

SHORT ARTICLE

Tobacco use among drivers and conductors in Western Uttar Pradesh, IndiaAditya Parashari¹, Shahid Ahmad², Smita Asthana³, Saumya Saxena⁴

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Abstract

Background: Tobacco use is the leading global cause of preventable death. There is estimation that three quarters of these deaths will be in low and middle income countries. Very few studies were available on the tobacco habit of transport staff from India. **Aims and Objectives:** Prevalence of habits for various tobacco products and initiating/ quitting patterns of these habits in Drivers and conductors. **Material and Methods:** Cross sectional survey was conducted on the staff of drivers conductors, technicians of government bus depot. Out of total 903 staff 702 could be contacted and surveyed. **Results:** The mean age was 36.4 ± 10.3 years. The mean age of initiation was 10-15 years. This have very high rate (77.9%) of tobacco and alcohol use. As a single habit chewing was more popular compared to smoking followed by alcohol. More than half of the chewers consume more than 4 pkts (20-25 grams in weight) of Gutka per day an even 30 to 40 pkts of Gutka consumption in a single day was reported by some staff. Addiction was a common feature for tobacco habit in this community for tobacco use (97%). Peer group pressure was the most important single cause of initiation of tobacco habits. Nearly half (44.3%) tobacco users want to quit the habit. Most common symptoms which tobacco users have were burning sensation in stomach or acidity. **Conclusions:** Repeated awareness programmes about the ill effect of tobacco and counselling/ de-addiction programmes are very much needed from the transport department and government are needed to improve the situation

Keywords

Addiction; Drivers; Tobacco

Introduction

Tobacco use is the leading global cause of preventable death. Currently about 5 million deaths per year are attributable to tobacco which is expected to rise to more than 8 million deaths a year by 2030. There is estimation that three quarters of these deaths will be in low and middle income countries (1). The

prevalence of tobacco consumption is reported by the WHO, which focuses on smoking not on smokeless chewing of tobacco. India is the second consumer in the world (2). Consequences of tobacco use in India are compounded by the prevalence of both smoking and smokeless tobacco products widespread across socioeconomic and ethnic groups both in urban and rural areas. (3). In the National

Family Health survey-2 conducted in 1998-99, 315,597 individuals aged 15 years or older from 91,196 households were sampled. Among the study population, 20% (28.1% of men and 12.0% of women) reported chewing tobacco/pan masala; however, the prevalence may be underestimated by almost 11% for men and 1.5% for women because of the use of household informants. The prevalence varied significantly from 7-60% between states. Chewing of tobacco/pan masala was relatively more common in the central, eastern, western (except Goa) and north-eastern states (except Tripura) compared with northern and southern states. (3). Chewing as well as smoking was found to be highest in Mizoram (60.2% and 59.4% in men and 60.7% and 22.0% in women) Tobacco is used in both smoking and smokeless forms. Smoking forms include cigarettes, bidis, hukka, pipes and chilam (ganja). Smokeless tobacco products include tobacco that is used in pan, gutkha, zarda, khaini etc. In India chewing form of tobacco (Gutkha) is most commonly used followed by Bidis (5). A large number of people know in general terms that tobacco use is harmful to their health, (4,5). Some studies were also done to study of tobacco use, attitudes and cessation practices in different professionals in India like health workers (6) and drivers (7).

Aims & Objectives

To assess the problem of tobacco use along and its determinants among drivers and conductors.

Material & Methods

Study Group:-The study was conducted in the driver's conductors and other ground staff working with Bus depot and workshop of U P State Road Transport Corporation (UPSRTC) in Ghaziabad and NOIDA. A total of 903 staff (Drivers, conductors and technicians was there on roll. The management was contacted and explained the objective of the study and was requested to facilitate the study.

Awareness: A drive for awareness about ill effects of tobacco use was launched on the site in advance to attract the people to come forward for oral examination. Information pertaining to project and sensitizing the staff to participate was given to the groups of 20-25 persons. The lectures were delivered by trained Medical social worker (MSW) and Dentist on the project. The main topics of the lecture were related to the various types of tobacco products and their harmful contents and their impacts on their health including the risk of developing the cancer of

oral cavity and others. It was a continuous process for the duration of project till all the target population could be contacted.

Target population: The study was purely based on the voluntary basis in response to our awareness drive. A total no. of 720 out of 903 staff (79.7%) volunteered themselves to participate in the study.

