
Bronchial Asthma	212	70.7%	88	29.3%
Cardio-Vascular disease	127	42.3%	173	57.7%
Stroke	116	38.7%	184	61.3%
Harms on reproductive health of women	68	22.7%	232	77.3%
Harms on pregnant women and her unborn child	238	79.3%	62	20.7%
Gum disease	66	22.0%	234	78.0%
Discoloration & stain on teeth	161	53.7%	139	46.3%
Effects on health of family members	290	96.7%	10	3.3%

*Multiple Response (n =300)

The total knowledge score was calculated by summing the scores of 12 questions and the mean knowledge score was calculated which was found 7.8 (±2.4). The mean knowledge score was highest 8.9 (±2.2) among the respondents in age group of 20-29 years followed by 7.4(±2.2) within the age group of 30-39 years. The mean knowledge sore was highest 11.3 (±0.8) among the respondents who had completed HSC, followed by them who had the educational qualification up to SSC level i.e. 10.2 (±1.2). Among the respondents, the garments worker had the highest mean knowledge score which was 9.1(±1.9) followed by homemaker 8.2 (±2.4). The association between socio-demographic characteristics (age, educational qualification and occupational status) and mean knowledge score of the respondents was found statistically significant. (Table-4)

Table 4. Association between socio-demographic characteristic and mean knowledge score of the respondents (n=300) [one-way ANOVA test]

Variables	Frequency	Knowledge score Mean (± SD)	Statistics (one-way ANOVA test)
Age group			
20 – 29	133	8.9 (±2.2)	p < 0.05*
30 – 39	103	7.4 (±2.3)	

40 – 49	64	6.2 (±1.9)	
Educational qualification			
No formal education	40	4.9 (±1.1)	$p < 0.05$*
Can write name only	85	5.9 (±1.4)	
Up to class V	87	8.2 (±1.1)	
Class VI to S.S.C.	59	10.2 (±1.2)	
H.S.C.	29	11.3 (±0.8)	
Occupational status			
Home maker	178	8.2 (±2.4)	$p < 0.05$*
House maid	59	6.1 (±1.8)	
Garments worker	19	9.1 (±1.9)	
Small business	44	8.1 (±2.4)	

*Statistically significant

Figure 1 showed that most (271) of the respondent knew about the harms of tobacco use from TV followed by doctor/health worker from whom they got that information (177). Only 32 respondents told that they got information about harmful effect of tobacco from social media.
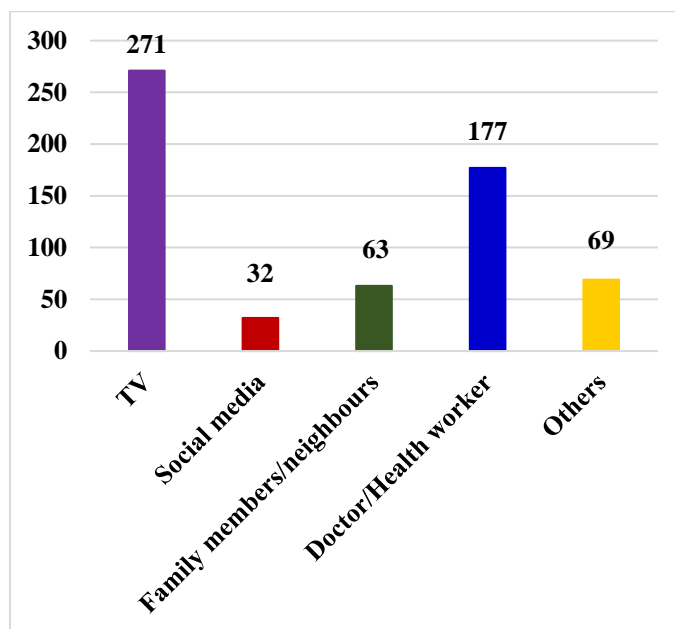
*Multiple response (n = 300)

Figure 1. Source of information regarding harms of tobacco use

DISCUSSION

The socio-demographic characteristics of the respondents included age, marital status, religion, educational status, family type and monthly income.

In the study, the mean age of the respondents was 32 (± 6.96) years where maximum (44.3%) lie within the age group of 20-29 years. Similar result found in a study was conducted on socio-demographic characteristics and tobacco use among the adults in

