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Pattern and associated socio demographic factors of tobacco use among health care staff in a tertiary care setting at Faridabad

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ABSTRACT

Background: This study aimed at assessing prevailing pattern and risk factors of tobacco consumption among health care workers of tertiary care centre, in Faridabad.

Methods: A cross-sectional approach was used. A sample of 306 participants included housekeeping and nursing orderly. Participants were interviewed during their lunch time. Semi structured questionnaire was used for data collection.

Results: The overall prevalence of tobacco use was found to be 42.8% (n=306), of which (30.7%) prevalence among housekeeping's compared to nursing orderlies (12.7%). The consumption of smokeless tobacco was higher among housekeeping staff. Khaini (45%) was the main consumption type, followed by hookah (21%) and cigarettes (19.5%) among the current tobacco user (n=133). The consumption of tobacco was found to be associated with gender (male), education, and nature of job (designation) at the hospital setting.

Conclusions: Tobacco use is very common in hospital staff in Faridabad as reflected by results of our study. We should build on success encountered in banning smoking in educational institutions and healthcare facilities. This is important for their health and also overall health of patients also as they can influence the behaviour of people that surrounds them.

Keywords: Tertiary care setting, Smoking, Smokeless, Health care staff, Tobacco use

INTRODUCTION

Tobacco is a serious but silent threat to health and humanity and also ranks second in the cause of death universally so it cannot be ignored.^{1,2}

Tobacco consumption is one of the major public health Issue and a social problem worldwide. Globally there for around 6 million deaths each year due to tobacco use, of which direct tobacco use causes more than 5 million deaths.³ WHO estimated the deaths due to tobacco use to rise above 8 million deaths annually in the next two decades worldwide, with low and middle-income

countries contributing to more than 80% of deaths.⁴ Annually 8 to 9 lakh deaths are due to tobacco use in India.⁵ The global youth tobacco study has reported that smoking is the predominant form of tobacco consumption among adolescents in developed countries while both smoking and smokeless tobacco (SLT) consumption (SLT is unburnt tobacco which is placed into the mouth) are prevalent in developing countries.⁶ Some study also quotes, by year 2020 the total deaths attributed to tobacco use in India are expected to rise by approximately 12% in comparison to year 1990.⁷ Several studies have reflected high prevalence of smoking habits in healthcare workers.⁸⁻¹⁰ The patients seeing them as a role model, they don't play a good example.¹¹

Besides the affecting worker's health, smoking causes significant loss to economy due to increased absenteeism and reduced productivity.¹²

So, the control of workers tobacco habit is a crucial point of health promotion in the workplace. The job-related disparities in the prevalence of smoking that are occurring are a real challenge for the initiatives to control the smoking habit in the workplace.¹³

The current study aimed at assessing prevailing patterns and the associated sociodemographic factors of tobacco consumption among hospital employees, in ESIC Medical College and Hospital, Faridabad during 2018. Tobacco is used is in various forms ranging from smokeless to smoking forms. Laws for smoking form of tobacco are being implemented but the laws for smokeless are still not implemented strictly.

METHODS

Study design

Cross sectional design was used. The hospital staff were interviewed using a pretested Performa after obtaining their consent.

Study area and duration

The study was conducted in ESIC Medical College and Hospital, Faridabad from June 2018 through December 2018.

Study population

Housekeeping and nursing orderlies of ESIC Medical College and Hospital, Faridabad.

Sample size and sampling

Universal sampling was used.

Inclusion criteria

All housekeeping staff who are unskilled workers and all nursing orderly working in the hospital were included.

Exclusion criteria

Those who did not provide consent to participate and the managerial and supervisory staff were excluded.

Study tool

Semi- structured pre tested questionnaire was used.

Data collection

Data was collected by face to face interview method using semi-structured questionnaire having questions

pertaining to socio demographic details and tobacco use. Informed consent was obtained after explaining the purpose of study. Anonymity was maintained by giving alphanumeric codes to study population instead of names. Supervisors of both the groups of study population, workers were contacted and permission was taken and purpose of study was explained. Data was collected on weekdays, during lunch break.

Operational definition

Current user: Using tobacco regularly within 1 month prior to examination.

Nontobacco users: Never used tobacco or occasionally used tobacco.

Ex -tobacco user: Stopped more than 1 month prior to the interview.

Data and statistical analysis

The quantitative data was entered in Microsoft excel sheet and analysed using Epi info version 7. The categorical variables are presented using proportions. Chi square is applied to test the difference between variables. The significance level is set at 5%.

