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Original Research Article

Prevalence and pattern of tobacco use among auto rickshaw drivers of South Delhi: a cross-sectional study

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ABSTRACT

Background: Tobacco is one of the major preventable causes of death and disability worldwide. Tobacco related diseases are a burgeoning public health problem. The pattern of tobacco consumption in India is unique as varied smoked and smokeless products are consumed.
Methods: Descriptive, cross-sectional study.
Results: 69% of the auto-rickshaw drivers are currently using tobacco in one form or the other. Use of multiple tobacco products is also quite high; 54% of tobacco users consumed both smoked as well as smokeless forms of tobacco. Bidi smoking is the most common form of tobacco consumption among current users.
Conclusions: Tobacco consumption among auto rickshaw drivers is high. The use of multiple products puts them at risk for problems related to both smoked and smokeless tobacco products. Support/services to quit tobacco should be targeted at their workplace as stress and free time during working hours have been cited as main reasons for tobacco consumption.

Keywords: Tobacco use, Prevalence, Auto rickshaw drivers

INTRODUCTION

Tobacco is the world's most important and most avoidable public health problem. Tobacco killed 100 million people in the last century, mostly in the developed countries, and could kill 1 billion this century, mostly in low and middle income countries (LMICs) 'Of the more than 1 billion smokers alive today, around 500 million will be killed by tobacco.'[1]

India is the second largest consumer of tobacco globally, and accounts for approximately one-sixth of the world's tobacco-related deaths. The tobacco problem in India is peculiar, with consumption of variety of smokeless and smoking forms.[2] Some of the forms in which tobacco is used are cigarette, bidi, hukka, gutka, khaini, pan masala, chillum, pan with tobacco etc.

42.4% of men, 14.2% of women and 28.6% of all adults in India currently either smoke tobacco and/or use smokeless tobacco. Khaini and bidi are the most commonly used tobacco products. 11% of adults consume khaini and 8% smoke bidi. Atleast 50% of tobacco users of any form (smoking or smokeless) were planning or thinking of quitting tobacco use.[3]

Auto-rickshaw drivers are likely to be stressed due to their long hours of work with idle breaks in between, driving in traffic situations and highly polluted environment coupled with unsteady income patterns. This

sub-group of population is also vulnerable as no specific health schemes are directed towards them

The few studies which have been done have mostly assessed the prevalence of tobacco use/smoking amongst auto-rickshaw drivers. Hence, the present study aimed to determine (a) the prevalence of tobacco use among auto-rickshaw drivers, and, (b) the type and amount of tobacco products used by them.

METHODS

A cross-sectional study was conducted among auto rickshaw drivers from 5 auto rickshaw stands of South Delhi, viz. Safdarjung hospital, AIIMS, Green Park, INA Market and South Extension. The sample size was calculated with expected prevalence of tobacco use (p) as 42% (reported by the GATS 2016-17 India survey), absolute error (d) of 7% at 95% level of confidence using the formula $z^2p(1-p)/d^2$. The minimum sample size came out to be 190. All those auto rickshaw drivers who were present during the visits made to each auto rickshaw stand for covering the sample size were interviewed. A total of 210 auto rickshaw drivers were hence included in the study during the data collection period of October to December 2017.

A semi-structured questionnaire was constructed which was translated into Hindi and pre-tested for interviewing the auto rickshaw drivers. Informed consent was taken from participants before the interview and they were assured about confidentiality of the information asked from them. Information related to socio-demographic variables was asked. Enquiry was made about whether tobacco was consumed; the forms and amount of tobacco used.

Following definitions were used in the study:

- *Users* were defined as individuals who are currently using any form of tobacco.
- *Past users* were defined as individuals who are currently not using tobacco and who stopped using tobacco ≥6 months ago.
- *Non users* were defined as individuals who have never used tobacco in any form.

Statistical analysis

The data was entered in MS Excel and analysed using SPSS version 22. Descriptive analysis was carried out for computing frequencies and results were expressed as proportions.

RESULTS

Socio-demographic profile of the study subjects

71% of the auto rickshaw drivers were in the age group of 21-35 years and 82% were literate. 86% were Hindu, 11% Muslim and 3% were Sikh. 45.5% belonged to lower middle socio-economic class and 32% to upper lower class. 62% drove rented auto rickshaws.

Tobacco use among auto rickshaw drivers

69% of auto-rickshaw drivers were current users of tobacco in one or the other form. 13.3% had past history of tobacco which included 7.6% who had quit tobacco more than six months back. The remaining 17.6% had never used tobacco in any form.

Table 1: Prevalence of tobacco use among auto rickshaw drivers.

Category		Number	%
Ever users	Current users	145	69
	Past users	16	7.6
	Quit <6 months back	12	5.7
Never users		37	17.6

Pattern of tobacco use

Of the current tobacco users, more than half (54%) smoked as well as chewed tobacco while 22% were smokers and 24% were chewers.

