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# Tobacco Use Among Long Route Bus Drivers and Staffs of Dharan Eastern Nepal a KAP Study

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**Abstract:** Tobacco use remains a major cause of preventable deaths worldwide. WHO estimated that about 25% of Nepalese population smokes. In Nepal it is widely believed that tobacco use among bus drivers and staffs is very high. This descriptive cross sectional study was conducted in Dharan bus station among 300 bus drivers and staffs who voluntarily responded with self-administered questionnaire to estimate the prevalence of tobacco consumption and to assess their knowledge, attitude and practice regarding tobacco use. Prevalence of tobacco consumption among the respondents was 96.3%. Tobacco initiation at the age <18 years was 52%. 'Peer pressure' and 'Influenced by family member(s)' were the reasons for initiation while 'Like the intoxicated feeling' (67.5%) and 'Feeling Mature' for continued use. Respondents (97%) claimed they knew about the injurious effect of tobacco use, diseases cited being respiratory, cancer and cardiac, but only 48.9% knew this before initiating its use. A 75.8% of tobacco consumers had tried to quit it due to 'Health issue' (65.3%) followed by 'Pressure from family member/s' and 'Economic burden'. Only about 20% were successful in quitting. The main reason for failure was feeling of addiction (69.7%). Among current tobacco users, 95% would like to seek medical help in quitting, if available. Our study concluded that the prevalence of tobacco consumption among bus drivers and staffs was very high. More than half started its use at age <18 years without prior knowledge of harmful effects of tobacco use. Majority would like to seek medical help as they have failed quitting it due to feeling of addiction. Targeted programs such as nicotine replacement clinics would be highly effective for them with desire to quit tobacco use with medical help.

**Keywords:** Tobacco Use, Bus Drivers, Eastern Nepal, Knowledge Attitude Practice

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## 1. Introduction

'Tobacco use (smoke and smokeless) remains a major cause of preventable deaths worldwide accounting about six million people each year with many of these deaths occurring prematurely.' [1] Tobacco consumption (TC) is not only associated with ill-health, disability and death from non-communicable chronic diseases, it also increases risk of death from communicable diseases. Despite its global burden, tobacco still is a legal drug. The endorsement of MPOWER package measures introduced by World Health Organization (WHO) in 2008 (where M: Monitoring tobacco

use and prevention policies; P: Protecting people from tobacco smoke; O: Offering help to quit tobacco use; W: Warning about the dangers of tobacco; E: Enforcing bans on tobacco advertising, promotion and sponsorship, and R: Raising taxes on tobacco) in law, are still the issues imposing challenges for their implementation. 'Report of WHO points the unavailability of Programs to offer help to quit tobacco use as a potential field to improve in Nepal.' [2]

'In 2015, WHO estimated that about 21.5% of Nepal's population among which 34.9% of men and 9.8% of women

smoked.’ [1] Though there is no exact data about burden of smokeless tobacco use, a national Global Youth Tobacco Survey (GYTS) in 2007 reported that overall 7.9% of the students ever smoked cigarettes and 8% used other tobacco products. [3] Similarly, Nepal Adolescents and Youth Survey (NAYS) published in 2012 revealed 13% of adolescents and youth ever used smoking or smokeless tobacco and 6% used illicit drugs. [4] As noted by Sinha *et al* [5] in 2012, prevalence of smokeless tobacco was 18.6% among adults aged 15-64 years; 31.2% among males and 4.6% among females. ‘A study conducted comparing the tobacco use among youth of Bangladesh, Nepal and Srilanka revealed prevalence is high in Nepal (9.4%) than Bangladesh (6.9%) and Srilanka (9.1%) but the age of initiation of tobacco use was the highest among Nepali youth (10.24 yrs.) compared with Bangladeshi (9.6 yrs.) or Srilankan (8.61 yrs.).’ [6] ‘The age of initiation of tobacco use in Nepal is early to late adolescence.’ [7], [8], [9], [10], [11] Although the result of NAYS (2012), 93% adult and youth expressed their confidence to give up alcohol/tobacco/drug, a study conducted by Aryal *et al* [9] concluded that the smoking susceptibility among adolescents in a peri-urban area of Nepal is as high as 50%.

‘Factors like education, occupation, influence from media, movies and family members, for stress relief, pleasure during tobacco use, better self-esteem and occupational boredom are associated with tobacco use. Similarly, reasons for not quitting tobacco use being unaware of the adverse effects of its use, lack of information or methods of quitting, lack of motivation to quit and unsuccessful attempts.’ [7], [8], [9], [10], [11], [12], [13], [14], [15]

Though there are no sufficient studies to support the notion, it is widely believed in Nepal that bus drivers and staffs are one of the high risk occupational groups for TC. Sreeramareddy *et al* [16] in 2011 concluded that prevalence of TC is significantly high in Nepalese people especially in Kathmandu valley and eastern regions. The current study was conducted in Dharan, which is situated in eastern part of Nepal. Khanal *et al* [12] pointed out that lower education and manual work were more likely to be associated with TC. Furthermore, most of the helping staffs of the long route buses are male of young age group with low education level.

