

Practice and Awareness Regarding Tobacco Consumption among Residents of the Hilly area of Eastern Region of Nepal

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ABSTRACT

Introduction: Tobacco use is a global socio-economic hazard and medical malady. The incidence of tobacco is persisting and spreading in all walks of our modern society.

Methods: The cross-sectional study was conducted among residents of Dhankuta Municipality where 205 households were taken as subjects. Pretested semi-structured questionnaire was administered to the study subjects and face to face interview was conducted. Chi-square test was applied to find out the association between pattern of tobacco use and awareness of tobacco use among residents of Dhankuta municipality.

Results: The awareness towards tobacco use among residents of Dhankuta municipality was found to be 41 %. The awareness of tobacco consumption was significantly higher among the female (49 %) in gender and those whose education were School Leaving Certificate (SLC) and above (44.6 %) ($P < 0.05$). The respondents consuming tobacco have forty times lesser chances of having aware as respondents not consuming tobacco ($OR = 0.025$). The respondents consuming tobacco for more than 20 years (12.1 %) and more than 20 sticks per day (20 %) were more aware of tobacco consumption but the difference was not significant.

Conclusions: The awareness towards tobacco use among residents of Dhankuta municipality was found to be less. Male in gender, lack of education and poor occupation like farmer, housewife was found to be less aware of tobacco consumption.

Keywords: awareness; tobacco consumption; quality of life.

INTRODUCTION

Tobacco use is one of the leading preventable causes of premature death, disease and disability around the world¹. Tobacco use is one of the risk factors for six out of eight leading causes of death worldwide². An estimated 4.9 million deaths occurring annually can be attributed to tobacco use. This may increase to 10 million by the year 2020, if the current tobacco use epidemic continues and more than 70 % of these deaths

are expected to occur in developing countries³.

In Nepal, chronic non-communicable diseases account for 42 % of all the deaths⁴. This rate may be due to a high prevalence of current daily tobacco users among men and women aged 17 years and above which was 48.5 % and 24 % respectively⁵. In the mountain region, the reported prevalence of females smoking was 71.6 %⁶. Various studies have reported prevalence ranging from 20% to 72% in different populations of Nepal^{6,7}.

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The Global Tobacco Surveillance System (GTSS) collaborative group has reported that tobacco use (both cigarette and smokeless tobacco) is high and has emphasized that interventions are necessary for the prevention of initiation and to promote cessation of tobacco among current users⁸. Therefore this study was designed to measure the prevalence of awareness of tobacco use and to find out the association between pattern of tobacco use and awareness of tobacco use among residents of Dhankuta municipality.

METHODS

The cross-sectional study was conducted from 1st July 2014 to 30th April 2015 among the residents of Dhankuta municipality of Nepal. Dhankuta is located in the eastern geographical region of Nepal. This research was based on random selection of the study area Dhankuta municipality. A National survey revealed that the prevalence of tobacco use was 33 % (Khan S et al in India in 2013)⁹, more than that 45 % (Karki YB et al Nepal in 2002)¹⁰ and highest 52.07 % (Zahiruddin QS et al in India in 2011)¹¹. So taking lower value 33% of prevalence of tobacco use, sample size was calculated at 95 % CI & 80 % powers then it became 205 persons aged above 17 years. There are 9 wards in Dhankuta Municipality. Among 9 wards, 5 wards was randomly selected. The list of households of five selected wards was prepared and equal number of households (41) from each ward was selected on the basis of simple random sampling.

consumption (N=205)

Ethical clearance was taken by Institutional Ethical Review Board of B P Koirala Institute of Health Sciences, Dharan, Nepal. Participants were first explained the purpose of study, its implications and assurance about the confidentiality of the information provided was given to the participants. Name of the individuals or participating group was not disclose after the study.

Written permission was taken from concerned authority (head of house) and the participants of the study. Those individuals who were available after three visits and willing to give written consents were included in the study. Pretested semi-structured questionnaire was administered to the study subjects in the presence of investigator and face to face interview was conducted.

The collected data was entered in MS Excel 2000. The quantitative data was analyzed using Statistical Package for the Social Sciences (SPSS) software package. Odds ratio and prevalence was calculated, Chi-square test was applied to find out the association between pattern of tobacco use and awareness of tobacco consumption. The probability of occurrence by chance is significant if $P < 0.05$ with 95 % Confidence Interval.