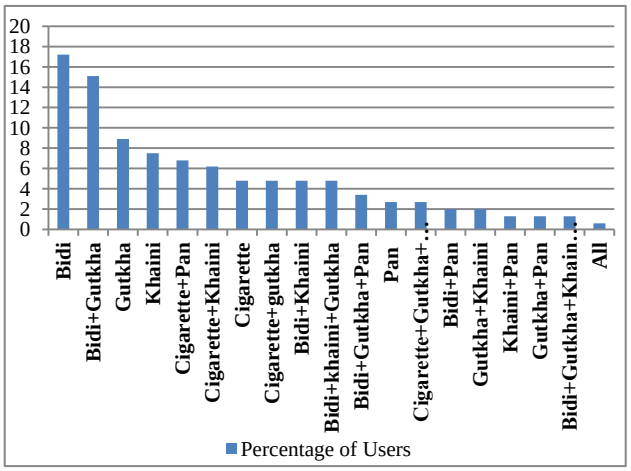

Figure 1: Forms of tobacco consumed by the current tobacco users (n=145) (multiple response).

Bidi was the most common form of tobacco use; 51% of the total tobacco users smoked bidi either as the only form or along with other forms of tobacco. However, most of the users consumed multiple forms of tobacco; with bidi smoking plus gutkha chewing being the most common combination (practiced by 16% of current tobacco users).

Amount of tobacco consumed

Amongst the smokers, (both cigarette and bidi) majority (~44%) smoked ½-1 packet/bundle per day. However, lesser percentage smoked higher amount of cigarettes as compared to bidis.

Table 2: Quantity of tobacco products used per day.

Quantity of tobacco products/day	Amount	Number of users	Percentage
Cigarettes (1 packet= 20 cigarettes)	<0.5	12	31.6
	0.5-1	17	44.8
	1-1.5	8	21
	1.5-2	1	2.6
	Total	**38**	**100**
Bidi (1 bundle= 15 bidis)	<0.5	7	9.5
	0.5-1	32	43.8
	1-1.5	31	42.4
	1.5-2	2	2.7
	>2	1	1.3
	Total	**73**	**100**
Gutka (sachet)	≤5	18	27.7
	5-7	23	50.8
	8-10	20	15.3
	>10	4	6.2
	Total	**65**	**100**
Khaini	<0.5	5	11.9
	0.5-1	32	76.1
	1-1.5	3	4.8
	1.5-2	2	4.8
	Total	**42**	**100**
Pan with tobacco	≤3	17	54.8
	3-5	12	38.7
	5-7	2	6.5
	≥7	0	0
	Total	**31**	**100**

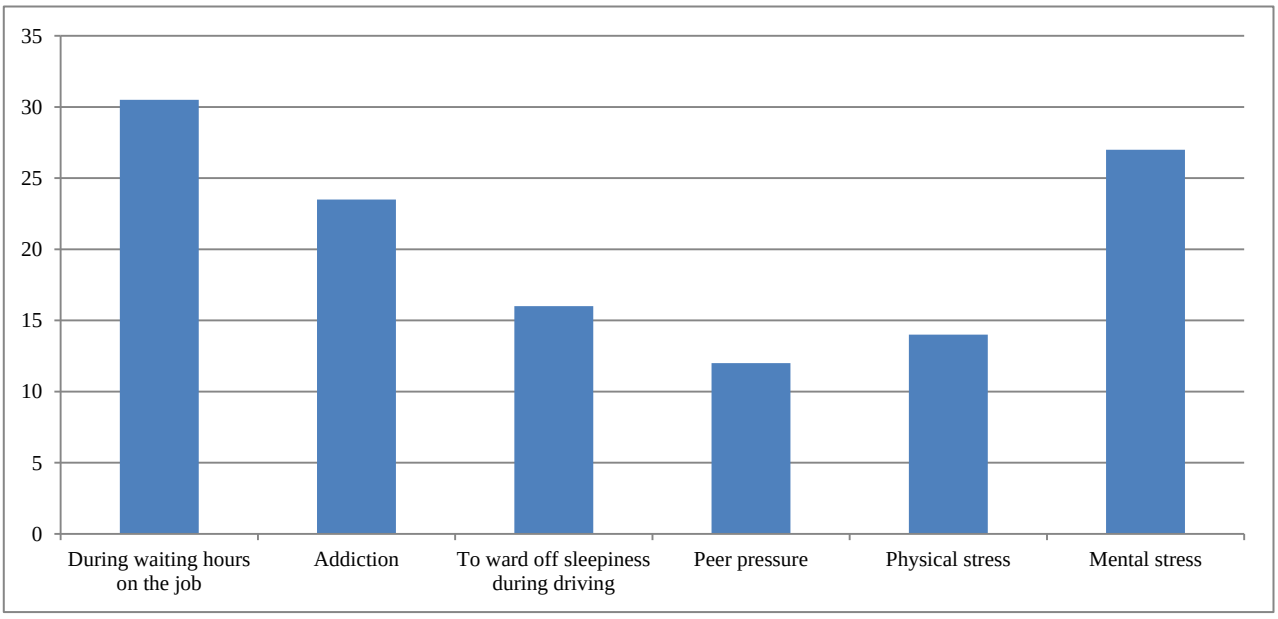

Figure 2: Reasons given by the current users for tobacco consumption (n=145) (multiple responses).