This study was conducted among ‘the long route bus drivers and staffs’ to assess the prevalence and to know their knowledge, attitude and practice regarding tobacco use. The result will be helpful in finding out the prevalence and attributing factors for tobacco use thus filling in the gaps between the KAP of this study population and the existing anti-tobacco programs.

## 2. Methods

### 2.1. Type and Setting of the Study

This is a descriptive cross sectional study conducted among 300 bus drivers and staffs of long route bus departing from Dharan bus station using a self-administered

questionnaire.

### 2.2. Inclusion Criteria

Bus drivers and staffs with minimum one year of experience and willing to participate in the study.

### 2.3. Measurement

The questions were categorized into demographic profile, TC behavior, knowledge regarding injurious effects of TC, attitude regarding TC and willingness for quitting.

### 2.4. Sample (Data Collection)

An official letter was issued from BP Koirala Institute of Health Science requesting to help in the study and sent to Yatayat Vewashahi Sangh (Transport Corporation). All the required data like bus routes, bus numbers, staffs list etc. were obtained. An information sheet was provided and explained by one of the members from research team during interview. A written consent of participants in the study was taken with confidentiality, thus encouraging the participants to give true answers. Furthermore, participants were assured that it’s a voluntary and they can quit from the study at any time without penalty or loss. Responses of illiterate respondents were filled up by a member of the research team. Pretest was done in 10% of the sample size.

### 2.5. Operational Definitions

For the purpose of this study, the following operational definitions are used-

‘Long route bus drivers’ means drivers of the buses departing from Dharan Bus Park on night service basis. ‘Bus Staffs’ means conductor, helper and any assistant driver of that bus. ‘Tobacco use’ means consumption of tobacco in any form, i.e. smoke or smokeless. ‘Ever user’ is a person who had consumed tobacco product any time in past but did not use regularly. ‘Current users’ are the persons who currently consume tobacco. ‘Past user’ is someone who had consumed tobacco in smoking or smokeless form regularly but has not used it from 1 month back to the point of filling questionnaire. ‘Non user’ is person who had never used tobacco in any form as of the day of completing the questionnaire.

### 2.6. Data Analysis

Collected data were entered in Microsoft excel 2007 and converted into SPSS for statistical analysis. Descriptive statistical like percentage was calculated. For inferential statistics, chi square test was applied to find out the significant between dependents and other related variables at 95% CI, where  $p=0.05$ .

### 2.7. Ethical Consideration

Ethical clearance from Institutional Research Committee was obtained before starting the study.

### 3. Results

All respondents were male ranging from 18 years to 53 years (mean age 30.8 years).

Table 1. Demographic profile of respondents.

Characteristics	Categories	No of Respondent	Percentage (%)
Age groups in years	≤25	89	29.7
	26 – 30	66	22.0
	31 – 35	53	17.7
	36 – 40	45	15.0
	>40	47	15.7
Education level	Illiterate	16	5.3
	Literate	173	57.7
	Secondary level	93	31.0
	Intermediate level	17	5.7
	≥ Bachelor level	1	0.3

Among the respondents, 245 (81.7%) were ‘current users’, 44 (14.6%) were ‘past users’ and 11 (3.7%) were ‘non-users’. Among those who used it, 52% started at the age <18 years and 48% at the age >18 years and 70% of them also consumed either alcohol (87.2%) or other illicit drugs (12.8%).

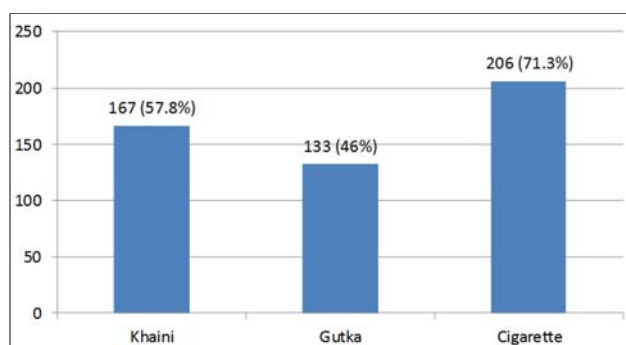


Figure 1. Type of Tobacco used by respondents (khaini and gutka are chewing forms).

