

A Study on Patterns of Tobacco Use Among School Teachers in Mahottary District of Nepal

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Abstract

Introduction	The consumption of tobacco related products by the school teachers is a bad habit. On account of its wastage of money, it is injurious to health and wrong role model for the students.
Objective	To find out the patterns of tobacco use and its influencing factors among primary, lower secondary and secondary school teachers in Mahottary district of Nepal.
Methods	Cross-sectional descriptive study was conducted using multistage proportionate random sampling technique among 210 teachers aged 22 to 59 years old from 85 schools in Mahottary district during January to June, 2007.
Results	Overall, prevalence of any form of tobacco use among school teachers was 57.1 percent. Only male teachers (64.9%) used tobacco. According to level wise, Primary (66.1%), Lower Secondary (63.9%) and Secondary level (61.8%) teachers were users of tobacco. Tobacco use was more prevalent in primary school teachers. Khaini (68.3%) and pan (60.8%) were mainly used by the teachers. More than 61 percent of the teachers were daily users of smoking. 60.8 percent of the teachers used tobacco inside the school premises. Most of the users initiated tobacco by 16-20 years of age. A substantial number of teachers initiated tobacco usage due to imitation and peer pressure. More than fifty per cent of the teachers were using tobacco due to dissatisfaction from profession, family problems, entertainment, as a part of culture, as it is easily accessible and available, etc.
Conclusion	A high proportion (57.1%) of school teachers were any form of tobacco users. Only male teachers (64.9%) used tobacco but female teachers did not use any form of tobacco at all because of social norm. Most (60.8%) of the teachers used tobacco and tobacco products inside the school premises. This behavior of teachers will affect students to start using tobacco.
Keywords	School teachers, Patterns of tobacco use, Influencing factors.

Introduction

Tobacco use increases the risk of development of a number of diseases. Even if current tobacco use stopped, the residual burden of disease among past users would cause disease for decades in the future¹.

Tobacco is a plant for its leaves, which are smoked, chewed or sniffed for a variety of effects. It is an addictive substance as it contains nicotine. In addition to nicotine, tobacco contains at least 43 known carcinogens and more than 4,000 chemicals^{2,3}. The World Health Organization (WHO) attributes 4.9 million deaths a year due to tobacco i.e. one death

every eight seconds. If current trends continue, there will be one death every three seconds by 2030 and a third of them in developing countries and this figure is expected to rise to more than 10 million deaths a year by 2030⁴. At present, tobacco kills more than half a million women per year worldwide⁵.

The Global Youth Tobacco Survey (GYTS) study covers 140 countries around the world, including Nepal. Currently, out of the 186 million, 34.8 million were using some form of tobacco and 25.8 million were smoking cigarettes^{6,7}. Teens who smoke are

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much more likely to use alcohol, drugs, engage in fighting and unprotected sex⁸.

In Nepal, tobacco is considered by farmers to be a cash crop and is being cultivated in about 4000 hectares of land in the Terai region of Nepal; about 6000 metric tones of tobacco is produced annually^{9,10}. Around 41 Nepalese die daily from tobacco-related diseases, which amounts to 1 500 deaths per year.¹¹ Among three ecological regions, the overall tobacco use prevalence is highest in the high hill (68.2%), followed by the Terai (42.4%) & the low hills (40.9%). According to the Nepal Demographic & Health Survey 2002, nearly three fourths of men smoke cigarettes, *bidis* or other tobacco products. The consumption of tobacco has increased 1200 fold in the last 15 years¹². In the central region, 19.9 percent teachers are users of tobacco products.

In accordance with Social Cognitive Theory, adolescents are more likely to take up smoking if they observe significant others' smoking.

Methods

This was a school-based cross sectional study in the Mahottary district of Nepal which was selected purposively. There were 927, 264 and 262 teachers in primary, lower secondary and secondary level schools respectively. Multistage random sampling technique was used for the selection of individual respondents. So, required number of teachers from primary, lower secondary and secondary school were 134 (63.7%), 38 (18.2%) and 38 (18.1%) selected respectively. Verbal consent was taken from school authority and all the participants before initiating the study. A structured pre tested interview schedule was used to obtain the data from the respondents. All the data were entered in the data-base created in SPSS (11.0 version) and analyzed by using tables, charts and figures.

Results

There was a difference in male (88.1%) involvement during data collection than the female (11.9%)

counterparts. More than three fifths (63.7%) of the respondents were from primary school and less than one-fifths were from lower secondary and secondary schools respectively. Near about, 37.0 percent of the respondents had a qualification of School Leaving Certificate (SLC). The mean age of the respondents was 41.56 years.

From table 1, it is evident that, 57.1 percent of the school teachers used any forms of tobacco among which male teachers were 64.9 percent. Out of total tobacco users, primary school teachers used tobacco products as smoking (26.6), smokeless (26.6%), application (44.2%) and others (1.6%). All together 68.3 percent of school teachers used application (quid) that was significantly higher than other forms of tobacco. It was statistically significant (table 2).