Amongst the gutka chewers, majority (50%) consumed 5-7 packets per day. Most of the Khaini users consumed ½ - 1 sachets in a day. Most of the users of pan with tobacco consumed 3 -5 pan per day.

Duration of tobacco use

Majority of the tobacco users (74%) had been consuming tobacco for atleast 5 years; 18% had been using tobacco for 15 years or more.

Reasons for tobacco use

Many of the auto rickshaw drivers cited job related reasons like to while off time during waiting for the passengers and to ward off sleepiness (30% and 16% respectively) as the reasons to use tobacco. Moreover, almost a quarter of the users (26%) mentioned job related mental stress as the reason for tobacco use. All the auto rickshaw drivers undisputedly agreed that tobacco use is harmful for health

Reasons for quitting tobacco use

Among those 12 who had quit tobacco (previous users who hadn't consumed tobacco in last 6 months), 8 (66%) had quit because of health problems (cough, mouth ulcers, gastritis) while rest had quit because of concern for health but not any active health problems. All of them had quit on their own and not taken any help for quitting tobacco.

67% of the current users said that they want to stop tobacco use and 53% mentioned that they were consciously trying to cut down on amount of tobacco products consumed. None knew of any services available for quitting tobacco.

DISCUSSION

69% of the auto rickshaw drivers were current users of tobacco, which is much higher than the tobacco use among adult males in India as reported by GATS 2016-17 (45%).[2] Though the tobacco use is much higher as compared to that reported among adult males residing in urban slums of Delhi (36%); it is less as compared to that reported among auto rickshaw drivers in other North Indian cities viz.[5] Gwalior and Jaipur (84% and 87% respectively).[6,7] Delhi, being the capital city, has stricter enforcement of anti-tobacco laws and this could be the reason for a slightly lower reported prevalence of tobacco use. Similar findings of a much higher tobacco use among commercial drivers as compared to general population have been reported in a study from Nigeria (25% and 6% respectively).[8]

Amongst the current tobacco users, almost half (48%) both smoked and chewed tobacco which is higher than the reported concurrent use of smoked and smokeless tobacco products by other studies done in Gwalior and Jaipur (37% and 30% respectively). Auto rickshaw drivers in Delhi might be at dual risk of the problems associated with both smoked and smokeless tobacco products. With rise in public awareness regarding hazards of passive smoke, the auto rickshaw drivers usually do not smoke while driving with passengers and hence they might be resorting to use of smokeless forms of tobacco.

Bidi was the most common tobacco product used followed by Gutka (51% and 44% of current tobacco users). These two together also form the most common smoked+smokeless combination consumed among those who use more than tobacco product. Bidi has been reported as the most common tobacco product used in urban, rural and urban-slum areas of Delhi; the study has even suggested special focus on bidis in cessation programmes.[5] Tobacco in general and bidis in particular have long enjoyed social acceptance and respectability in some parts of the culture; especially among the lower socio-eonomic class.[9] Smoking tobacco, coupled with environment smoke exposure, puts them at high risk for respiratory problems.[10,11]

Moreover, bidis are considered to be less harmful than cigarettes and are cheaper; thereby making them the favored choice of form of tobacco consumed, though the contrary has been proven by scientific research.[12] However, GATS reports Khaini as the most common product used among adult males (11%) with more use of smokeless forms of tobacco as compared to smoked products.

However, the number of cigarettes and bidis smoked per day is more in the current study as compared to smokers in urban slums; reaffirming the higher use of tobacco in auto rickshaw drivers as compared to adults in general.

The reasons for tobacco use in the present study (stress, to stay awake, habituation) are similar to those among auto rickshaw drivers elsewhere. Environmental and occupational stress and hectic work schedules have been reported as reasons for smoking tobacco among bus drivers in Dhaka, Bangladesh.[13] Another important reason mentioned is to pass time during waiting hours for which education programmes to focus their attention somewhere else (e.g. mobile-phone games) can be promoted.

Since more than two- thirds of the current users explicitly expressed the desire to quit tobacco, they should be motivated and provided the support for doing so.

CONCLUSION

Tobacco consumption, among auto rickshaw drivers, is much higher as compared to adult males in general and poses a peculiar challenge to the tobacco control programme as they are on the go and no specific activities are targeted towards this sub-group of population. Since the consumption of smoked as well as smokeless forms of tobacco is high, they are at a risk for problems associated with both. Special drives should be targeted at their place of work/union meetings to help them quit tobacco.

Recommendations

Since the usage of tobacco is quite high among auto rickshaw drivers and they comprise a subset of the population that have no organized health care services

targeted to them but have their own unions that hold regular meetings, this platform can be used to provide them services for education and support to quit tobacco. These may include teaching about stress management and involving them in activities for their in-between-passenger times!

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