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### Factors initiating tobacco use, attitude and awareness among residents of the hill area of eastern region of nepal

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#### ABSTRACT

##### BACKGROUND

Tobacco use is considered a major public health hazard in the world. It is among the main preventable causes of untimely death, morbidity and mortality worldwide.

##### OBJECTIVES

To find out the association between factors initiating tobacco use and attitude towards tobacco use with awareness of tobacco consumption among residents of Dhankuta municipality.

##### 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 factors initiating tobacco use and attitude towards tobacco use with awareness of tobacco consumption among residents of Dhankuta municipality.

##### RESULTS

People started consuming tobacco due to the presence of adult smokers in the family was seen more aware (13.6%) but the difference was not significant. The respondents those feel cut down tobacco use (10.6%) and feel guilty about their habit (10.6%) was seen more aware but the difference was not significant. The problem of tobacco consumption can be control by ban the production (50.5%), awareness program (41.5%) and behavior change (41.6%) was seen significantly more aware ( $P < 0.05$ ).

##### CONCLUSION

People started consuming tobacco due to the presence of adult smokers in the family, those feel cut down tobacco use and feel guilty about their habit was seen more aware but the difference was not significant. The problem of tobacco consumption can control by ban the production, awareness program and behavior change.

**KEYWORDS:** Factors, Attitude, Awareness, Tobacco use, Nepal

## INTRODUCTION

Annually 4.9 million people in worldwide lose their lives as a result of tobacco consumption.<sup>1</sup> In the 20th century, 100 million people across the globe lost their lives due to consumption of tobacco.<sup>2</sup> Mathers C et al estimated that deaths due to tobacco consumption are on the rise, from 5.4 million in 2005 to 6.4 million in 2015 and 8.3 million in 2030.<sup>3</sup> Annually, tobacco is responsible for 1.4 million cancer deaths. Lung, oral, and nasopharyngeal cancers are some of the major cancers caused by tobacco consumption.<sup>1,4</sup> Chronic diseases due to cigarette smoking, elevated risk of cardiovascular disease, diabetes and respiratory diseases are also the consequences of tobacco use.<sup>5</sup> The World Health Organization (WHO) projected that there is an increasing trend of tobacco use in developing countries ranging from 4.9 million in 2000 to more than 10 million by 2020.<sup>1</sup> Every year 15,000 deaths in Nepal are attributable to tobacco smoking and using other products of tobacco.<sup>6</sup> According to a recent study on Nepalese Adolescents and Youth, prevalence of tobacco smoking was reported to be 16.74%.<sup>7</sup> Based on the Nepal Demographic and Health Survey (NDHS, 2006) dataset, Sreeramareddy et al.<sup>8</sup> reported that the prevalence of ‘any tobacco use’, ‘tobacco smoking’ and ‘tobacco chewing’ was 30.3%, 20.7% and 14.6%, respectively. Therefore this study was designed to find out the association between factors initiating tobacco use and attitude towards tobacco use with awareness of tobacco consumption among residents of Dhankuta municipality.

## MATERIAL AND METHODS

The cross-sectional study was conducted from 1<sup>st</sup> July 2014 to 30<sup>th</sup> 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)<sup>9</sup>, more than that 45% (Karki YB et al Nepal in 2002)<sup>10</sup> and highest 52.07% (Zahiruddin QS et al in India in 2011)<sup>11</sup>. 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 was calculated, Chi-square test was applied to find out the association between factors initiating tobacco use and attitude with 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 factors initiating tobacco use among smokers and awareness of tobacco consumption (N=205)**

Characteristics	Awareness of tobacco consumption		Total	P-value
	Yes	No		
Consume tobacco (205)				
Yes	12 (10.3)	105 (89.7)	117	<0.001

No	72 (81.8)	16 (18.2)	88	
Total	84 (41.0)	121 (59.0)	205	
Age of start consuming tobacco (n=117)				
<15 years	4 (7.4)	50 (92.6)	54	0.572
15-25 years	6 (14.0)	37 (86.0)	43	
>25 years	2 (10.0)	18 (90.0)	20	
What form you started consuming tobacco at first (n=117)				
Smoking	10 (16.9)	49 (83.1)	59	0.027
Chewing	0 (0.0)	38 (100.0)	38	
Both	2 (10.0)	18 (90.0)	20	
Why you started consume tobacco (n=117)				
Peer pressure	5 (7.6)	61 (92.4)	66	0.554
Recreation	4 (13.8)	25 (86.2)	29	
Adult smoker in family	3 (13.6)	19 (86.4)	22	
Why you continuing use of tobacco (n=117)				
Out of habit	10 (11.4)	78 (86.6)	88	0.499
Gives strength	0 (0.0)	11 (100.0)	11	
Relieves stress	2 (11.1)	16 (88.9)	18	
Common situation of tobacco consumption increases (n=117)				
Group	5 (15.6)	27 (84.4)	32	0.473
Workload	3 (12.5)	21 (87.5)	24	
Family problem	2 (10.5)	17 (89.5)	19	
Others (habit, love alone, leisure time, stress)	2 (4.8)	40 (95.2)	42	
Take other substance with smoking (n=117)				
Alcohol	4 (8.7)	42 (91.3)	46	0.590
Pan parag	2 (7.1)	26 (92.9)	28	
Cannabis	6 (14.0)	37 (86.0)	43	
<b>Total</b>	<b>12 (10.3)</b>	<b>105 (89.7)</b>	<b>117</b>	

