

**Tobacco Use among Adolescents of A Public School of Kaski District**Sailaja Sharma,<sup>1</sup> Ratna Shila Banstola,<sup>1</sup> Sakuntala Pageni<sup>2</sup><sup>1</sup>IOM, Pokhara Campus, TU, <sup>2</sup>PN Campus, Pokhara, TU**ABSTRACT**

**Introduction:** Tobacco, one of the proven risk factors, contributes substantially to the rising epidemic of non-communicable diseases.

**Methods:** This cross-sectional study was conducted to determine the prevalence and associated factors among adolescents of a selected public School in Kaski district. Non-probability purposive sampling technique was adopted and data was collected with self-administered questionnaire from 168 respondents.

**Results:** The prevalence of tobacco-use was 19.6 percent and mean age of initiation was 13.84 years. The most common reasons for smoking were peer pressure (63.3%), imitation (27.3%), family influence (27.3%) and quest for new experience (21.2%). Tobacco-use was strongly associated with ethnicity ( $p=0.03$ ), mother's education level ( $p=0.02$ ), father's occupation ( $p=0.03$ ), peer pressure ( $p=0.01$ ) and friends smoking habit ( $p=0.03$ ).

**Conclusion:** Hence tobacco-focused interventions are required for school going adolescents to promote cessation among users and prevent its initiation.

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**Keywords:** *Adolescent, Tobacco-use*

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**INTRODUCTION**

Tobacco-use is a major risk factor of non-communicable diseases such as cancer (NCDs) making one of the biggest public health threats the world has ever faced.<sup>1,2</sup> The NCDs have already posed a substantial economic burden, and will be the biggest in developing and underdeveloped countries.<sup>3</sup> This wide spread behavior among youth across the world is a major preventable cause of death. Tobacco-attributable mortality is projected to increase from 3.0 million deaths in 1990 to 8.4 million in 2020 and it could rise to 8 million by 2030 with more than 80 percent of premature deaths in developing countries.<sup>3</sup> Hence, if current trends are not reversed, one billion people will be killed in the 21st century, as already it killed 100 million in 20th century.<sup>4</sup> Furthermore, WHO has estimated that tobacco-use kills six million people every year throughout the world and about 600,000 are also estimated to die due to the effects of second-hand smoke.<sup>5</sup> Approximately one person dies from a tobacco related illness every 6 seconds, and unfortunately, tobacco-use is on the rise, has doubled in the last four decades and more prevalent among young-people and the poor.<sup>2</sup> The first use of tobacco occurs before high school graduation commonly before the age of 18. Due to the nicotine addiction occurred with regular use of tobacco, adolescent smokers are most likely to continue and become adult smokers.<sup>6</sup>

South Asia, where more than half of the world's poor live, is the single largest area for production and consumption, and

where approximately 1.2 million people die every year from tobacco-use. As per the Global Youth Tobacco Survey (GYTS) except Bhutan and Afghanistan, showed one-in-ten students (13-15 year-old) smokes and Nepal has highest prevalence among females and in the fourth rank for male tobacco-use.<sup>1</sup>

Past studies in different parts of Nepal has shown the variation in its prevalence among adolescents, for example, a study in Kalaiya district that 25.3% were 'ever users' of tobacco products with higher among boys (31% vs 14.4 %) with mean age of initiation  $13.38 \pm 1.62$  years.<sup>7</sup> Another study in Sunsari district has reported as 19.7%.<sup>8</sup> In Western Nepal, among college students overall prevalence of ever users and current users was 13.9% and 10.2% with median age at initiation of 16 years.<sup>9</sup> Those studies have revealed association of certain factors such as sex (males), ethnicity (janajati), lower levels of school achievement, family members and friends using tobacco products, exposed to tobacco-use at home and public place, lower self-images, exposure to tobacco advertising, and having pocket money.<sup>7, 8, 9</sup> Therefore, in this context, the researchers proposed this study on their felt need and interest to identify the prevalence of tobacco-use among school-going adolescents and the factors associated with it in a selected public school of Kaski district.