RESULTS

Table 1. Association between sociodemographic characteristics and awareness of tobacco

Characteristics	Awareness of tobacco consumption		Total	P- value
	Yes	No		
Age				
17-40 years	60 (42.9)	80 (57.1)	140	0.696
41-59 years	20 (37.7)	33 (62.3)	53	
≥ 60 years	4 (33.3)	8 (66.7)	12	
Gender				
Male	34 (33.0)	69 (67.0)	103	0.020
Female	50 (49.0)	52 (51.0)	102	

Religion				
Hindu	74 (40.9)	107 (59.1)	181	0.942
Others (Buddhist, Christian, Muslim)	10 (41.7)	14 (58.3)	24	
Ethnicity				
Brahmin/ Chhetri	25 (33.8)	49 (66.2)	74	0.080
Kirati	12 (41.4)	17 (59.6)	29	
Janajati	41 (49.4)	42 (50.6)	83	
Dalit	6 (46.2)	7 (53.8)	13	
Terai caste	0 (0.0)	6 (100.0)	6	
Education of respondents				
Illiterate	12 (25.0)	36 (75.0)	48	0.035
Below SLC	35 (47.3)	39 (52.7)	74	
SLC and above	37 (44.6)	46 (55.4)	83	
Occupation of respondents				
Service	26 (41.9)	36 (58.1)	62	0.027
Business	29 (56.9)	22 (41.1)	51	
Farmer	6 (20.7)	23 (79.3)	29	
Housewife	11 (34.4)	21 (65.6)	32	
Others (students, abroad, labor, tailor, carpenter)	12 (38.7)	19 (61.3)	31	
Economic status				
Below poverty line(<1.25 US\$)	47 (37.0)	80 (63.0)	127	0.140
Above poverty line (≥1.25 US \$)	37 (47.4)	41 (52.6)	78	
Total	84 (41.0)	121 (59.0)	205	

SLC: School Leaving Certificate

Table 1 shows overall awareness of the harmful consequences of tobacco consumption in Dhankuta Municipality was found to be 41%. The awareness of tobacco consumption among the female was significantly higher than male ($P<0.05$). The awareness of tobacco consumption was recorded higher in those

who were School Leaving Certificate (SLC) and above than illiterate ($P<0.05$). Regarding respondents occupation, awareness of tobacco consumption rate was found to be higher in business and service ($P<0.05$).

Table 2. Association between pattern of tobacco use and awareness of tobacco consumption (N=205)

Characteristics	Aware of tobacco consumption		Total	Odds Ratio	P- value
	Yes	No			
Consume tobacco (N=205)					
Yes	12 (10.3)	105 (89.7)	117	0.025	<0.001
No	72 (81.8)	16 (18.2)	88		
Total	84 (41.0)	121 (59.0)	205		
If consume tobacco, then what form (n=117)					
Smoking	9 (18.8)	39 (81.2)	48	0.022	
Chewing	0 (0.0)	33 (100.0)	33		
Both	3 (8.3)	33 (91.7)	36		
Total	12 (10.3)	105 (89.7)	117		
Duration of your habit till now (n=117)					
<10 years	4 (9.3)	39 (90.7)	43	0.915	
10-20 years	4 (9.8)	37 (90.2)	41		
>20 years	4 (12.1)	29 (87.9)	33		
Total	12 (10.3)	105 (89.7)	117		
If smoking then (n=84)					
Filtered	11 (16.9)	54 (83.1)	65	0.378	
Unfiltered	0 (0.0)	8 (100.0)	8		
Both	1 (9.1)	10 (90.9)	11		
Total	12 (14.3)	72 (85.7)	84		
If smoking then number of sticks per day (n=84)					
<10	9 (17.6)	42 (82.4)	51	0.274	
10-20	1 (4.3)	22 (95.7)	23		
>20	2 (20.0)	8 (80.0)	10		
Total	12 (14.3)	72 (85.7)	84		
Number of packets (chewing tobacco) per day (n=69)					
<2	3 (5.0)	57 (95.0)	60	0.950	0.493
2-5	0 (0.0)	9 (100.0)	9		
Total	3 (4.3)	66 (95.7)	69		
How many times per day consume tobacco per day (n=69)					
<10	2 (4.9)	39 (95.1)	41	1.385	0.794
10-20	1 (3.6)	27 (96.4)	28		
Total	3 (4.3)	66 (95.7)	69		
If no consume tobacco, then ever consume (n=88)					
Yes	12 (85.7)	2 (14.3)	14	1.400	0.680
No	60 (81.1)	14 (18.9)	74		
Total	72 (81.8)	16 (18.2)	88		
If ever consume then duration of consumption (n=14)					
<10 years	10 (90.9)	1 (9.1)	11	5.000	0.287
10-20 years	2 (66.7)	1 (33.3)	3		
Total	12 (85.7)	2 (14.3)	14		
If ever consume then why leave tobacco consumption (n=14)					
Self interest	9 (100.0)	0 (0.0)	9	1.667	0.040
Old age	3 (60.0)	2 (40.0)	5		
Total	12 (85.7)	2 (14.3)	14		

If ever consume then when leave tobacco consumption (n=14)					
<10 years	9 (81.8)	2 (18.2)	11	0.818	0.425
10-20 years	3 (100.0)	0 (0.0)	3		
Total	12 (85.7)	2 (14.3)	14		

Among 205 study population, almost 117 (57.1 %) was found to be consuming tobacco. The respondents consuming tobacco have forty times lesser chances of having aware of tobacco consumption as respondents not consuming tobacco (OR=0.025). The respondents consuming tobacco for more than 20 years and smoking more than 20 sticks per day were more aware of tobacco consumption but the difference was not significant (Table 2).