Ethical justification

Investigator and supervisor are aware of the ethics in biomedical research policy of ICMR (2006) and declaration of Helsinki revised in 2002. The ethical clearance was obtained from the institute (ESIC Medical College and Hospital, Faridabad, Haryana) ethical committee for biomedical research. Informed consent of all participants was obtained before gathering any information.

RESULTS

In our study, out of the total 306 health workers, 254 (83%) were males and 52 (17%) were females. It is found that there was higher prevalence in males as males outnumber female in this particular setting but this can be because of less female participation in our study.

Table 1 depicts the sociodemographic characteristics of the targeted participants. As shown in the table 42.8% participants using any form of tobacco (n=306). Among both groups it was slightly higher, among housekeeping's 48% (94 out of 196) as compared to nursing orderlies 35% (39 out of 110). Only 17% (9 out of 52) female staff were addicted to substance abuse in the study. Whereas 49% (124 out of 254) of male staff admitted for addiction to one or more form of substance abuse.

The study shows less educated staff (<10th grade), male gender and nature of work are associated with tobacco use among hospital staff. No association with marital

status and age was seen with tobacco use among the participants, out of 236 married participants only 108

(46%) in comparison to 29 out of 70 (41%) unmarried participants were tobacco user.

Table 1: Demographic characteristics of hospital staff and their association with tobacco use (n=306).

Characteristics	User (n=133)	Non-user (n=173)	Total (n=306)	P value	
	N (%)	N (%)	N (%)	r value	
Gender					
Female	9 (0.06)	43 (24.85)	52 (17)	P<0.0001	
Male	124 (93.23)	130 (75.14)	254 (83)	$\chi^2 = 17.442$	
Age (in years)					
<30	74 (55.63)	94 (54.33)	168 (54.90)	P=0.82025	
>30	59 (44.36)	79 (45.66)	138 (45.09)	$\chi^2 = 0.0516$	
Education					
≤10 th	68 (51.12)	63 (36.41)	131 (42.81)	P=0.009932	
>10 th	65 (48.87)	110 (63.58)	275 (57.18)	$\chi^2 = 6.647$	
Designation					
Housekeeping	94 (70.67)	102 (58.95)	196 (64.05)	P=0.0342	
Nursing orderly	39 (29.32)	71 (41.04)	110 (35.94)	$\chi^2 = 4.4835$	
Marital status					
Married	108 (81.2)	128 (73.98)	236 (83.66)	P=0.568991	
Unmarried	25 (18.79)	35 (26.01)	60 (16.33)	$\chi^2 = 0.3244$	

Table 2: Type of tobacco exposure and their frequency (n=133).

Type of tobacco exposure or frequency	No. of persons (%)
Chewing tobacco (khaini)	39 (29.3)
1 packet per day	10 (25.6)
1 packet per 2 days	06 (15.4)
1 packet per 3 days	14 (36)
1 packet per 4 days	04 (10)
>1 packet per day	05 (13)
Cigarette	26 (19.5)
<5 sticks per day	18 (69)
>5 sticks per day	08 (31)
Gutka	14 (10.5)
1 packet per day	4 (28.6)
>1 packet per day	10 (71.4)
Hookah	28 (21)
Daily	7 (25)
Twice daily	7 (25)
Weekly	9 (32)
Twice weekly	5 (18)
Bidi	26 (19.5)
<5 bidi per day	19 (73)
>5 bidi per day	07 (27)

Table 2 shows the form of tobacco commonly being used and the its frequency among our study groups. The main form of SLT consumed was chewing tobacco i.e., Khaini 29% (n=133). Among users 10 out of 39 (25.6%) participants chew tobacco 1 packet per day followed by 15.4% chew 1 packet in 2 days and 13% were using more than 1 packet per day, while 5 participants chew >1 packet per day (n=39).

Table 3: Pattern of tobacco use among two groups.

Pattern of use	Nursing orderly (n=39) N (%)	House keeping (n=94) N (%)
Tobacco or gutka or pan	10 (25.7)	50 (53.2)
Cigarette	16 (41)	10 (10.6)
Bidi	3 (7.7)	16 (17.1)
Hookah	10 (25.6)	18 (19.1)

It was found that among cigarette smoker's majority 69% were smoking <5 sticks in a day and 31% smokes more than >5 sticks in a day (n=26). Among the gutka users 4 (29%) participants were using 1 packet per day, while 10 (71%) participants were using >1 packet per day (n=14).

Among hookah users it was found that 14 (50%) participants were using it daily or twice daily, while other half users were showing frequency of weekly or biweekly (n=28).

