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Original Research Article

Prevalence of Smoking and Associated Factors among Security Personnel in a Rural Tertiary Care Medical Institute in Haryana

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ABSTRACT

Introduction and Objective: Tobacco is the single biggest cause of cancer in the world and the leading cause of preventable deaths. In total, more than 6 million people die every year from tobacco-related diseases including cardiovascular diseases, chronic lung diseases and cancer.. Although the smoking prevalence trends in the developed world are on decline, the smoking and tobacco use rates in developing world including India remain dangerously high especially among men. Hence, the present study was undertaken to assess the magnitude of smoking problem.
Materials and Methods: A cross-sectional study among security personnel of a rural medical college of Haryana was carried out. All the 129 security personnel working in the institution were included in the study and required data were collected.
Results: Out of total 129 security personnel, 11 were females and none smoker. Of the remaining 118 males, 52 (44%) were smokers. Most of smokers were heavy to medium smokers and almost all smoked Bidi, followed by Hukka and rarely cigarettes. Majority of the respondents were in age groups of 25–39 years followed by 40–55 years, mean age of the study participants was 31.6 years. Over three fourth of personnel were from rural area. All were literate. The prevalence of smoking was higher in rural area personnel than semi-urban and urban residents but, statistically insignificant.
Conclusion: Prevalence of smoking was unacceptably high (44%) among security personnel working in a tertiary care medical Institution, a public place where smoking is a punishable offence. Hence, smoking cessation drive needs to be initiated to stem addictions and the tobacco related cancers and other problems.

Key words: Tobacco, smoking prevalence, security personnel, tertiary care hospital.

INTRODUCTION

Tobacco is the single biggest cause of cancer in the world and the leading cause of preventable deaths. [1,2] In total, more than 6 million people die every year from tobacco-related diseases including cardiovascular diseases, chronic lung diseases and cancer. Out of it, tobacco related cancer contributes to at least 1.6 million or 27% of these are tobacco-related deaths. [2] Tobacco is on track to kill more than 8 million by 2030, by which time

approximately 80% of the deaths would occur in low- and middle-income countries In the South-East Asia Region alone, 1.3 million die from tobacco-related diseases where one third of the world's smokers reside and is a home to 250 million smokers with nearly the same number of smokeless tobacco (SLT) users. [3] In India also, at least one million people die yearly due to tobacco related diseases. Tobacco kills up to half of its users because tobacco products are made of extremely toxic materials. Tobacco smoke contains more than 7000 chemicals, of which at least 250 are known to be harmful and at least 69 are known to cause cancer. [4] Thus, premature deaths due to tobacco related illnesses need to be reduced.

During the most recent decade (2000-10), the prevalence of tobacco smoking in men fell in 125 (72%) countries, and in women fell in 156 (88%) countries. If these trends continue, only 37 (21%) countries are on track to achieve their targets for men and 88 (49%) are on track for women, and there would be an estimated 1·1 billion current tobacco smokers (95% credible interval 700 million to 1·6 billion) in 2025. Rapid increases are predicted in Africa for men and in the eastern Mediterranean for both men and women, suggesting the need for enhanced measures for tobacco control in these regions. [5] Ng M, Freeman, MK, Fleming, TD et al in their study on smoking prevalence and tobacco consumption also reported the similar findings. [6] The prevalence of smoking has shown a declining trend among high school children in US from 1965-2011 and it declined from 27.5% in 1991 to 18.1% in 2011. [7] As per NFHS-3 (2005-06), in the age group of 15-49 years, who use any kind of tobacco, the prevalence was 10.8% among women and 57.0% in men. [8] These declining trends may be primarily due to concerted initiatives, advocacy, actions and programs of WHO, namely: Tobacco free initiative (TFI): tobacco control economics, The WHO Framework Convention on Tobacco Control (WHO FCTC) etc. The comprehensive smoking bans covering both, indoor workplaces, public places and public transport with no exemptions have been introduced in 48 countries in 2014, an almost ten-fold increase since 2005. [9-11] The WHO Framework Convention on Tobacco Control (WHO FCTC) advocates to its member countries, in addition to comprehensive bans on tobacco, to raise tax on tobacco, pictorial health warnings and ban on tobacco advertisement at the point of sale etc. also requires its Parties to regularly collect national data on the magnitude, patterns, determinants and consequences of tobacco use and exposure. [12-15] All such measures, no doubt, are effective in reducing the tobacco use, but are practically just like air raids and no war can be won without ground battle. So, we need to motivate people to quit smoking by firm conviction. [16] Social environment conducive for smoking and smokers' peer pressure are the major factors for initiation of smoking. Similarly, if the above conditions are transformed to anti-smoking situations, the same can help to quit smoking. The people who fall victim to smoking are weak and vulnerable to pressure in comparison to those who abstain smoking in the same surroundings. Their weakness and vulnerability to pressure can also be exploited to quit smoking by ensuring strong anti-smoking social environment. [4] WHO under TFI also seeks to build capacity on conducting and implementing surveys related to tobacco use, exposures and health outcome? [17] But, in India, smoking rates remain dangerously high for men and there is more work to be done to drive these rates lower. Hence, the present study was undertaken to assess the magnitude of smoking problem and associated factors among security personnel so as to use these