Study Tool: The study tool was a predesigned, pre-tested, questionnaire. Before recruiting them for the study, consent forms were signed by volunteers, and MSW asked them the questions by one-on-one basis pertaining to questionnaire and filled it. They were assured about the confidentiality of the interview. The questionnaire included the socio-demographic profile, their tobacco products and alcohol intake habits, quantity and frequency of intake, various types of addiction details and their knowledge about the ill effects of tobacco and alcohol intake pertaining to health and cancer.

Referral: The screening for oral cavity for the presence of any lesions and associated disease was done by the Dentist on the project and the patients having any type of lesions were referred to GTB Hospital, Delhi for further management.

Statistical analysis: All the information was entered in the SPSS 16 version and a descriptive study was carried out to analyse the results.

Results

Socio-demography:

A total of 720 persons, all males, were included in the study for analysis. The mean age was 36.4 ± 10.3 (18-50 Years). Religion wise, majority were (680;94.4%) Hindus. A total of 272 (37.8%) had education up to high school, 233 (32.4%) were graduates, 26 (3.6%) had technical qualification. Thus, a large majority were well qualified (73.8%). Only 189 (26.2%) had studied up till middle pass or below. Income wise 89.7% were earning in between Rs.5000 to 20000, only 6 (0.8%) earning below Rs.5000 while 68 (9.4%) were earning more than Rs. 20000.

Age of initiation:-

Age of initiation of smoking was before 15 years of age in all tobacco users with 4 persons reported initiating even before 10 years of age. Age of initiation for tobacco chewing habits was found to be 10-15 years of age, just like tobacco smoking.

Habits of using tobacco products, alcohol and others:-

Details of tobacco and other addiction habits are given in [Table-1](#). A very large proportion of

participants (547; 77.9%) were using tobacco and/or alcohol. Of all those who were using some tobacco product &/or alcohol 42% (n=230) reported a single habit; 92 (16.8%) were smokers only, 125(22.8%) were chewers only and only 13 (2.3%) were using alcohol. Thus, one can see that as a single habit chewing was the most frequent habit followed by smoking and alcohol intake was the least.

Those having more than one habits, tobacco smoking accounted for 346 out of 547(63.3%). Among them bidi use was the most common (261; 75.4%) followed by cigarette use (187;54%), hukka was the least common (13;3.7%).

There were a total of 362 chewers. A large majority of them chewed tobacco (344; 95%), while only 18(4.9%) were consuming non-tobacco products (pan;4, supari;12, bhigi supari;3, pan masala;1 alcohol;6). Zarda and pan accounted for 3 each.

Among the tobacco chewer (344) gutka was the leading product consumed by the subject population (237;68.9%), followed by Khaini mix (73;21.2%) and khaini (63;18.3%). Sixteen persons (4.6%) used tobacco products for local application in oral cavity. While only 6/362 (1.7%) persons amongst non-tobacco chewer were taking alcohol, 72/344 (20.9%) tobacco chewer had a habit of alcohol intake.

Amongst 203 cigarette smokers, 198 (97.5%) smoke cigarette with filter and 5 (2.5%) smoke cigarette without filter. Further amongst 353 total smokers (Cigarette, Bidi, Hukka, chilam) 41 (11.6%) take superficial inhalation, 312 (88.4%) take deep inhalation. This is evidenced from the way they hold cig./ bidi. Thus 292 (82.7%) use to hold the cigarette/ Bidi between first and second finger, which is compatible with deep smoking while 55 (15.6%) use to hold the cigarette/ Bidi between thumb and first finger, and 6 (1.7%) between last finger and ring finger indicating superficial inhalation.

Quantitative analysis revealed that numbers of bidis smoked were higher compared to no. of cigarettes. Thus while 81.2% (165/203) smoke 1-5 cigarette, only 39.6% (111/280) smoked 1-5 bidis. Likewise, 12.8% (26/203) smoke 6-10 cigarettes vs. 22.1% (62/280) smoke 6-10 bidis/ per day. Furthermore, only 5.9% (12/203) smoked > 10 cigarettes compared to 31.7% (89/280) smoked 10-20 bidis per day, and only 6.4% smoke 21-30 bidi per day.

Quantity wise analysis showed that 22.3% take 1-2 pkts of gutka 22.7% (56/246) take 3-4 pkts, and 54.8% (135/246) consume more than 4 pkts of gutka per day. Khaini and khaini mix was consumed mostly

in the quantity of 1pkts. Other types of tobacco products are not common for chewing. In 348 tobacco chewer, 176 (50.6%) persons used to chew the tobacco in changing position of oral cavity and 172 (49.4%) persons use to chew the tobacco in fixed position. The persons who keep the tobacco products in the mouth in fixed position, the 68 (39.5%) people keep the tobacco in between right cheek, 71 (41.3%) in between left cheek and 40 (23.3%) in between front teeth and lips. Only 40 (11.5%) use to wash their mouth after chewing and 308 (88.5%) do not wash their mouth after chewing.