urban slums of Dhaka, Bangladesh, there mean (± SD) age of the participants was 37.9 (±11.2) years and majority 44.6% of them were within the 25 to 34 years age group.[7] A study was conducted in our country on Prevalence and Correlates of Smokeless Tobacco Consumption among Married Women in Rural Bangladesh, in their study most of the respondents 95.0% were Muslim, 85.0% were married, and 61.0% were housewives.[9] In this study, majorities (97.0%) of the respondents were also muslim and were married (93.7%). Similarly, 59.3% of the respondents were home maker which was only about 2% less than the previous study. The present study found that 29.0% of the respondents could not complete class V, 28.3% respondents can write their name only, and 13.3% respondents had no formal education. This study finding was little bit different from the study which conducted in Bangladesh on Tobacco Consumption among Slum Women of Dhaka City: Causes, Consequences and Remedies where approximately 80.0 % went to school but could not complete class V, more than 6.0 % can write their name only, and around 4.0% women have no literacy.[1] Another study was conducted on Socio-demographic characteristics and tobacco use among the adults in urban slums of Dhaka, Bangladesh. The findings of this study shows that majority (51.5%) of the study population have no formal education, 19.3% had complete secondary education and 12.2% had completed primary education.[7]

In this study, majority (90.0%) of the respondents had heard about tobacco but 62.0% respondents among them do not know about the tobacco containing products and rest of them (38.0%) knew about tobacco products. Among 300 respondents, most (56.0%) of the respondents consume smokeless tobacco, 42.3% was non tobacco users, and only a few (1.7%) respondents consume smoking tobacco. A study was conducted in Bangladesh on Awareness of Tobacco-Related Health Harms among Vulnerable Populations in Bangladesh, where majority of the study population consume smoking tobacco 32.0% followed by 14.0% was consume smokeless tobacco and 41.0% was non tobacco users.[6] This study also showed that, majority (96.4%) of the respondents consume jarda, followed by gul (30.4%) and sada pata(17.3%). Only 1.7% respondents consume bidi. Another study was conducted on Tobacco Consumption among Slum Women of Dhaka City: Causes, Consequences and Remedies, this study was found that most of the respondents 98.0% was consume zarda, 20.0% was consume dry leaf of tobacco, 13.0% was consume gul and around 5.5% respondents consumed bidi.[1]

Knowledge regarding harmful effects of tobacco:

In this study, majority of the respondents knew that tobacco use can cause different types of cancer like lung cancer (98.3%) and oral cancer (90.0%). One study was conducted on Awareness of Tobacco-Related Health Harms among Vulnerable Populations in Bangladesh, where among slum residents 96.5% respondents were knew about lung cancer and 96.0% were knew about oral cancer caused by smoking tobacco consumption. That study also showed that 77.5% respondents knew about bronchitis.[6] This study showed that, most (70.7%) of the respondents knew about bronchial asthma whereas more than half (57.7%) of the respondents did not know about cardiovascular disease and also maximum (61.3%) respondents did not know about stroke. A similar study was conducted at India on Awareness towards tobacco consumption: A community based study. That cross-sectional study showed that out of 205 respondents, most (62.0%) of them knew that the tobacco consumption can causes respiratory problems.[10] Another descriptive cross-sectional study results showed that, among 326 respondents, 20.86% knew about cardiovascular disease and only 7.1% knew about stroke.[11] In this study, 42.3% and 38.7% of respondents knew about cardiovascular diseases and stroke respectively which was higher than the previous study.

Among 300 respondents, few (22.7 %) of the respondents knew tobacco use can causes harms on reproductive health of women but most (79.3%) of them knew about harmful effects of smoking tobacco on pregnant women and her unborn child. Another study showed that majority of the respondents 77.0% knew smoking tobacco could have a bad effect on the fetus only few respondents knew about effect on reproductive health of women.[3] In this study, a few (22.0%) respondents knew that tobacco use can causes gum diseases and more than half (53.7%) of the respondents know about discoloration and stain on teeth caused by tobacco use. Another study results shows that 25.0% respondents knew about oral diseases as ill effects of tobacco.[12] Findings of the another study shows that 27.0% were knew about staining of teeth and only 15.0% knew that tobacco use led to ulcers in mouth.[13] The study found statistically significant association between mean knowledge score regarding harm of tobacco use and socio-demographic characteristics (age, educational qualification, occupational status) of the respondents.

CONCLUSION

The increasing problem of tobacco use among the people of urban slum areas has become public health issues for Bangladesh. Slum women are more likely to use tobacco and are vulnerable to developing non-

communicable diseases. The present study was done to assess the knowledge of slum dwelling adult women in Bangladesh regarding harms of tobacco use. This study revealed that majority of the slum women were less educated and consume smokeless tobacco. Present study found that maximum respondents knew about different types of cancer (Lung cancer, oral cancer etc.) but most of them did not know about the effects of tobacco use on reproductive health of women. Television was the main source of the information about harms of tobacco use. The analysis of this study shows that association between most of the sociodemographic variables and mean knowledge score of the respondents were statistically significant ($p<0.05$). Majority of them had lowest mean knowledge score regarding harmful effects of tobacco use. Community based health awareness programs and campaigns about harmful effects of tobacco use should be implemented for slum women to increase their knowledge.

Acknowledgement

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