study results for undertaking smoking cessation effective interventions and to study the prevalence of smoking problem and associated factors among security personnel.

MATERIALS AND METHODS

Across-sectional study among security personnel of a rural medical college of Haryana was carried out to know the magnitude of smoking problem and related associated factors. All the security personnel working in the institution were included in the study and required data were collected on a pretested semi-structured schedule from each person by the investigators. The data collected were entered in MS Office Excel sheet and analyzed using SPSS software. Data was presented and analyzed by percentage, proportion and association was calculated by using chi-square test using SPSS.

RESULTS AND DISCUSSION

Out of total 129 security personnel, 11 were females and none smoker. Of the remaining 118 males, 52 (44%) were smokers. Majority of them were heavy smokers i.e. smoking more than ten times a day. Only 3.4% smoked 1-5 times a day and 17.8% smoked 6-10 times per day. (Table 1).

Table 1: Prevalence of smoking among security personnel

Smoking status		Number	Percentages
Non-smokers		66	55.9
Smokers (frequency/ day)	1-5	4	3.4
	6-10	21	17.8
	>10	27	22.9
Total		118	100

Table: 2.Family types of study subjects

Type of family	Male	Female	Total
Joint	104 (88.1)	10 (90.4)	114 (88.4)
Nuclear	14 (11.9)	1 (9.5)	15 (11.6)
Total	118 (100)	119100)	129 (100)

Table 3: Age and sex wise distribution of study subjects

Age(years)	Male	Female	Total	
Upto 20	1(0.8)	0	1 (0.8)	
21-25	28 (23.7)	0	28 (21.7)	
26-30	45 (38.1)	5(45.5)	50(38.8)	Mean age
31-35	12 (10.2)	4 (36.4)	16 (12.4)	
36-40	7 (10.1)	2 (18.2)	9 (7)	31.6±8.7 years
41-45	15 (12.7)	0	15 (11.6)	
Above 45	10 (8.5)	0	10 (7.8)	
Total	118 (100)	11 (100)	129 (100)	

Table: 4. Association of Smoking and Education of respondents (n- 118)

Education	Smoking	Not Smoking	Total
Primary	0	1 (100)	1
Middle	5 (100)	0	5
Matric	32 (59.3)	22 (40.7)	54
10+2	13 (26)	37 (74)	50
Graduate	2 (25)	6 (75)	8
Total	52	66	118

X^2 value = 19.992, p value = 0.001

Table: 5. Association of Smoking and Age of respondents (n- 118)

Age(yrs)	Smoking	Not smoking	Total
Up to 20	0	1	1
21-25	8(28.6)	20 (71.4)	28
26-30	15 (33.3)	30 (67.7)	45
31-35	4 (33.3)	8 (66.7)	12
36-40	5 (71.4)	2 (28.6)	7
41-45	13 (86.7)	2 (13.3)	15
> 45	7(70)	3 (30)	10
Total	52	66	118