Knowledge and awareness:-

Knowledge about tobacco related cancers of driving staff has given in [Table-2](#). 67.5% persons know about how oral cancer is caused and 62.9% persons have the knowledge about the different sites of tobacco related cancers. Even 8.3% persons were able to tell about the symptoms about cancers. 29.4% persons used to visit the dentist for different purposes. 28.6% persons had the knowhow to prevent tobacco-related cancers. About 1/3rd of them (31.9%) knew about early detection of these cancers.

Persons who knows about tobacco related cancers has more prevalence of smoking, chewing of tobacco products and taking alcohol (51.7%; 47.9% and 38.7% respectively) compared to those who do not have knowledge about tobacco related cancers (38.8%; 38.0%; 25.3% respectively).

Addictions for tobacco products:-

[Table-3](#) shows that very high proportions (97%) of tobacco users were addicted to tobacco. The details of tobacco addiction levels showed that 86% feel strong urge for tobacco. 46.8% smoke or chew tobacco before going to toilet and surprisingly 40.4% smoke or chew tobacco even during their illness. 23% of the tobacco users have all the five symptoms. Various factors influencing initiating and quitting the tobacco habits are given in [table-4](#). Peer group pressure was the most important single cause of initiating tobacco habits (83.2%) followed by the perceived demand by certain occupations (40.9%). Strangely no or negligible role family tradition and customs was in initiating the tobacco habits.

Tobacco quitting habits:-

Only 235 (44.3%) tobacco users tried to leave this habit and the commonest reasons for trying to quit the habit was the social pressure from work/family/friends i (69.7%), followed by knowledge that it was a dirty habit (52.7%), perceived association between dental problems (45.9%) and tobacco use and 44.6%

want to get rid off from these dirty habits, while 17.4% want to set an example for young generation and others. There was no role of religious reason.

Some of the tobacco users have complaints about some symptoms like feeling burning sensation in stomach or acidity (31.9%), breathlessness (28.9%), muscular pain in hands and feet (15.7%), wrinkles (14.9%), problem in swallowing food or burning sensation (10.2%) and sore throat (6.4%). Only 15 (6.4%) persons were able to get rid of this habit, while others could not.

220/235 (93.6%) could not leave the tobacco habits and the leading reasons for not being successful were getting strong urge (90.4%), social pressure from works/ friends (57.3%). Other symptomatic reasons were day drowsiness (54%), insomnia (45%), dizziness (14.5%), disorientation (5.4%) and constipation/ or diarrhoea (2.2%) only.

Further the tobacco users tried to leave their smoking habits once by 5.5% (13/235) twice by 37.9% (89/235) thrice by 17% (40/235) and more times by 5.5% (13/235) and tried to leave their tobacco chewing habits once by 2.1% (5/235), twice by 23.8% (56/235), thrice by 11.5% (27/235) and more times by 8.9% (21/235). Only the 15 out of 235 (6.4%) could be successful to leave the habit (duration was 5 years and more) forever.

Discussion

The community of drivers and conductors have very high rate (77.9%) of tobacco and alcohol use. As an average people initiate these habits 15 years. Reason which has been told, that because of having odd hours and long hours duties during which they suffer the stress of driving and awakening in the night hours. During questioning they told that to keep themselves alert in the night and long journey they develop the tobacco and alcohol habits and many of them started this after coming into profession.

As a single habit chewing was more popular compared to smoking followed by alcohol. This may be due to acceptability in the society. Amongst the chewers gutka was more popular followed by khaini. Similarly, amongst smokers bidi was more common due to the cost effectiveness. Quantitative analysis showed that more than half of the chewers consume more than 4 pkts (20-25 grams in weight) of Gutka per day an even 30 to 40 pkts of Gutka consumption in a single day was reported by some staff. The high consumption of cigarette/bidi/gutka was also

reported amongst the auto-rikshaw drivers of Jaipur in India by Rewar *et al.*, (8).

Tobacco smoking and taking alcohol and drugs were found to be significantly lower in those persons who are matriculates above, while a narrow difference was in tobacco chewing habits indicates that although they have developed reasoning capability of their mind for quitting smoking and alcohol or may be due to the work/ peer group/ family pressure, but diverging themselves to tobacco chewing habits due to the acceptability in the society and surroundings. Persons who are having knowledge about the tobacco related cancers have more prevalence equally for tobacco smoking chewing and drinking alcohol, which clearly indicates that only having knowledge about ill effect of tobacco is not sufficient to change their attitudes, behaviour and practices.