Table 3 shows that, 33.3 percent of the school teachers used cigarette followed by *bidi* (9.2%), filtered cigarette (30.0%), non-filtered cigarette (12.5%), pan masala (23.3%), pan (60.8%), gutkha (22.5%), ready-made tobacco (8.3%) and *khaini* (68.3%). It indicated that there were more school teachers had a habit of *khaini*.

Table 4 shows that, there is a statistical significant difference observed in using the tobacco by school teachers in the school premises.

Figure 1 shows that, school teachers started to smoke (11.7%), use smokeless tobacco (15.8%) and application of tobacco (25.0%) in the age of 16-20 years.

Table 5 shows that, 14.2, 10, 25 percent and 10, 20.8 and 21.7 percent of the respondents started smoking, smokeless and application of tobacco due to imitation and peer pressure respectively.

There was a statistical significant difference observed between most of the causative factors and levels of schools (table 6).

Table 1: Sex wise distribution of respondents as any form of tobacco used

Sex	Yes	No	Total
Male	120 (64.9)	65 (35.1)	185 (88.1)
Female	-	25 (100.0)	25 (11.9)
Total	120(57.1)	90(42.9)	210(100.0)

Note: Values in the parenthesis indicate percentage.

Table 2: Forms of tobacco used in different levels of School

Types of tobacco	(N=120)			
	Primary	L. Secondary	Secondary	Total
Smoking	32 (26.6)	5 (4.2)	7 (5.8)	44 (36.6)
Smokeless	32 (26.6)	11 (9.2)	9 (7.5)	52 (43.3)
Application	53 (44.2)	15 (12.5)	14 (11.6)	82 (68.3)
Others	2 (1.6)	-	1 (0.9)	3 (2.5)

Smoking: $\chi^2 = 8.533$, $df = 1$ and $P = 0.003$; smokeless $\chi^2 = 2.133$, $df = 1$ and $P = 0.144$;
Application $\chi^2 = 16.133$, $df = 1$ and $P = .000$; others $\chi^2 = 108.3$, $df = 1$ and $P = .000$

* Multiple responses.

Note: Values in the parenthesis indicate percentage.

Table 3: Types of tobacco product used

Tobacco products	(N=120)	
	Frequency	Percentage
Cigarette	40	33.3
Bidi	11	9.2
Filtered	36	30.0
Non-filtered	15	12.5
Pan Masala	28	23.3
Pan	73	60.8
Gutkha	27	22.5
Ready made tobacco	10	8.3
Khaini	82	68.3

* Multiple responses

Table 4: Tobacco used in the School premises

Response	Levels of School			
	Primary(N=76)	Lower Secondary (N=23)	Secondary(N=21)	Total(N=120)
Yes	46 (60.5)	14 (60.9)	13 (61.9)	73 (60.8)
No	30 (39.5)	9 (39.1)	8 (38.1)	47 (39.2)
Total (N=120)	76 (63.3)	23 (19.2)	21 (17.5)	120 (100.0)

$\chi^2 = 63.650$, $df = 2$ and $P = .000$

Note: Values in the parenthesis indicate percentage.

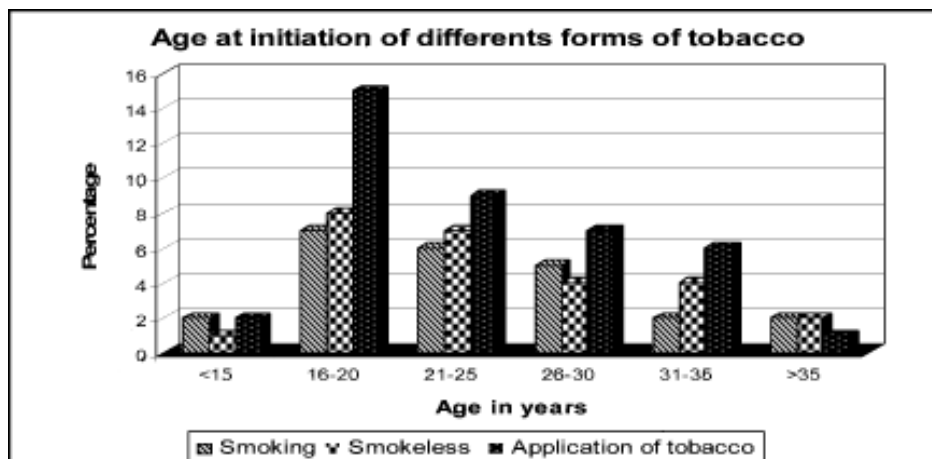
Figure 1: Age at initiation of different forms of tobacco

Table 5: Reasons to start tobacco use

Reasons to start	(N =120)			
	Smoking	Smokeless	Application of tobacco	Total
For fun	5 (4.1)	12 (10.0)	9 (7.5)	26 (21.6)
Imitation	17 (14.2)	12 (10.0)	30 (25.0)	59 (49.2)
Tension	4 (3.3)	5 (4.1)	7 (5.8)	16 (13.2)
Peer pressure	12 (10.0)	25 (20.8)	26 (21.7)	63 (52.5)
Toothache	1 (0.8)	-	2 (1.7)	3 (2.5)
Stop smoking	-	1 (0.8)	1 (0.8)	2 (1.7)
No cause	5 (4.1)	-	5 (4.1)	10 (8.2)

* Multiple responses

Note: Values in the parenthesis indicate percentage.

