Prevalence of tobacco use among rural women of Mohanpur block, West Tripura district

Rituparna Das[1*] and Subrata Baidya[2]

[1] Department of Community Medicine, Tripura Medical College & BRAM Teaching Hospital, Hapania, Agartala-799014, Tripura, India and [2] Department of Community Medicine, Agartala Government Medical College, P.O. Kunjaban, Agartala-799006, Tripura, India

Abstract: *Background:* Tobacco is used in different forms among Indian women and the health effects can be seen irrespective of the way it is used. *Objectives:* To study the prevalence of tobacco use among the rural women in Mohanpur Block, West Tripura District and to study the factors associated with tobacco use. *Materials and Method:* This cross-sectional study was conducted in March, 2012, among 460 rural women in two randomly selected subcentre areas of Mohanpur Block. *Results:* The study revealed that 58.48% of the rural women were current consumer of tobacco, whereas the prevalence of ever tobacco users was 64.13%. Beetle leaf and nut with tobacco was the most common form of tobacco use with 57.40 % respondents using it. The most common reason cited for tobacco use was 'using it as a group habit' by 32.30 % respondents. Multiple logistic regression analysis showed that tobacco use was significantly low between 15-30 years of age (p value- 0.047), and was significantly high among those who were illiterate (p value- 0.014) or had primary education (p value- 0.013). *Conclusion:* The study showed a high prevalence of tobacco use by rural women which necessitates active intervention by formulating cessation and prevention programs.

Keywords: Rural woman, tobacco use, Tripura.

Introduction

Tobacco is used in different forms and the health effects can be seen irrespective of the way it is used. Tobacco use has serious health outcomes like carcinoma, chronic obstructive pulmonary disease, cardiovascular disease, cerebrovascular accidents, etc. Tobacco is estimated to have killed 100 million people in 20th century. Around 8.3 million people are expected to get killed every year by 2030, and 80% of this deaths is expected to occur in low to middle income countries [1]. According to NFHS -3, 2005-06, around 56.70 percent of rural women in India between 15 to 49 years age and 49.30 percent of rural women in Tripura consume tobacco in various forms. [2]

However, information on tobacco use and the factors associated with initiating and maintaining such behavior among the rural women of Tripura is very limited. Hence, the present study was conducted to assess the prevalence of tobacco use, and to assess the factors associated with tobacco use among the rural women of Mohanpur block in West Tripura District, Tripura.

Material and Methods

This community based cross-sectional study was conducted in March, 2012, in two randomly selected sub centre areas of Mohanpur Block, West Tripura District among rural women of ≥ 15 years of age. The study sample was calculated considering the prevalence of tobacco use among rural women of Tripura to be 49.30 percent [2] and using the formula, n= $Z^2_{\dot{a}/2}$ pq / E^2, where p= 49.30, q= 50.70 and with a relative precision of 4.90 considering an allowable error of 10 percent. Adding 10 percent non response rate the sample size was rounded to 460 women of ≥ 15 years of age.

The study area had 2023 families with a total population of 11,300 people. From the 2023 families, 460 women above the age of 15 years were selected through systematic random sampling procedure with a sampling interval of four i.e. every 4th house was selected for the study. If in a selected family the respondent female was not available, the adjacent next house was taken up and if more

than one eligible woman was available, then randomly one woman was selected for the study. Women who were unwilling to participate and who were not mentally sound were excluded from the study. After obtaining written informed consent, the information was collected by administering the interview schedule face to face and socio demographic information, patterns of tobacco use, reason of tobacco use, awareness about the health hazards of tobacco, etc. were elicited. Ever consumers of tobacco were taken as those who had ever used any form of tobacco in the past and current chewers as those who are presently using any form of tobacco.

Data analysis was done manually as well as in Epi.info version 7 using frequency, percentage and multiple logistic regression analysis. P value <0.05 was considered as statistically significant.

The study was approved by Institutional Ethics Committee of Agartala Government Medical College.

Results

A total of 460 women of $\geq$15 years of age in two randomly selected sub centre areas of Mohanpur Block participated in the study.

Table 1 shows that majority (38.30%) of the respondents belonged to 15 to 30 years of age, followed by 29.30 percent of the respondents who were between 31 to 45 years of age. Almost all (n=459) the respondents were Hindu by religion and majority of them belonged to scheduled caste (38.90%). 67.80 percent of the rural women were housewife and majority (36.50%) of them had primary education.