Reasons for Initiation of tobacco use were mostly seen as ‘peer pressure’ (31%) followed by ‘influenced by smoking habit of family members/relatives’ (15.2%), ‘due to curiosity’ (14.9%) and for continuation of tobacco use was for ‘enjoying the intoxicated feeling’ (67.5%), ‘feeling mature’ (22.5%), ‘relief from stress’(8%). Also, 75.8% had tried quitting the use of tobacco. Their reasons mainly were ‘due to health issue’ (65.3%), ‘pressure from family member/s’ (21.5%), ‘economic burden’ (11.9%) and ‘not liking the use’ (1.4%). Among them, 79.9% were unable to quit its use due to ‘feeling of addicted to tobacco use’ (69.7%) and ‘seeing others use it’ (27.4%). Our study revealed that 66.3% smokers have tried more than four times to quit its use. Again, 97% responders knew about the injurious effect of tobacco use but only 48.9% knew this before starting its use. Among those who didn’t know the injurious effect of TC on health before its initiation, 90% would not have used it if they had prior knowledge and 95% of current tobacco consumers would like to quit tobacco use with medical help.

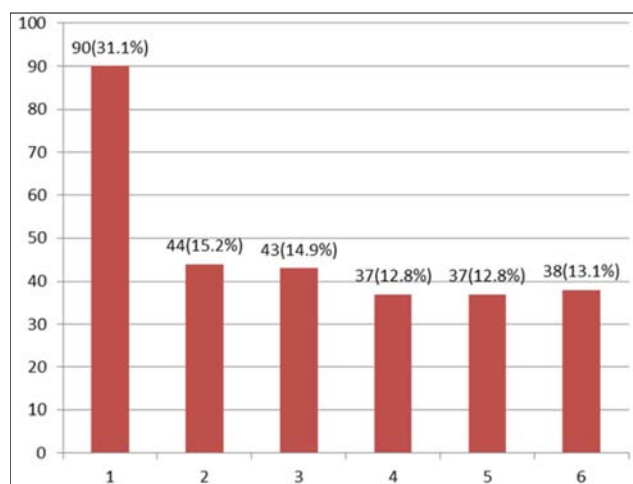


Figure 2. Reasons for Initiation of tobacco use (1=Peers pressure, 2=Due to curiosity, 3=Influenced from family members/ relatives, 4=Influenced from cinema / as fashion, 5=To feel mature, 6=Others).

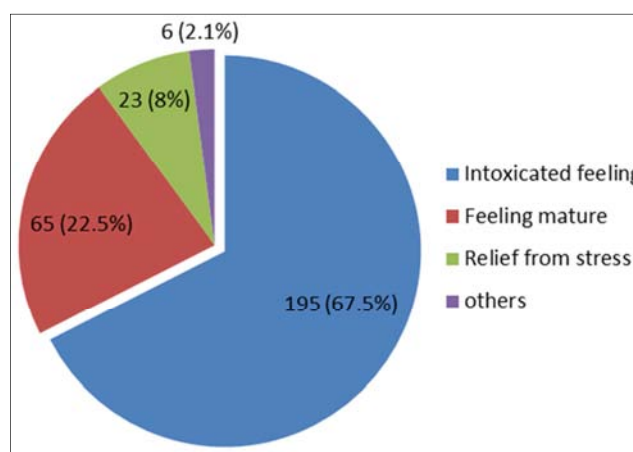


Figure 3. Reasons for continuation of Tobacco consumption.

### 4. Discussion

The prevalence of both ‘ever use’ and ‘current use’ of tobacco in present study group was quite high (96.3% and 81.7% respectively), unlike the results of studies done among adolescent students from Dharan (19.7% and 16.46% respectively), college students (34.2% and 17% respectively), employee of a university hospital (‘ever smoker’ 33.6% and ‘current smoker’ 13.6%), Nepalese men (‘current smoker’ 33.6% and ‘current smokeless tobacco chewer’ 34.8%; and among women in Dharan (current smoker’ 12.9% and ‘current smokeless tobacco use’ 14.1%). [7], [12], [17], [18], [19] The prevalence of TC estimated by Kabir et al [6] on 2013 using the data of GYTS also varied widely to the result of current study (9.4% versus 96.3%).

The variation in prevalence of tobacco consumption in our study population and other population may be because of the fact that the drivers and the bus staffs usually are away from home for their work, mostly with their colleagues in bus or in bus station. This is supported by the finding of current study which showed the major cause of initiation of TC to be ‘peers pressure’ (31%) and the major cause of continuation