Among 205 study population, almost 117 (57.1%) was found to be consuming tobacco. The respondents those smoking was seen significantly more aware than those taking both chewing and smoking and no anyone was found aware those only chewing

( $P < 0.05$ ). The respondents started consuming tobacco due the presence of adult smokers in the family and those taking cannabis with smoking was seen more aware but the difference was not significant. (Table1).

**Table 2: Association between attitude towards tobacco use among smokers and awareness of tobacco consumption (N=205)**

Characteristics	Awareness of tobacco consumption		Total	P-value
	Yes	No		
Feel cut down tobacco use (n=117)				
Yes	9 (10.6)	76 (89.4)	85	0.847
No	3 (9.4)	29 (90.6)	32	
Annoy when people criticize your habit (n=117)				
Yes	10 (10.5)	85 (89.5)	95	0.842
No	2 (9.1)	20 (90.9)	22	

Feel guilty about your habit (n=117)				
Yes	10 (10.6)	84 (89.4)	94	0.783
No	2 (8.7)	21 (91.3)	23	
Need to consume tobacco first in the morning (n=117)				
Yes	7 (10.8)	58 (89.2)	65	0.838
No	5 (9.6)	47 (90.4)	52	
Feel after tobacco consumption (n=117)				
Tension free	4 (9.8)	37 (90.2)	41	0.973
Energized (very active)	7 (10.3)	61 (89.7)	68	
Satisfied	1 (12.5)	7 (87.5)	8	
Have you tried to discontinue (n=117)				
Yes	7 (9.1)	70 (90.9)	77	0.564
No	5 (12.5)	35 (87.5)	40	
Interested in quitting (n=117)				
Yes	7 (9.5)	67 (90.5)	74	0.709
No	5 (11.6)	38 (88.4)	43	
<b>Total</b>	<b>12 (10.3)</b>	<b>105 (89.7)</b>	<b>117</b>	

Table 2 shows the respondents those feel cut down tobacco use and feel guilty about their habit was seen more aware than those did not feel cut down and did not feel guilty about their habit but the difference was

not significant. The respondents those did not interest in quitting tobacco were seen more aware than those Interested in quitting but the difference was not significant.

**Table 3: Attitude towards tobacco consumption among whole population and aware of tobacco consumption (N=205)**

Characteristics	Awareness of tobacco consumption		Total	P- value
	Yes	No		
How can control the problem of tobacco consumption				
Awareness program	22 (41.5)	31 (58.5)	53	0.028
Bann the production	49 (50.5)	48 (49.5)	97	
Behavior change	5 (41.7)	7 (58.3)	12	
Strong policy	2 (16.7)	10 (83.3)	12	
Stop marketing	1 (20.0)	4 (80.0)	5	
Medicine	5 (19.2)	21 (80.8)	26	
*How can be discourage smoking				
Strict low				
Yes	53 (42.7)	71 (57.3)	124	0.525
No	31 (38.3)	50 (61.7)	81	
Recreational activities				
Yes	8 (44.4)	10 (55.6)	18	0.754
No	76 (40.6)	111 (59.4)	187	
Education				
Yes	16 (39.0)	25 (61.0)	41	0.776
No	68 (41.5)	96 (58.5)	164	
Family support				
Yes	20 (39.2)	31 (60.8)	51	0.768
No	64 (41.6)	90 (58.4)	154	

Are you aware of anti-tobacco law				
Yes	46 (39.3)	71 (60.7)	117	0.577
No	38 (43.2)	50 (56.8)	88	
<b>Total</b>	<b>84 (41.0)</b>	<b>121 (59.0)</b>	<b>205</b>	

\*percentages are based on multiple responses

The respondents those thinking the problem of tobacco consumption can control by ban the production, awareness program and behavior change was seen significantly more aware ( $P < 0.05$ ). The respondents those thinking the smoking can be discourage by recreational activities and strict low was seen more aware but the difference was not significant (Table 3).