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## METHODS

This cross-sectional study was conducted in a public school in Pokhara metropolitan city among 168 school-going adolescents of 12 to 17 years old, selected by non-probability purposive sampling method. Data was collected with self-administered questionnaire that consisted of two parts, first related to demographic information and the later consisted of questions related to tobacco-use which was based on Global Youth Tobacco Survey (GYTS) Questionnaire for Nepal, 2010.<sup>10</sup> Pretesting of the instrument and then necessary modification were done, i.e. questions were made clearer, well sequenced and easy to answer. Ethical review and approval for this study was obtained from the research committee of Tribhuvan University, Institute of Medicine, Pokhara Campus, then formal permission was taken from concerned school authority. Informed verbal consent/assent from adolescents was obtained prior to data collection. The purpose of the study was explained to the respondents, who were ensured that the information would be used only for the research purpose. Anonymity was maintained and priority was given to the rights and welfare of the respondents throughout the study. Data was collected in the presence of researcher only in their respective classroom. Data analysis was done in SPSS software applying both the descriptive (frequency, percentage, mean and SD) and inferential (chi-square test) statistics to see the association between selected independent and outcome variables.

## RESULTS

Table 1: Socio Demographic Information of respondents (n=168)

Characteristics	Number	Percentage
Sex		
Male	82	48.8
Female	86	51.2
Ethnicity		
Brahmin/Chhetri	70	41.7
Janajati	91	54.2
Dalits	7	4.2
Type of family		
Nuclear	95	56.5
Joint	73	43.5
Father's education		
Illiterate	55	32.7
Literate	113	67.3
Mother's education		
Illiterate	71	42.3
Literate	97	67.3

Table 1 reveals that, of the 168 respondents, females, those belonged to Janajati ethnic group and from nuclear family were slightly higher in proportion.

Table 2: Prevalence of Tobacco use among adolescents (n=168)

Tobacco users	Number	Percentage
Users	33	19.6
Non users	135	80.4
Among users (n=33)		
Regular users	4	12.1
Type of tobacco used*		
Smoking	30	90.9
Smokeless	6	18.2

Table 3: Tobacco Use by Family and Friends, Exposure and Influence (n=168)

Characteristics	Number	Percentage
Tobacco-use by		
Father	97	63.8
Mother	26	17.1
Siblings	7	4.6
Others	36	23.7
Friends	99	65.7
Peer Pressure		
Yes	34	20.2
No	134	79.8
Mass media influence		
Yes	98	58.3
No	70	41.7
Exposure to second hand smoking		
Yes	80	47.6
No	88	52.4
Place of exposure (n=80)		
Public places	42	52.5
Home	26	32.5
School	12	15

Table 2 shows that 19.6 percent of students ever used tobacco product, among them 12.1 percent were regular users and smoking tobacco was the most commonly used (90.9%).

Table 3 revealed that 65.7 percent of the respondents have their friends using tobacco products followed by father using tobacco in a family (63.8%). Twenty percent of them stated that their friends encouraged them to use tobacco and more than half of them were exposed to tobacco advertisement. Nearly 48 percent were exposed to second hand smoking and i.e. at public place (52.5%) followed by at home (32.5%)

Table 4: Characteristics of Tobacco Users (n=33)

Characteristics	Number	Percentage
Sex		
Male	20	60.6
Female	13	39.4
Ethnicity		
Brahmin/Chhetri	7	21.2
Janajati	24	72.7
Dalits	2	6.1
Type of family		
Nuclear	21	63.6
Joint	12	36.4
Age at initiation		
12-14 years	24	72.7
15 years and above	9	27.2
Mean± SD (13.84± 1.03)		
Reason to use*		
Peers pressure	21	63.3
Imitation	10	30.3
Family influence	10	30.3
Quest for new experience	5	21.2
Stress/anxiety	5	15.2
Easily available	5	15.2
Place of smoking		
Toilets/hiding	17	51.5
Home	11	33.4
School	3	9.1
Public places	2	6.1

\*Multiple Response

Table 4 illustrates that among tobacco users, males (60.6%), adolescents from Janajati group (72.7%), and nuclear families (63.6%) were more than others. Mean age of initiation was 13.84 years. The reason given for tobacco use were peer pressure (63.0%) followed by imitation (30.3%) and family influence (30.3%). The most preferred place for tobacco-use was toilet (51.5%) where they could hide.

Table 5: Association between Tobacco Use and Socio Demographic Characteristics (n=168)

Variables	Tobacco-Use		p value#
	Yes Number (%)	No Number (%)	
Sex			
Male	20(24.4)	63(75.6)	0.13
Female	13(15.1)	73(84.9)	
Ethnicity			
Brahmin/Chhetri	7(10)	63(90)	
Janajati	24(26.4)	67(73.6)	0.03*
Dalits	2(28.6)	5(71.4)	

Family Type			
Nuclear	21(22.1)	74(77.9)	0.36
Joint	11(13.6)	61(83.6)	
Father's education			
Illiterate	6(10.9)	49(89.1)	0.05
Literate	27(23.9)	86(76.1)	
Mother's education			
Illiterate	8(11.3)	63(88.7)	0.02*
Literate	25(25.8)	72(74.2)	
Father's occupation			
Agriculture	6(10.5)	51(89.5)	0.03*
Non-agriculture	27(24.3)	84(75.7)	
Mother's occupation			
Unemployed	14(21.9)	50(78.1)	0.57
Employed	19(18.3)	85(81.7)	

\*significant at &lt;0.05; # Chi-squared test

Table 5 displays that ethnicity (p=0.03), mother's education (p=0.02) and father's occupation (p=0.03) were significantly associated with tobacco-use.

