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Research Article

Knowledge and awareness of tobacco related health problems: A study from Eastern Nepal

Ram Bilakshan Sah¹, Laxmi Subedi², Nilambar Jha³ and Usha Shah⁴

¹Associate Professor, School of Public Health and Community Medicine, BPKIHS, Dharan, Nepal

²Senior Instructor, School of Public Health and Community Medicine, BPKIHS, Dharan, Nepal

³Professor & Chief, School of Public Health and Community Medicine, BPKIHS, Dharan, Nepal

⁴M.Sc. student, Dept. of Microbiology, Sunsari Technical College Pvt. Ltd., Dharan, Nepal

Corresponding Author: bilaksah@yahoo.com

Abstract

Three million people die every year because of tobacco-related diseases in the world. The present study was carried out to find out the association between Knowledge and awareness towards tobacco consumption and to find out association between awareness towards tobacco consumption and diseases in the last one year among residents of Dhankuta Municipality. 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 Knowledge and awareness towards tobacco consumption and association between awareness towards tobacco consumption and diseases in the last one year among residents of Dhankuta Municipality. The respondents those thinking that tobacco is injurious to health were significantly more aware (46.9%) than those not thinking (26.7%) ($P < 0.05$). The respondents those thinking that tobacco can cause oral problems (51.7%) and respiratory problems (48%) were more aware but the difference were not significant. The respondent suffered from diseases was high who was not aware of tobacco consumption (18.2%). The respondent suffered from respiratory problems (12.5%) and oral problems (10%) was high among those not aware of tobacco consumption but the difference was not significant. We conclude that people those thinking that tobacco is injurious to health were significantly more aware. The people who were not aware of tobacco consumption suffered more from diseases but the difference was not significant.

Keywords

Knowledge,
Awareness,
Tobacco, Health
problems,
Nepal.

Introduction

The South-East Asia is amongst the biggest producers and consumers of tobacco products in the world. Survey findings show that 30% to 60% of men and 1.8% to 15.6% of women in the South-East Asia Region use some form of tobacco (WHO, 2011). Use of smokeless tobacco products for chewing in many varieties is highly prevalent in Bangladesh, India, Myanmar and Nepal and people think that chewing is not as hazardous to health as smoked products. Although smoking is still predominantly a male habit, use of smokeless tobacco, particularly chewing, is common among both men and women. Recent surveys clearly indicate that tobacco use among young girls and women in the Region is on the rise (WHO, 2010).

There is enough scientific evidence that tobacco use is depriving poor households of nutrition, education and health. The immediate impact of hospitalization cost due to tobacco

related morbidity and mortality is not only money per se but also losing earning members in a family that could potentially push the whole family into poverty (WHO, 2011).

A few studies have shown that the prevalence of tobacco smoking in Nepal ranges from 20% to 70% (Pandey *et al.*, 1998). Results of a study conducted in 1994 showed that the prevalence of smoking in Sunsari district was 17.5% (Jha *et al.*, 1999). Therefore this study was design to find out the association between Knowledge and awareness towards tobacco consumption and association between awareness towards tobacco consumption and diseases in the last one year among residents of Dhankuta municipality.

Materials and 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 *et al* in India in 2013), more than that 45% (Karki *et al* in Nepal in 2002) and highest 52.07% (Zahiruddin *et al* in India in 2011). 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.

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. The prevalence and odds ratio was calculated, Chi-square test was applied to find out the association between knowledge and awareness of tobacco consumption and association between awareness towards tobacco consumption and diseases in the last one year. The probability of occurrence by chance is significant if $P < 0.05$ with 95% Confidence Interval.