## DISCUSSION

Smoking and the use of tobacco is the single major cause of non-communicable diseases. Resulting in four million deaths a year, smoking has a great risk, socially and economically.<sup>12</sup> The South East Asia region of the WHO alone shares the burden of 90% of global smokeless tobacco (SLT) consumers.<sup>6</sup> The respondents started consuming tobacco at the age of 15-25 years was higher (14%) than more than 25 years (10%) and less than 15 years (7.4%) but the difference was not significant. A study conducted by Bhimarasetty DM et al showed that more than half of respondents (56%) initiated smoking during the 18th, 19th or 20th year of age.<sup>13</sup> In a similar study 20% of the respondents started smoking before the age of 14 yrs.<sup>14</sup> Nearly 23% of the subjects in another study initiated smoking at the age of less than 18 years.<sup>13</sup> This may be due to the difference in setting of the different studies. The respondents started consuming tobacco due to recreation (13.8%) and the presence of adult smokers in the family (13.6%) was seen more aware than peer pressure (7.6%) but the difference was not significant. Exposure to adult smokers in the family and peer's smoking are significant predictors of being susceptible to smoking and established smoking.<sup>15</sup> Various factors may play a role in initiation of smoking among which, exposure to parent and peer's smoking<sup>16</sup>, feeling mature, seeking attention and coolness<sup>17</sup> have been named by some studies. These factors are related to the culture, traditions and other characteristics of a country. The respondents taking cannabis with smoking was seen more aware (14%) than those smoking with alcohol

(8.7%) and pan parag (7.1%) but the difference was not significant. The use of tobacco, especially cigarettes, has been associated with illicit drug use in other U.S. populations.<sup>18</sup> Illicit drug use by blue collar workers may precede workplace accidents, which represents a safety concern to both workers and the public.<sup>19</sup> Workplace interventions that target tobacco users should include screening for illicit drug use and include prevention initiatives and treatment referrals as necessary.<sup>19</sup> The respondents those did not interest in quitting tobacco was seen more aware (11.6%) than those Interested in quitting (9.5%) but the difference was not significant. About 3/4ths of smokers (74.4%) were willing to quit smoking. Among them nearly 70% had made one or more prior attempts.<sup>13</sup> More than half of those willing to quit were showing interest to join smoking cessation programs. Tobacco cessation interventions are clinically effective and cost- effective, relative to other commonly used disease prevention intervention and medical treatments.<sup>20</sup> The respondents those thinking the problem of tobacco consumption can control by ban the production (50.5%), awareness program (41.5%) and behavior change (41.6%) was seen significantly more aware than those thinking it can control by stop marketing (20%), medicine (19.2%) and strong policy (16.7%) ( $P < 0.05$ ). The Government of Nepal has implemented a complete ban on tobacco advertisement on electronic and print media since the late 1990s. Recently, the Tobacco Control and Regulation Act, Nepal (2068 BS/2011)<sup>21</sup> was endorsed which includes: a ban on smoking in public places, enclosed houses and vehicles; displaying "No Smoking" warning signs in public places; requirements that packaging should not contain any logo, picture, or word that attracts a child (plain packaging); a ban on manufacturing goods that look similar to cigarettes, beedis or cigars; 75% of the packaging of the tobacco related products should contain warnings on the ill health effects of tobacco use and a ban on selling or distributing free tobacco to a child aged <18 years and a pregnant mother; and a ban on the use of tobacco as a gift item. Although

laws have been adopted prohibiting tobacco sales to minors, it appears that this has not been sufficient to prevent smoking, but it may help to reduce it.<sup>22</sup> Limitation of this study includes the cross sectional nature of data which precludes from drawing causal inferences. Tobacco use, specially smoking, is sometimes associated with social stigma. Therefore, some of the individuals may under-report their smoking habits. However, this study does provide social determinants which are to be focused for future interventions.

## CONCLUSION

We conclude that people those only smoking was seen more aware and no anyone was found aware those only chewing. People started consuming tobacco due to the presence of adult smokers in the family and taking cannabis with smoking was seen more aware but the difference was not significant. The people those feel cut down tobacco use and feel guilty about their habit but the difference was not significant. People those thinking the problem of

tobacco consumption can control by ban the production, behavior change and awareness program was seen significantly more aware. The smoking can be discouraged by recreational activities and strict law was seen more aware but the difference was not significant. Some factors were found to be high but our study couldn't significantly associate with awareness of tobacco consumption. So, further strong study probably a case control study can make picture clearer.

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