of TC to be 'enjoying the intoxicated feeling' (67.5%). Therefore, a bus station acts as a fertile land for the initiation and continuation of TC. Second most common reason for tobacco initiation was 'influenced by smoking habit of family members/ relatives' (15.2%) which was found to be in consistent with other studies. [6], [9], [13] Similarly, second most common reason cited for continuation of its use is 'to feel mature' (22.5%), which is comparable with the studies done among college students from western Nepal. [17], [20] More than half of our tobacco consuming respondents initiated tobacco consumption due to peers pressure and mimicking family members and relatives, even before they knew the harmful effect of TC on health. In more than half of them, the habit persisted due to feeling addicted to its use. It clearly shows a need of preventive measures like health education regarding harmful effects of tobacco use, creating tobacco free homely environment and preventing minors from tobacco exposure. In contrast to our study, some researchers noted the reasons for TC to be 'for refreshment', 'coping stress' and 'abundant leisure time/boredom. [13], [15], [21] The reasons may differ to some extent due to difference in study population. 'Among those who work shift duties, more than half used tobacco to cope with stress' [15] while respondents from a study conducted in China in 2013 revealed that 'though knowledge and lack of motivation plays a vital role, social and cultural factors were the main barrier for quitting TC.' [21]

Our result showed that more than half of the respondents (52%) initiated tobacco use at the age less than 18 years, in line with the results of previous studies. [7], [10], [17], [20], [22] Some authors argue that there is a recent downward shift of age of initiation of tobacco use (10-13 years). [6], [7], [17] Most of those studies were done among school and college students, thus may have impacted in the result of early initiation of tobacco use. However, a study done by Choe *et al* [8] (in 5 south Asian countries including Nepal) concluded that only 35% of study group initiated tobacco use under the age of 20 years.

Among the responders who consume tobacco, more than three fourth (75.8%) tried to quit its use. This positive attitude was also noted in a study conducted among college students from Gaza Palestine (81%) and from western Nepal (64.7%). [17], [23] In contrast to the result of current study, the percentages of respondents who tried to quit TC were less than a half in other studies. [10], [20] Echer *et al* [18] concluded that respondents in their study were motivated and desired to quit TC.

Despite the high percentage of respondents who tried to quit TC, only about 20 percentage succeeded quitting it in our study. The respondents failed to quit TC due to 'feeling addicted' (69.7%). Results of other studies showed only some proportion of the respondents to have developed addiction' [10], [20] but a study conducted among 816 college students from western Nepal showed 43.1% feel addicted to TC. [17] The percentage of respondents trying to quit TC in current study (66%) and the times attempted does not have similarity to other studies. [10], [23] Health concern

was the main reason (65.3%) among those who tried to quit TC. Early age of initiation, use of multiple tobacco products and concurrent use of other drugs may have played a vital role for adverse effect on health, and it increases attempts at quitting TC among the respondents using tobacco in our study. The result of the study conducted by Echer *et al* [18] in 2011 also showed that health concern was the main reason for attempts to quit tobacco. Though the percentage is very low, there were some respondents who did not like the tobacco use and did quit it. The major reasons for attempts to quit TC may be used for effective planning of tobacco control programs.

At the time of interview, 97% of the respondents of current study claimed they know the adverse effects of TC on health, which is quite higher than the results from other studies. [15], [22] On probing the diseases caused by TC, majority of the respondents mentioned respiratory, cancer and cardiac diseases in descending order. Very few of them had idea about mental illness and gastrointestinal diseases caused by TC. More than half (51.1%) of the respondents who consume tobacco had no knowledge of injurious health effects of TC on initiation, otherwise 90.2% of them would not have had initiated. This result may give an opportunity in formulation of tobacco control plans and policies to improve their scientific knowledge and decreasing TC.

'Almost all (93%) adolescents and youths of NAYS (2010/11) express confidence among themselves not to use tobacco or other drugs' while other authors had different views. [4], [10], [23] Our study showed that the respondents were highly motivated to quit tobacco consumption with some medical help (95.1%). Despite high motivation and desire among the respondents of current study, they failed to quit TC due to physical and psychological dependence or feeling of addiction. Simple steps in assisting the quitting of TC can have a dramatic decline in the prevalence of TC among this high risk population group.

## 5. Limitations

Sample size was small and limited to Dharan bus station so it cannot be generalized to that occupational group. The responses given by the respondents were believed to be true for the assessment of tobacco use. It was not validated by use of any biomarkers. Further multi centered studies including greater sample size and using biomarkers for assessment of tobacco use is advised to be conducted to know the exact burden of TC among bus drivers and staffs.

## 6. Conclusion

Our study concluded that the prevalence of tobacco consumption among bus drivers and staffs was very high among whom more than a half initiated its use at the age less than 18 years without the knowledge of injurious effects on health. Most of the respondents would not have initiated TC if they had prior knowledge about it. The respondents were highly motivated to quit tobacco and had tried to quit it too

but failed due to feeling addicted to its use. Almost all would like to quit TC with some medical assistance.

## Recommendation

Government policies to ban free sale of tobacco to minor age group, smoking on public places, on tobacco advertisement and promotion, though amended in law, are still issues to be properly and strictly implemented. Targeted programs such as nicotine replacement clinics would be highly effective for such vulnerable group who desire to quit TC with medical assistance.

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