DISCUSSION

The Member countries of South-East Asia have been striving to increase the tax rates on tobacco products and strengthen the tax administration for tobacco control. Bangladesh is imposing duty and VAT on the unmanufactured tobacco products and smokeless products. India is going to introduce the Goods and Services Tax (GST) with cascading tax rates. Indonesia has simplified its tobacco tax regime while Thailand has kept increasing tax rates progressively in keeping with the rate of inflation. Although many countries have increased taxes in every fiscal year, over the last decade, cigarettes have become more affordable as inflation and the growth in per capita income have not been taken into account while raising the tax¹².

Tobacco use and its pattern are closely linked to age, sex, education, income, etc. amongst many other factors. Findings from studies in the member countries of the region reveal that tobacco use is higher among the illiterate and poor population. The use of tobacco among the people in Bangladesh, India and Thailand was high¹².

The awareness of tobacco consumption among the female was significantly higher (49 %) than male (33.0 %) (P<0.05). Youth also have the perception that smoking makes them look more attractive. The Global Youth Tobacco Survey (GYTS) reports show that more than 20 % of youth in Bangladesh, Myanmar, Nepal, Sri Lanka and Timor-Leste think that boys and girls who smoke look more attractive¹². But in Nepal, educated women were four times less likely to smoke than those who were illiterate¹³. Smoking among adult

women is much lower than men in some regions as it is socially not acceptable for women and tobacco use is restricted. Global Adult Tobacco Survey (GATS) reports reveal a huge variation in tobacco use between men and women. Tobacco use among women varies from 9.1 % (Thailand) to 28 % in Bangladesh¹².

The awareness of tobacco consumption was recorded higher in those who were School Leaving Certificate (SLC) and above (44.6 %) than illiterate (25 %) (P<05). Literacy is found to greatly affect the rates of smoking among population. Findings of Global Adult Tobacco Survey (GATS) show that there is a significant difference in tobacco use among people by the level of education. For example, the tobacco use among people without formal education is three-fold higher than among those who have been schooled up to secondary and above in Bangladesh. The use of tobacco among illiterate people in India is twice as high as those who completed secondary education while Thailand also represents the same trend¹².

The respondents below poverty line (<1.25 US\$) was less aware of tobacco consumption (37 %) than above poverty line (\geq 1.25 US \$) (47.4 %) but the difference was not significant. People of lower economic classes in India tend to smoke bidis more and have a higher level of social acceptance than those in upper classes¹⁴. It is found that tobacco use is inversely related to income and wealth. People in the lower income brackets tend to use more tobacco than those in the higher income bracket. For instance, tobacco use is two times higher among the lowest income group than those in highest income group in Bangladesh¹⁵.

This study showed that the respondents only smoking was more aware (18.8%) than both (smoking and chewing) (8.3%) but none of the respondents was aware among only chewing but difference was not significant. In Nepal, tobacco chewing is more socially acceptable than smoking while smoking is considered

as a symbol of independence among young people¹⁶. On the other hand, there is a gross misconception among people about tobacco use. About 40 % of tobacco users in Thailand believe that a hand-rolled cigarette is less harmful than manufactured cigarettes and this belief is common particularly among population where its use is also high¹⁷.

The respondents smoking more than 20 sticks per day were more aware of tobacco consumption (20 %) than smoking less than 10 sticks per day (17.6 %) but the difference was not significant. But in another study, smoking more than 20 cigarettes per day was a significant predictor of cessation attempts and cessation success. The finding that smoking a higher number of cigarettes per day is associated with increased cessation success corroborates findings in the USA¹⁸. It is conceivable that heavier smokers may be more motivated to quit, as they are more likely to have experienced smoking related adverse health conditions, whereas light smokers might feel less motivation to quit because of a perceived lower personal risk.

The major limitation of our study was the low sample size. Another limitation is the cross-sectional nature of the original survey. This temporal ambiguity leads to the possibility of reverse causation of the observed effects. Smoking habits were assessed by self-report only, and are therefore subject to reporting and/or recall bias.

CONCLUSIONS

We conclude that the awareness towards the harmful consequences of tobacco consumption was found to be less. Male gender, lack of education, poor occupation like farmer, housewife, students, abroad, labor, tailor, and carpenter was found to be less aware of tobacco consumption. The people those smoking more than 20 years and smoking more than 20 sticks per day were found to be more aware of tobacco consumption but the difference was not significant. Effective smoking cessation programmes may need to involve family members who may also be smokers. There is necessity for initiation of school based anti tobacco campaigns and reinforcement of such programs during graduation courses.

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