Addiction was a common feature for tobacco habit in this category of tobacco users where 40% reported to smoke or chew tobacco during illness and 1/4th tobacco users have all the five symptoms of addictions. Peer group pressure was the most important single cause of initiation of tobacco habits. To the utter surprise the family traditions and customs has no role for initiation.

Nearly half (44.3%) tobacco users want to quit the habit due to social pressure (commonest reason) followed by the knowledge that it is a dirty habits, but there was no role of religion. Most common symptoms which tobacco users have were burning sensation in stomach or acidity, followed by breathlessness and muscular pain in hands and feet and even 10% reported the problem in swallowing food with burning sensation. The tobacco associated disease in the drivers and conductors were also reported from other parts of north central India (7,8) and from Bangladesh having similar pattern (9). Even after having a strong desire for quitting the habits, 93.6% were unable to quit after several attempts due to strong urge/ craving (commonest reasons) followed by social peer pressure and day drowsiness, dizziness. Only 15 persons were able to quit the habits (duration was five years or more) without assistance with only their will power

Conclusion

Prevalence of tobacco consumption is very high amongst the Transport staff (drivers, technicians and conductors), and the commonest form is Gutka. They initiate this habit at an average age of 15 years. Peer pressure and work stress is the commonest cause for

initiating this habit. Knowledge and awareness is high but still they use the tobacco. Further, addiction level for tobacco is very high and they want to quit this habit but unable to quit in the absence of any guidance and counselling.

Recommendation

Repeated awareness programmes about the ill effect of tobacco and counselling/ de-addiction programmes are very much needed from the transport department and government are needed to improve the situation.

Authors Contribution

All authors have contributed equally in this study.

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References

1. World Health Organization. MPOWER: A policy package to reverse the tobacco epidemic. Geneva: World Health Organization; 2008.
2. WHO report on the Global Tobacco Epidemic, 2009: Implementing Smoke-Free Environments. Geneva, World

Health Organization, 2009. <http://www.who.int/tobacco/publications/gender/en.tfi.gender.women.prevalence.tobacco.use.pdf>

4. Rani M, Bonu S, Jha P, Nguyen SN, Jamjoum L. Tobacco use in India: prevalence and predictors of smoking and chewing in a national cross sectional household survey. *Tob Control.* 2003 Dec;12(4):e4. PubMed PMID: 14660785; PubMed Central PMCID: PMC1747786. [[PubMed](#)]
5. www.who.int/hpr/youth/html/yt-rar/: Introduction to the use of RAR in addressing tobacco use among young people.
6. WHO. WHO report on the global tobacco epidemic 2011: Warning about the dangers of tobacco. Geneva: WHO; 2011. Available from: http://whqlibdoc.who.int/publications/2011/9789240687813_eng.pdf.
7. Mony PK., Vishwanath NS. And Krishnan S. 2015. Tobacco use, attitudes and cessation practices among health care workers of a city health department in Southern India. *J.Family med.Prim.Care.* 4(2); 261-264.
8. Bhatia M, Mishra A. and Agrawal AK. 2014.Prevalence and pattern of tobacco addiction among autorikshaw drivers of North Central India. *Asian Pac.J.Health Sci.m* 1(4): 312-18.
9. Rewar S., Poonia N. and Singh NK. 2013. A Cross sectional study on tobacco consumption pattern among auto Rikshaw Drivers in Jaipur City, Rajasthan. *IOSR-JHSS,* 14(3) 88-91.
10. Goon S, Bipasha MS. Prevalence and Pattern of Smoking among Bus Drivers of Dhaka, Bangladesh. *Tob Use Insights.* 2014 Mar 9;7:21-5. doi: 10.4137/TUI.S13966. eCollection 2014. PubMed PMID: 25741182; PubMed Central PMCID: PMC4335464. [[PubMed](#)].

Tables

TABLE 1 TOBACCO AND ALCOHOL HABITS

	Total (547/720)
TOTAL SMOKERS	346(47.9%)
CIGARETTE	187(54%)
BIDI	261(75.4%)
CIGA+BIDI	120(34.6%)
HUKKA	13(3.7%)
ONLY SMOKERS	92(26.6%)
SMOKING+ALCO	91(26.3%)
TOTAL CHEWER	362(50.1%)
NON-TOB-CHEWER	18(4.9%)
PAN	4/18(22.2%)
SUPARI	12/18(66.7%)
BHIGI SUPARI	3/18(16.7%)
PAN MASALA	1/18(5.5%)
NON-TOB CHEW +ALCOHOL	6/18(33.3%)
NON-TOBCHEW+TOBCHEW	2/18(11.1%)
TOBACCO CHEWER	344(95%)
PAN	3(0.9%)
ZARDA	3(0.9%)
KHAINI	63(18.3%)
KHAINI MIX	73(21.2%)
GUTKA	237(68.9%)
ONLY TOBACCO CHEWERS	125(36.3%)
SMOKERS + TOB. CHEWERS	72(20.9%)
TOBACCO CHEWER+ALCOHOL	49(14.2%)