Table-1: Socio-demographic profile of the study respondents			
		Frequency (N=460)	Percentage (%)
Age	15-30 year	176	38.3
	31-45 year	135	29.3
	46-60 year	111	24.1
	>60 year	38	8.3
Religion	Hindu	459	99.8
	Christian	1	0.2
Community	General	139	30.2
	SC	179	38.9
	ST	79	17.2
	OBC	63	13.7
Education	Illiterate	137	29.8
	Primary	168	36.5
	Secondary	115	25
	Higher secondary	29	6.3
	Graduate and above	11	2.4
Marital status	Married	380	82.6
	Unmarried	23	5
	Widow	57	12.4
Type of family	Nuclear	252	54.8
	Joint	208	45.2
Occupation	Government Service	16	3.5
	Skilled labor	14	3
	Unskilled labor	97	21.1
	Housewife	312	67.8
	Student	15	3.3
	Pension	6	1.3
Per capita income	≤Rs 500	52	11.3
	Rs 501-1000	180	39.1
	Rs 1001-1500	85	18.5
	Rs 1501-2000	72	15.7
	>Rs 2000	71	15.4

Table 2 shows that the prevalence of tobacco use among the rural women of Mohanpur block was 58.48 percent i.e. majority of the rural women were current consumers of tobacco; whereas, the prevalence of ever consumers of tobacco, in the study area was 64.13 percent.

Table-2: Prevalence of tobacco use among the rural women		
	Frequency	**Percentage (%)**
Current consumer of tobacco	269	58.48
Ever consumer of tobacco	295	64.13

Table 3 shows that majority of the respondents (58.30%) were using chewing form of tobacco and 1.90 percent of the respondents were using it in smoking form. Regarding the type of tobacco used by the rural women, the respondents gave multiple responses and Beetle leaf and nut with tobacco was the most common form of tobacco use with 57.40 percent of the respondents using it.

Table-3: Pattern of tobacco use among the study participants			
		Frequency	**Percentage (%)**
Chewing form	Beetle leaf and nut with tobacco	264	57.4
	Ghutka	1	0.2
	Khaini	3	0.7
	Pan Masala	8	1.7
Smoking form	Cigarette / Bidi	3	1.5
	Hubble Bubble	6	1.3

Table 4 shows the reasons cited by the consumers for consumption of tobacco, with many respondents showing more than one reason. The most common reason cited for tobacco use was 'using it as a group habit' with friends and relatives by 32.30 percent of the respondents. The next common reason cited for tobacco use was 'for a sense of pleasure' by 26.40 percent of the respondents.

Table-4: Reasons of tobacco use by female respondents		
	Frequency	**Percentage (%)**
For a sense of well being	58	26.4
As a group habit	71	32.3
To prevent bad breath	17	7.8
To get relief from tooth problems	19	8.6
Under peer pressure	21	9.6
For a change of taste	17	7.7
Relief from abdominal discomfort	14	6.4
To relieve stress and increase concentration	14	6.4

Table 5 shows that 42 percent of the respondent women had the knowledge that there are harmful effects of tobacco use and 33.90 percent of the respondents knew that consumption of tobacco products are leading cause of cancer.

Table-5: Knowledge of the harmful effects of tobacco		
	Frequency (n=192)	**Percentage (%=42)**
Cancer	156	33.9
Oral ulcer	7	1.5
Respiratory disease	6	1.3
Cardiac disease	11	2.4
Dental problems	5	1.1
Gastric problems	2	0.7
Others	5	1.1

Multiple logistic regression analysis in table 6 shows that tobacco use was significantly low in the age group of 15 to 30 years (p value- 0.047). The study also showed that tobacco use was significantly high among those who were illiterate (OR- 21.6, p value- 0.014) or had primary education (OR- 22.03, p value- 0.013).

Table-6: Multiple logistic regression analysis showing factors associated with tobacco use			
Variable		**OR (95% C.I.)**	**P value**
Age	15-30 years	0.34 (0.12-0.98)	0.047
	31-45 years	1.13 (0.39-3.26)	0.827
	46-60 years	1.86 (0.65-5.33)	0.247
	>60 years	1	-
Education	Illiterate	21.6 (1.87-248.86)	0.014
	Primary	22.03 (1.94-250.5)	0.013
	Secondary	3.26 (0.28-37.43)	0.343
	Higher secondary	5.78 (0.46-72.39)	0.173
	Graduate and above	1	-
Occupation	Government Service	0.64 (0.03-15.56)	0.785
	Skilled labor	1.21 (0.04-38.11)	0.914
	Unskilled labor	0.71 (0.03-15.26)	0.829
	Housewife	0.31 (0.02-6.34)	0.446
	Student	0.42 (0.003-56.8)	0.727
	Pension	1	-
Type of family	Nuclear	0.72 (0.45-1.15)	0.168
	Joint	1	-

Discussion

This cross-sectional study showed that the tobacco use was highly prevalent among rural women ≥15 years of age in Mohanpur Block, West Tripura District.

The prevalence of tobacco use among rural women in the present study was 58.48percent which was much higher compared to the prevalence of tobacco use among rural women of Tripura (49.30%) as per NFHS -3 [2]. The prevalence of tobacco use was also high compared to studies conducted by Bala DV et al [3] in Gujarat and by Gupta V et al [4] in Northern India where the prevalence of tobacco use among rural women had been 26.46 percent and 17.70 percent respectively. The high prevalence of tobacco use shows that intervention is yet to be effective among the rural population.