Table 6: Association between Tobacco Use and Related Factors (n=168)

Variables	Tobacco-Use		p value#
	Yes Number (%)	No Number (%)	
Peer pressure			
Yes	12(35.3)	22(64.7)	0.01*
No	21(15.7)	113(84.3)	
Mass media influence			
Yes	20(20.2)	79(79.8)	0.83
No	13(18.8)	56(81.2)	
Tobacco-use by others			
Father			
Yes	20(20.6)	70(79.4)	0.71
No	13(18.3)	58(81.7)	
Mother			
Yes	5(19.2)	21(80.4)	0.95
No	28(19.7)	114(80.3)	
Siblings			
Yes	2(28.6)	5(71.4)	0.54
No	31(19.3)	130(80.7)	
Friends			
Yes	25(25.3)	74(74.7)	0.03*
No	12(35.3)	22(64.7)	

\*significant at &lt;0.05, # Chi-squared test

Table 6 illustrates that tobacco-use was significantly associated with peer pressure ( $p=0.01$ ) and friend's use of tobacco ( $p=0.03$ ).

## DISCUSSION

This study was intended to identify the prevalence and its association with some demographic, family and peer related factors of school-going adolescents in Kaski district. Present study revealed the prevalence of tobacco-use (ever users) 19.6% which is almost similar to past studies in other parts of the country<sup>9,11</sup> but its higher than a study conducted in Western Development Region which showed the prevalence of 10.3%. The difference might be due to the study setting or it can be said that the prevalence is increasing or higher among urban school adolescents because past study included 2 rural schools and one urban school in their study.<sup>12</sup> Regarding the pattern of smoking, 39.4% were occasional and 12.1 percent were regular users and this is in line to other studies.<sup>11,13</sup> Other studies too agreed with our findings of male predominance on tobacco-use,<sup>8, 12,13,14</sup> adolescents from Janajati ethnic group,<sup>9</sup> and from nuclear family.<sup>9,11</sup> This study found the mean age at initiation of tobacco-use was of 13.84 years which corroborates with past study.<sup>14</sup> Reported reasons for tobacco-use were peer pressure (63.3%), imitation (27.3 %), family influence (27.3%) and quest for new experience (21.2 %) in this study and these reasons were consistent with past studies.<sup>9, 13</sup> Similar to the past study, current study revealed that common place of smoking was toilet/hiding (51.5%) followed by home (33.4%).<sup>14</sup> In this study, 65.1% of the students reported that their friends use tobacco followed by 63.8% of father's use and other studies also affirmed with this.<sup>13,14,15</sup> The present study indicated the similar exposure to second hand smoking that of other studies.<sup>14,15</sup>

In line with other past studies this study revealed a significant association of tobacco-use with ethnicity ( $p= 0.03$ ), mother's education ( $p=0.02$ ) and father's occupation ( $p=0.03$ ) amongst various socio demographic factors.<sup>10, 16</sup> But in contrast to this, a study in western Nepal reported the association with mother's occupation this might be due to the difference in setting and population. Amongst other variables, current study depicted the significant association of peer pressure ( $p=0.01$ ) and having friends using tobacco ( $p=0.03$ ) with their tobacco using behavior and these findings were matched to studies done at various places within in the country. However, with this cross-sectional study from only one school limits its generalization.<sup>13,14,16,17</sup>

## CONCLUSION

There was a significant prevalence of tobacco-use with initiation at an early age of thirteen years. Associated factors were ethnicity, mother's education, father's occupation, and those having peer pressure and having friends with tobacco using

behavior. Therefore, it is recommended that making mothers aware especially focusing the illiterate mothers, as well as making parents and adolescents aware about peer pressure and peers election will have positive impact. Along with this health education/awareness, screening and counseling regarding tobacco-use and its consequences at school level will be helpful. Hence, in clue of present association, further large-scale study could be conducted to find out the exact effect of parental and peer related factors on adolescents' tobacco-use.

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