Table 3 shows pattern of tobacco use among the two groups (housekeeping (HK) and nursing orderly (NO)). SLT (khaini, gutka) was most prevalent 60 (45%) among the participants (n=133). Closely followed by hookah 28 out of 133 (21%) and cigarette 26 out of 133 (19.5%). Smoking was more prevalent among the nursing orderly 41% (n=39) and SLT (khaini or gutka) 53% was more prevalent among HK's (n=94).

DISCUSSION

Many previous studies had covered specified groups or specified area's with limited literature on the use of tobacco among healthcare workers in Haryana. 14,15

This paper aimed to provide rich detailed insights into the pattern of Tobacco use among the healthcare staff employed at ESICMH, Faridabad. In this study significant association between tobacco consumption and male gender, less educated, and designation (nature of job) was identified. Education as a significant factor was also found, male gender and nature of job was found significant in study from. Association with age was not found significant in this study and also not seen in other study. Most of the participants (54%) were in the younger age group (<30 years), 64% (196) belonged to the house keeping category. Male participants (83%) constitute the majority and about (77%) of subject were married

Assuming that hospital staff has appropriate knowledge regarding tobacco as they are surrounded by medical fraternity and prevalence should be less among them, but it was found that the prevalence is still high in this group. Studies done on worker's in different industrial sector of India shows the prevalence of tobacco use among tea industry workers, power loom workers and daily wage workers was found to be 54.7%, 85.9% and 88.7% respectively. Definitely if we compare, prevalence is low but still higher as compared to the data of NFHS 4 (39.2%) and GATS 2 Haryana done in 2016 to 2017, which was 23.6%. ^{22,23} The difference could be because of selective targeted study population in our study.

In this study smokers 55% (cigarette, hookah, bidi) was most prevalent form of tobacco users and SLT 45% (khaini, gutka) among the health care staff at Faridabad which was high as found in other study in similar group were 23% and SLT users were 28%, but use of smokeless was comparable to the study were 48.6% of the hospital staff were using at least one type of SLT. ^{16,17}

Overall among the smoking form cigarette and hookah are commonly used in Haryana. Behind hookah is an ageold belief associated with socio cultural reasons particularly in Haryana. Cigarette has also replaced hookah in some cases, who moved away from home in Haryana as its preparation is cumbersome and not easy to carry along. Among smokeless khaini was most prevalent followed by gutka, the reason being easy to consume and carry and less chances of being noticed gutka. 24,25 In India, tobacco with lime (khaini) appeared to be the most common form of ST used (11.6% of adults), followed in descending order by gutka (8.2%).²⁴ These findings demonstrate that of chewing betel quid with tobacco has become less prevalent than use of gutka, which is essentially a dry, commercially manufactured version of betel quid.²⁵

In present study, NO's preferred cigarette (41%) followed by khaini and hookah (25.6%) i.e., smoked form more in comparison to smokeless. High prevalence of smoking among NO's can be attributed to the high income, status symbol, stable job (Government job). But as NO's get less frequent gaps between duty hour's and law being

strict, also they are in wards and in constant touch with seniors and attendants they would get noticed. They prefer to take it during recess or after duties hour. The higher percentage of SLT use among HK's is because it is cheaper, easy to take and can be kept in mouth for longer durations and it was not easily noticed. According to housekeeping they had to work under filthy or dirty conditions and the flavored SLT's help to mask the odour. We can thus make an inference that nature of jobs and breaks between work and not so strict laws for tobacco use in working premises, all these factors which influences their behavior. Similar associations were observed with educational attainment and variations were observed in the probability of different types of tobacco use according to different occupational groups.²⁶

As there is lack of data from the hospital settings. This study gives us insight to review the problem. Tobacco use by health staff in hospital is no doubt a great hindrance to the efforts in encouraging patients to quit. The behaviour and opinions of health employees are regarded with respect by patients and can influence in decision making. Limited campaigning and cultural misconceptions also causing hindrance in leaving tobacco use among people. This study also focuses on tobacco laws that are existing but are not strictly implemented.