Regarding the type of tobacco used by the rural women majority of the respondents (57.40%) used Beetle leaf and nut with tobacco. A total of 58.30 percent respondents were using tobacco in the chewing form and only 1.90 percent of the respondents were using it in smoking form. Study conducted in Gujarat by Bala DV et al [3]

reported that chewing form of tobacco was used by 25.86 percent, whereas 33.91 percent of the respondents were using it in smoking form. In a study conducted in Pondicherry by Jagadeesan M. et al [5], the prevalence of tobacco use in chewing form was 13.70 percent which was also much lower than the present study. Study from Nepal by Subba SH et al [6] among youth showed that 41 percent of young female were current users of chewing form of tobacco. Kumar S et al [7] showed that 74.50 percent of women in Northern India were habituated to the chewing form of tobacco and 59.30 percent to the smoking form. Thus the present study revealed that the prevalence of tobacco use in chewing form in this study population was quite high. But the smoking habit was very less.

In the present study, the most common reason cited for tobacco use was 'group habit' with friends and relatives by 32.30 percent respondents and followed by the reason of 'for a sense of pleasure' by 26.40 percent of the respondents. 9.60 percent of the respondents reported that this habit was introduced in them

due to peer pressure. Similar findings were obtained in study conducted in Pondicherry [5] where influence of friends was the most important factor introducing the habit. Study conducted in Nepal by Subba SH et al [6] had shown that having friends who use tobacco had significant association with the introduction of the habit of tobacco use.

In the present study 42 percent of the respondent women were aware about the harmful effects of tobacco use and 33.90 percent of the study participants had the knowledge that consumption of tobacco is a leading cause of cancer. Thus it can be seen though the study participants had the knowledge regarding the harmful effects of tobacco use; they were consuming tobacco in various forms. It showed that the study participants had the knowledge regarding the harmful effects of tobacco use, but they were still consuming tobacco in various forms. Hence there is a definite need to bring a change in their attitude and reflect the awareness in their practice.

Multiple logistic regression analysis in the present study showed that tobacco use was significantly lower in the age group of 15 to 30 years (p value- 0.047). Similar finding was obtained in study conducted by Bala DV et al [3] where the tobacco use was least popular in the age group of ≤25 years. Again in the present study it was found that the use of tobacco increased with increase of age up to 60 years. Similar finding was obtained in a study conducted

in North India by Gupta V. et al [4] and Pondicherry by Jagadeesan M. et al [5] where a direct relationship of increase in tobacco use with age was established. The present study also showed that tobacco use was significantly high among those who were illiterate (OR- 21.6, p value- 0.014) or had primary education (OR- 22.03, p value- 0.013) compared to those who had higher educational status. Similar finding was obtained in studies conducted by Bala DV et al [3] where the tobacco use was highest among illiterates (50.6%) and with primary education (53.51%). Another study was conducted in Pondicherry by M. Jagadeesan et al [5] where an inverse relationship of educational status with tobacco use was established.

The present study thus revealed that the prevalence of tobacco use among the rural women of Mohanpur block was high, with chewing form of tobacco as the most common form of tobacco use. The tobacco use was significantly low in the age group of 15 to 30 years and was significantly high among those who were illiterate or had primary education. It is pertinent to consider this while formulating cessation programs. The study participants had the knowledge regarding the harmful effects of tobacco use but they were consuming tobacco in various forms. This showed that there is a definite need to strengthen IEC activities to change their attitude and reflect the awareness in their practice.

References

1. World Health Organization: World report on the global tobacco epidemic- The MPOWER package. Geneva; *WHO* 2008.
2. National Family Health Survey (NFHS-3): Fact sheet. Tripura, 2005-2006. *NFHS* 2006.
3. Bala DV, Bodiwala ILA N, Patel DD, Shah M: Epidemiological determinants of tobacco use in Gujrat state, India. *Indian J Community Med* 2006; 31(3):173-176.
4. Gupta V, Yadav K, Anand K: Patterns of tobacco use across rural, urban, and urban-slum populations in a North Indian community. *Indian J Community Med* 2010; 35(2):245-51.
5. Jagadeesan M, Rotti SB, Danabalan M, Narayan KA. Chewing Habits Among Rural Women In Pondicherry. *Indian J Community Med* 1997; 22(2):74-81.
6. Subba SH, Binu VS, Menenzes RG, Ninan J, Rana MS: Tobacco chewing and associated factors among youth in Western Nepal: A cross-sectional study. *Indian J Community Med* 2011; 36(2):128-132.
7. Kumar S, Pandey U, Bala N, Tewar, Oanh KT: Tobacco habit in northern India. *Journal of Indian medical association* 2006; 104(1):19-22, 24.

*All correspondences to: Dr. Rituparna Das, Assistant Professor, Department of Community Medicine, Tripura Medical College & BRAM Teaching Hospital, Hapania, Agartala-799014, Tripura, India. E-mail ID: drrituparnad@gmail.com