TOBACCO APPLICATION	16(2.2%)
DRUGS	12(1.7%)
ALCOHOL	238(33.0%)
ONLY ALCOHOL	13(5.4%)
SMOKERS+T.CHEW+ALCO	101(42.4%)

TABLE 2 KNOWLEDGE ABOUT TOBACCO RELATED CANCERS

Know about tobacco related cancers	453 (62.9%)
May cause cancer of Buccal cavity	323
May cause cancer of Tongue	268
May cause cancer of Gums	48
May cause cancer of Throat	155
May cause cancer of lungs and other sites	33
	265
Know how the oral cancer is caused	486 (67.5%)
By smoking	295
By Chewing tobacco/ khaini	404
By chewing tobacco pan with tobacco	72
By chewing supari	15
By chewing pan masala	145
By using nasvar	3
By using drugs	1
Able to tell the symptoms and signs of oral cancer	60 (8.3%)
Visit the dentist/ doctor for oral health checkup	(29.4%)
For dental cleaning	64
Tooth pain	55
Oral health check-up	55
Problem ulcers in mouth	3
For other reasons	15
Know that cancer is preventable and Able to tell how it is preventable	206 (28.6%)
Know that cancer can be detected early and Able to tell how it can be detected early	230 (31.9%)

TABLE 3 ADDICTION OF TOBACCO HABITS

Habitual of tobacco product	514 (97.0%)
Habitual of smoking only	184 (34.7%)
Habitual of chewing only	163 (30.7%)
Habitual of smoking and chewing both	143 (27.0%)
Habitual of applying tobacco only	4 (0.7%)
Tobacco + Alcohol	101 (19%)
Symptoms of addiction of habits	
1 Become restless/ tense if not getting tobacco	302 (57.0%)
2 Feel strong urge for tobacco	456 (86.0%)
3 Feel restlessness/ tense at those places prohibited for smoking/ chewing	328 (61.8%)
4 Start to smoke/ chew tobacco since morning before going to toilet	248 (46.8%)
5 Continue to smoke/ chew during illness	214 (40.4%)
With all symptoms	123 (23.2%)
With any four symptoms	221 (41.7%)
With any three symptoms	318 (60.0%)
With any two symptoms	402 (75.8%)
With any one symptoms	481 (90.8%)

TABLE 4 REASONS FOR INITIATING THESE HABITS

Reasons for initiating these habits		Frequency and percentage
1	Peer group persuasion.	441 (83.2%)
2	Family tradition	27 (5.1%)
3	Stress	28 (5.3%)
4	Profession demands	217 (40.9%)
5	Medical reasons	12 (2.2%)
6	Social customs	2 (0.3%)
7.	More than one reason or multiple reasons	
	Tried to leave this habit	235 (44.3%)
	Reasons for trying to leave this habits	
1	Breathlessness	68 (28.9%)
2	Soar throat	15 (6.4%)
3	Feel burning sensation in stomach or acidity	75 (31.9%)
4	Problem in swallowing food or burning sensation	24 (10.2%)
5	Muscular pain in hands and feet	37 (15.7%)
6	Wrinkles	35 (14.9%)
7	Dental or gum disease	108 (45.9%)
8	Smoking related illness in friends or relatives	50 (21.2%)
9	Social pressure from works/ friends/ family	164 (69.7%)
10	To set an example for others	41 (17.4%)
11	Freedom from dependency	105 (44.6%)
12	Because it is a massy or dirty habit	124 (52.7%)
13	Can't afford	33 (14.0%)
14	Religious role	1 (0.4%)
	Not successful for leaving tobacco habit	220
	Reasons for not successful for leaving habit	
1.	Feeling strong urge (craving)	199 (90.4%)
2.	Disorientation	12 (5.4%)
3.	Irritable behaviour	20 (9%)
4.	Could not sleep in night insomnia	99 (45%)
5.	Day drowsiness	119 (54%)
6.	Dizziness	32 (14.5%)
7.	Constipation or diarrhoea	5 (2.2%)
8.	Social pressure from works/ friends	126 (57.3%)