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REFERENCES

- 1. Ball K. Smoking spells death for millions. World Health Forum. 1986;7:211-6.
- 2. Older J. Anti smoking language that the young understand. World Health Forum. 1986;7:74-8.
- 3. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. Plos Med. 2006;3(11):442
- 4. World Health Organization. WHO Report on the Global Tobacco Epidemic. Geneva: World Health Organization, 2011.
- 5. Reddy K, Sguptap C. Tobacco control in india.New Delhi: Ministry of Health and Family Welfare, Government of India. 2004: 43-47.
- 6. Warren CW, Riley L, Asma S, Eriksen MP, Green L, Blanton C, et al. Tobacco use by youth: a surveillance report from the Global Youth Tobacco Survey; Bulletin of World health Organization; World health Organization. 2000.
- 7. Patel DR. smoking and children. Indian J Pediatr. 1999;66(6):817-24.
- 8. Ferguson P, Small WP. Further study of the smoking habits of hospital nurses. Health Bull. 1985;43:13-8
- Olsen AD, Fugleholm AM, Rasmussen S, Backer V, Jørgensen SJ, Tonnesen H, et al. Smoking behaviour and exposure to passive smoking among hospital

- employees 1992-1999. Ugeskr Laeger. 2000;162:5623-7
- Nielsen PE, Falk J, Danielsen US. Smoking habits and attitudes towards the tobacco issue among health professionals in Denmark in 1996. Ugeskrift. 2000;162:4140-4.
- 11. Willaing I, Ladelund S. Smoking behavior among hospital staff still influences attitudes and counseling on smoking. Nicotine Tob Res. 2004;6:369-75.
- Parrott S, Godfrey C, Raw M. Costs of employee smoking in the workplace in Scotland. Tob Control. 2000;9:187-92.
- Sorensen G, Pechacek T. Occupational and sex differences in smoking and smoking cessation. J Occup Med. 1986;28:360-4.
- Kapoor SK, Krishnan A, Kumar G. Prevalence of tobacco use among school and college going adolescents of Haryana. Indian J Pediatr. 1995;62(4):461-6.
- Jangra A, Malik JS, Singh S, Sharma N. Pattern of current tobacco use in a rural block of North India. Int J Community Med Public Health. 2017;4(10):3802-7.
- Divinakumar KJ, Patra P, Prakash J, Daniel A. Prevalence and patterns of tobacco use and nicotine dependence among males industrial workers. Ind Psychiatry J. 2017;26:19-23.
- 17. Arif V, Bilawal A, Nanji K, Valliani S, Zulfiqar B, Fakih M, et al. Smoke-less Tobacco Amongst the Staff of Tertiary Care Hospitals in the Largest City of Pakistan. Asian Pacific journal of cancer prevention. APJCP. 2012;13:2315-7.
- 18. Kotian SM, Kumar V, Joseph N. Proportion and Pattern of Tobacco Use: A Study of its Determinants and Awareness Among Class Iv Workers of a Private Medical College in an Urban Area In South India. J Subst Abuse Alcohol. 2016;4(1):1043.
- Medhi GK, Hazarika NC, Mahanta J. Correlates of alcohol and tobacco use among tea industry workers of Assam. Subst Use Misuse. 2006;41:691-706.
- Ansari ZA, Bano SN, Zulkifle M. Prevalence of tobacco use among power loom workers- a cross-

- sectional study. Indian J Community Med. 2010;35:34-9.
- 21. Panigrahi A, Das BC, Panigrahi M. Tobacco use among daily wage laborers in the city of Bhubaneshwar, Odisha, India. J Public Health. 2012;21:57-61.
- National Family Health Survey-4 (NFHS 4: 2015-2016). Ministry of Health and Family Welfare. Indian Institute of Population Sciences, Mumbai; 2016. Available at: http://www.rchiips.org/ nfhs/factsheet_NFHS-4.shtml. Accessed on 4 June 2019.
- 23. GATS 2 Haryana Government of India. Ministry of Health and Family Welfare. Global Adult Tobacco Survey 2. Factsheet, Haryana 2016-17. MOHFW, New Delhi: World Health Organization; 2018. Available at: http://www.tiss.edu/uploads/files/ 06_HR.pdf. Accessed on 16 April 2019.
- 24. International Institute for Population Sciences, Ministry of Health and Family Welfare, Government of India. Global Adult Tobacco Survey India (GATS India), 2009-10. New Delhi: Ministry of Health and Family Welfare; Mumbai: International Institute for Population Sciences; 2010. Available at: http://whoindia.org/EN/Section20/ Section25_1861.htm/. Accessed on 16 April 2019.
- 25. International Agency for Research on Cancer. Betelquid and areca-nut chewing and some areca-nut-derived nitrosamines. IARC monographs on the evaluation of carcinogenic risks to humans. Vol. 85. Lyon, France: World Health Organization, International Agency for Research on Cancer; 2004.
- Singh A, Arora M, Dallas R, Mathur MR. Socioeconomic Gradients in Different Types of Tobacco Use in India: Evidence from Global Adult Tobacco Survey 2009-10. BioMed Res Int. Volume 2015;2015:837804:9.

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