Results

Table-1 Association between knowledge and awareness towards tobacco consumption (N=205)

Characteristics	Aware of tobacco consumption		Total	P- value
	Yes	No		
Family member consume tobacco				
Yes	27 (20.3)	106 (79.7)	133	<0.001
No	57 (79.2)	15 (20.8)	72	
Total	84 (41.0)	121 (59.0)	205	
If yes then when FM started (n=133)				
After you started	8 (40.0)	12 (60.0)	20	0.014
Before you started	14 (14.3)	84 (85.7)	98	
Simultaneously	5 (33.3)	10 (66.7)	15	
Total	27 (20.3)	106 (79.7)	133	
Tobacco use is injurious to health				
Yes	68 (46.9)	77 (53.1)	145	0.007
No	16 (26.7)	44 (73.3)	60	
Total	84 (41.0)	121 (59.0)		
*If tobacco affect health, then what kind of problems (n=145)				
Oral problems				
Yes	45 (51.7)	42 (48.3)	87	0.154
No	23 (39.7)	35 (60.3)	58	
Respiratory problems				
Yes	47 (48.0)	51 (52.0)	98	0.711
No	21 (44.7)	26 (55.3)	47	
GI problems				
Yes	0 (0.0)	3 (100.0)	3	0.100
No	68 (47.9)	74 (52.1)	142	
Total	68 (46.9)	77 (53.1)	145	
*Source of information about tobacco (n=205)				
Media (Radio, TV, newspaper, billboard)				
Yes	75 (48.4)	80 (51.6)	155	<0.001
No	9 (18.0)	41 (82.0)	50	
Friends				
Yes	63 (43.8)	81 (56.2)	144	0.215
No	21 (34.4)	40 (65.6)	61	
Family				
Yes	59 (44.7)	73 (55.3)	132	0.145
No	25 (34.2)	48 (65.8)	73	
Others (Doctor, study)				
Yes	1 (25.0)	3 (75.0)	4	0.512
No	83 (41.3)	118 (58.7)	201	
Total	84 (41.0)	121 (59.0)	205	

*percentages are based on multiple responses

Among 205 study population, almost 117 (57.1) of respondents was found to be consuming tobacco. The respondents those thinking that tobacco is injurious to health was significantly more aware than those thinking it is

not injurious to health ($P < 0.05$). The respondents that thinking that tobacco can cause oral problems and respiratory problems were more aware but the difference was not significant (Table 1).

Table -2 Awareness towards tobacco consumption and diseases in the last one year (N=205)

Characteristics	Suffered from diseases in last one year		Total	Odds Ratio	P- value
	Yes	No			
Are you aware of the harmful consequences of tobacco consumption					
Yes	8 (9.5)	76 (90.5)	84	0.47	0.085
No	22 (18.2)	99 (81.8)	121		
* If aware then what are they (n=84)					
Oral problems					
Yes	5 (9.3)	49 (90.7)	54	0.92	0.912
No	3 (10.0)	27 (90.0)	30		
Respiratory problems					
Yes	4 (7.7)	48 (92.3)	52	0.58	0.466
No	4 (12.5)	28 (87.5)	32		
GI problems					
Yes	5 (10.9)	41 (89.1)	46	1.42	0.644
No	3 (7.9)	35 (92.1)	38		
Are you aware of anti-tobacco law					
Yes	13 (11.1)	104 (88.9)	117	0.52	0.100
No	17 (19.3)	71 (80.7)	88		
Total	30 (14.6)	175 (85.4)	205		

*percentages are based on multiple responses

The respondent suffered from diseases was higher who was not aware of the harmful consequences of tobacco consumption (18.2%) than those aware (9.5%) but the difference was not significant. The respondent suffered from diseases was higher who was not aware of tobacco consumption as respiratory problems and oral problems but the difference was not significant (Table 2).

Discussion

Tobacco use is one of the leading preventable causes of premature death, disease and disability around the world (Ezzati *et al.*, 2002). Tobacco use is one of the risk factors for six out of eight leading causes of death worldwide (WHO, 2010). 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 countries (Peto, 2010). Studies conducted on Tobacco Economics in Member countries including Bangladesh, Myanmar, Nepal and Thailand by WHO and the World Bank show that health and economic consequences of tobacco use is much more than the revenues received from tobacco. For instance, the cost of treatment of diseases attributable to tobacco use was more than double the revenue that governments received from tobacco in Bangladesh (Ertas, 2007).