X^2 =22.098; Significance level (p value): 0.002

Table: 6. Association of Smoking and family type of respondents (n- 118)

Type of family	smoking	Not Smoking	Total
Joint	48 (45.7)	57 (54.3)	105
Nuclear	4 (30.7)	9 (69.3)	13
Total	52	66	118

Table: 7. Association of Smoking among respondents and their majority friends (n- 118)

Majority Friends	Respondent smoking	Respondent Not Smoking	Total
smoking	27 (64.3)	15 (35.7)	42 (100)
Not Smoking	25 (32.9)	51 (67.1)	76 (100)
Total	52	66	118

P value 0.020 X^2 = 5.709

Table: 8. Association of Smoking and Alcohol intake among study subjects

Alcohol intake	Smoking	Not Smoking	Total
Yes	22 (70.9)	9 (29.1)	31(100)
No	30 (34.5)	57 (65.5)	87(100)
Total	52(44)	66 (56)	118 (100)

p value 0.04. X^2 value = 4.102.

Majority of them were heavy smokers i.e. smoking more than ten times a day. About 90% per cent of responders resided in rural areas while 10 per cent

resided in semi-urban and urban settings. The prevalence of smoking as observed in the present study is almost similar to the prevalence reported by other researchers i.e. Bagchi NN et al in their study in Calcutta among adolescent found 37% of male adolescents as current smokers; [18] Gupta V et al in their study on Patterns of tobacco use across rural, urban, and urban-slum populations in a North Indian community reported that the prevalence of bidi smoking as 17.8%), 36.7% and 44.6% among urban, urban-slums and rural males respectively. The use of cigarettes was lower than that of bidi in all three regions. In rural areas, hookah/pipe/chillum use turned out to be the second most preferred product after bidi, both among men and women. [19] Other associated factors revealed that average age of initiation of smoking was 22 years with a range from 10- 30 yrs. Over 65% respondents were aware that smoking harms the health/body and more than 50% knew that it can cause cancer.More than 88% of security personnel belonged to joint families in comparison to about half of the families being joint families in the general population in nearby areas. (Table:2) Maximum number of the respondents was in age groups of 26-30 years (38.8%) followed by and 21-25 years (23.7%), mean age of the study participant was 31.63 years. (Table: 3) All respondent were literate. Majority of them were matriculate, followed by 10+2 literacy level. Smoking Prevalence of smoking decreased drastically from the literacy level 10+2 and above, and there was highly significant association of smoking and low literacy level as shown in table 4.Smoking prevalence increased with age of respondents and the association was significant as shown in table 5.Respondents belonging to joint family smoked more as compared to from nuclear family. (Table 6) About two third of smokers also had most friends smoking and this association was highly significant, indicating that peer pressure has a big role in developing smoking habit. (Table: 7) This is a very crucial observation that supports that smokers are weak and vulnerable to the surrounding social environment and the same thing can be exploited to take them out of smoking habit by changing the social environment favorably. A significant association was observed in smoking and alcohol intake indicating that an addiction attracts the other. (Table: 8) Thus, such smokers become hard nuts to crack i.e. to take them out of smoking habit.

CONCLUSION

Prevalence of smoking was unacceptably high (44%) among security personnel working in a tertiary care medical Institution, a public place where smoking is a punishable offence. Hence, smoking cessation drive needs to be initiated. Significant association of smoking with higher age, low literacy level, most friends smoking and alcohol intake etc. indicate that social environment, awareness and associated other addictions play major role in developing smoking habit.

Recommendation:

A comprehensive program involving enhancing awareness, making social environment conducive to quit smoking and motivating them for the same by health personnel can help in making all respondents as non-smokers. Motivation of health care providers to address smoking cessation among security personnel also needs to be initiated. Thus, prohibiting smoking in institutions in true spirit along with motivation to quit smoking can go a long way towards stemming addictions and the tobacco related cancers and other problems.

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