Table 6: Reasons for tobacco usage among school teacher

Causative factors	Primary (N =76)	L. Second (N =23)	Secondary (N =21)	Total (N =120)	X ² (p-value)
Using tobacco for relief stress and tension	58 (76.3)	12 (52.1)	15 (71.4)	85 (70.8)	4.98* (<0.01)
Using tobacco due to family problem	22 (28.9)	3 (13.1)	4 (19.1)	29 (24.2)	2.80** (<0.05)
Using tobacco as a part of cultur	66 (86.8)	16 (69.6)	16 (76.2)	98 (81.7)	4.03** (<0.05)
Using tobacco as it is easily accessible and available	54 (71.1)	16 (69.6)	14 (66.7)	84 (70.0)	0.15*** (>0.05)
Using tobacco to improve performance	16 (21.1)	4 (17.4)	6 (28.6)	26 (21.7)	0.85*** (>0.05)
Using tobacco for fun or entertainment	61 (80.2)	15 (65.2)	16 (76.2)	92 (76.7)	2.23** (<0.05)
Using tobacco to relieve toothache or as a medicine	25 (32.9)	5 (21.7)	4 (19.1)	34 (28.3)	2.16** (<0.05)
First exposure to smoking/ chewing tobacco as an experiment or trial	66 (86.8)	19 (82.6)	17 (80.9)	102 (85.0)	0.57*** (>0.05)
Using tobacco because of non-satisfaction from profession	11 (14.5)	3 (13.1)	6 (28.6)	20 (16.7)	3.16*** (>0.05)

Note: Values in the parenthesis indicate percentage.

(* = P value <0.01 ; ** = P value <0.05 and *** = P value >0.05 and <0.10)

Discussion

It was found that 57.1 percent of the school teachers used any form of tobacco, where as merely 64.9 percent of the male teachers use any form of tobacco. It was statistically significant. The finding is almost similar of [Sorensen et al. \(2005\)](#), 78 percent of teachers in Bihar and 31 percent from Maharashtra were current tobacco users¹³.

Result also shows that 66.1 percent of the primary level teachers smoked, use smokeless tobacco, application of tobacco significantly more than in lower secondary (63.9%) and secondary level (61.8%). All together, more than three fourth (68.3%) of school teachers used application of tobacco that was significantly higher than other forms of tobacco.

It was statistically significant. Similarly, [Barrueco et al. \(2000\)](#) reported that 29.7 percent of Spanish teachers are smokers, smoking significantly more in Primary education than in Secondary education¹⁴.

In this study, 33.3 percent of the school teachers used cigarette followed by 9.2 percent *bidi*, 30 percent filtered cigarette, 12.5 percent non-filtered cigarette 23.3 percent Pan masala, 60.8 percent Pan, 22.5 percent Gutkha, 8.3 percent ready-made tobacco and 68.3 percent Khaini. More school teachers had a habit of Khaini. Similarly, [Sinha et al. \(2003\)](#) reported that among school personnel in eight North-eastern states of India (Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura), cigarette was the most prevalent form of smoking (range 41 to 55%) in four states whereas in other four states it was *bidi* (range 34 to 53%)¹⁵.

This study shows 61.9 percent of the secondary school teachers used tobacco in the school premises which was higher than in primary (60.5%) and lower secondary (60.9%). Out of the total 60.8 percent school teachers used tobacco in the school premises. It is statistically significant.

In this study, approximately half (49.2%) and more than half (52.5%) of the respondents started smoking, using smokeless and application of tobacco due to imitation and peer pressure respectively. According to [Warren et al. \(2006\)](#) found the student exposure to secondhand smoke was high both at home (more than four in ten) and in public places (more than five in ten)¹⁶.

It was found that exposure to factors was significantly associated with the initiation of tobacco use, these were 70.8 percent for relief stress and tension; 24.2 percent family problem; 81.7 percent as a part of culture; 70 percent as it was easily available; 21.7 percent for improving performance; 76.7 percent for fun or entertainment; 28.3 percent to relieve toothache; 16.7 percent due to dissatisfaction from profession. These were statistically significant (P value < 0.01 and < 0.05). Similarly, [Pandey et al. \(2001\)](#) reported that common reasons given for tobacco consumption were curiosity (37.9%), to be social (22.0%), enjoyment (21.2%), to relieve stress (8.17%) and improving performance (5.8%)¹⁷.

Most of the teachers used tobacco and tobacco related products inside school premises. This behavior of teachers will affect students to start using tobacco. More than two fifth teachers were using tobacco since school life and also after entering in

teaching profession due to imitation and peer pressure and used usually anywhere. Most of the teachers are using tobacco due to dissatisfaction from profession, family problem, entertainment, as a part of culture, as it is easily available, etc.

School education authorities should develop 'code of conduct' regarding the prohibition of tobacco use in the school premises (district/region-wise) and government should provide training and other incentives to all teachers specially the primary teachers to promote prohibition of tobacco use is, therefore, recommended.

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