Due to a widespread misconception about tobacco being good for the teeth and oral health, people in many parts of

India use tobacco products as dentifrices in different forms such as tobacco toothpaste, tooth powder, roasted and powdered tobacco, dry snuff, etc (Sinha *et al.*, 2004). In North eastern states of India, people believe that tobacco water, which is called tuibur, protects against the bites of insects and it acts as an antiseptic, protects the teeth and has anti-snake venom properties (Sinha *et al.*, 2004). Truck drivers, rickshaw drivers and manual labourers in Myanmar believe that tobacco keep them alert and make them more productive at work (WHO, 2005).

The respondents whose family member not consuming tobacco was seen significantly more aware (79.2%) than whose family member consuming tobacco (20.3%) (< 0.001). A similar study conducted by Ertas N *et al* among Turkish population in 2007 shed that the exposure to adult smokers in the family was significant predictors of being susceptible to smoking and established smoking. Another study conducted by Rozi S *et al* in Karachi, Pakistan in 2007 which also showed that the exposure to parent smoking may play a role in initiation of smoking. These factors i.e. parents or presence of smoker in the family are related to the culture, traditions and other characteristics of a country.

The respondents that thinking that tobacco can cause oral problems (51.7%) and respiratory problems (48%) was more aware but the difference was not significant. Knowledge regarding ill effects of tobacco use among the study population was found to be lung cancer (35%), Oral

cancer (30%), and oral diseases (25%) (Sreedhar *et al.*, 2013). A study conducted by Madan Kumar *et al* in 2006 found it to be 65.3%, 75.8% & 82% respectively.

Another study conducted by Bhimarasetty *et al* in Visakhapatnam in 2013 which showed that majority of the subjects (83.2%) had awareness that the smoking can cause cancer. Only 24.8% and 7% knew of respiratory and cardiovascular related health effects respectively. Adverse effects on cardiovascular and other systems should be highlighted in the anti-tobacco campaign as smoking happens to be a significant risk factor for stroke and fatal heart attacks (Bhimarasetty *et al.*, 2013).

Economic studies have shown that people are losing a significant part of their income to purchasing tobacco products. Studies reveal that poor smokers spend up to 40% of their income on tobacco at the cost of their basic needs that in turn push them further deeper into a cycle of poverty (Efroymsona *et al.*, 2001). In Myanmar, tobacco users who are in the lowest income group spend as high as 33% of their income on tobacco (WB and WHO, 2005). In general, cost incurred on tobacco consumption comprises about 14% of the family expenditure (WB and WHO, 2003).

This study showed that the respondents get knowledge from media about impact of tobacco on health was seen significantly more aware (<0.001). The respondents get knowledge from family member and friend about impact of tobacco on health was also high but not associated with awareness. A study conducted by Sreedhar M *et al* in Hyderabad, India in 2013 which showed that the source of information regarding ill effects of tobacco use being mainly television-22%, teachers, friends -18%, Parents, Newspaper- 15% and hoardings 12%. While almost all Member countries have totally banned direct advertisement of tobacco on national TV and radio, the majority have no control on international TV and radio advertisements. A number of countries in the Region have included provisions to ban sale of tobacco products to and by minors. However, the enforcement remains here as a huge challenge (Kyaing *at al.*, 2011).

Accordingly teaching about harmful effects of smoking in schools itself was rated as best smoking prevention measure. The role of school based anti-tobacco education is supported by findings from many studies. Studies have shown that contribution of schools as source of information on health effects of smoking ranges from 3 to 50 % (Tiwari *et al.*, 2006 and Sinha *et al.*, 2003). School based smoking prevention programs have demonstrated consistent and significant reductions in smoking prevalence.

Conclusion

We conclude that people those thinking that tobacco is injurious to health were significantly more aware. The people who were not aware of tobacco consumption suffered more from diseases but the difference was not

significant. Our findings suggest that special attention be paid to people who are dependent on tobacco consumption. This means that treatment centres should be organized to treat dependence and to improve strategies to increase public awareness.

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