ORIGINAL ARTICLE

Prevalence and Determinants of Smoking among Healthcare Professionals in Hyderabad

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ABSTRACT

Objective: To evaluate the prevalence of cigarette smoking in doctors, nurses and paramedics and to study different aspects related with it.
Study Design: Cross-sectional survey
Place and Duration of Study: Liaquat University Hospital Jamshoro/Hyderabad from 1st March 2021 to 30th April 2021.
Methodology: Seven hundred health care professionals and staff including consultants, postgraduate residents, house officers, medical officers & paramedics, nurses, dispensers, ward boys and sweepers. A self-made questionnaire was used to collect information from the participants. The first part of questionnaire has demographics followed by smoking status and certain set of questions regarding smoking habits from smokers. All reasons to fail to quit smoking and factors influencing to quit smoking were also analysed.
Results: The mean age of all participants was 38.15±8.85. 85% of the participants were males and 15% were females. The prevalence of smoking in health care professionals was 24.17%. The reasons for failure to quit smoking were lack of will power in 35.38% participants, friends smoking circle in 27.69%, withdrawal symptoms after quitting in 26.15% and smoker family member in 10.76%. The factors influencing to quit smoking in ex-Smokers were will power in 20%, fear of Health hazards in 16.92%, insistence of partner 12.3%, friends 10.7%, bad effect on patients 9.23%, kids 7.69% and multiple factors in 23.07% participants were reported.
Conclusion: The smoking prevalence was 24.17% among our hospital workers. Friend circle was the leading influencing factor to begin smoking and lack of will power was main hurdle to quit smoking habit.
Keywords: Smoking, Prevalence, Health care professionals, Smoking attitudes, Pakistan

INTRODUCTION

Tobacco is the second major cause of morbidity and 4th most common controllable health risk factors in the world. It can cause lung and heart diseases that can impact quality of life or may be fatal in many cases. Among all forms of tobacco intake, smoking considers as the most preventable risk factor for reducing associated morbidity and mortality.[1] This concern is on rise in the developed countries, where at least every one in four adult smokes cigarette. The developing countries are even worse than this scenario. In fact, the trend of smoking is rapidly increasing in Pakistan.[2] Smoking cessation and prevention are major public health concern that really require proper legal attention.[3] In modern states, the systematic legal actions have been taken to control smoking habits. According to a survey that was conducted in Croatia, 31% of the Croatians are smokers. After this survey, the ban was imposed on smoking in workplaces and public places like parks, mall and cinemas.[4]

Most unfortunate fact is that the health care professionals also have a tendency to smoke. It has been reported in an American study that licensed nurses had 20.55% of tobacco smoking tendency which was higher than any other health care professional group. According to this study, the overall prevalence of smoking among health care professionals was 9.85% in America.[5] A study in China that showed high prevalence of smoking in physicians (35.7%) with the overall prevalence of 20.8% among all health care professionals.[6]

Due to increase in non-communicable diseases associated with smoking and tobacco, it is necessary to develop awareness programs and counselling sessions. Health care professionals play a very crucial role in promoting healthy life style and cessation of smoking. Therefore, analysing the smoking habits of heath care professionals is very essential to overcome addiction.[7] There are only few studies that have been done to evaluate the behaviour and attitude toward smoking cessation among health care professional.[2,5,6,8] It is very important to understand the increasing smoking trend and recent prevalence of smoking in Pakistan. It is also need of the hour to evaluate the factors that motivate a person to overcome smoking addiction and to analyse them with the factors that cause failure to quit smoking. These factors will help to make a recommendation to cessation of smoking habits for health care professional and thereafter the public.

Therefore, the purpose of this survey-based study is to evaluate the prevalence of smoking among health care professionals and also find out the reasons to quit smoking among ex-smokers and also factors that are responsible to continuing smoking habits.

MATERIALS AND METHODS

This descriptive cross-sectional survey was conducted at Liaquat University Hospital Jamshoro, Hyderabad, Pakistan from 1st March 2021 to 30th April 2021 after permission from obtaining permission from ethical review board of the institute (NO/LUMHS/REC/-15 Dated 11th January 2021). The written consent was taken from all participants. Data was collected randomly from consultants, postgraduate residents, house officers, medical officers and paramedics including nurses, dispensers, ward boys, technicians and sweepers. All the participants who are employed in the respective hospital and are mentally stable to give consent for the study were included.

The data was conducted by mean of anonymous questionnaire. It was a self-made questionnaire that was designed on the basis of prior knowledge, literature review and theoretical concepts. This questionnaire was not validated before this research. Therefore, pilot study was conducted on 50 participants to validate a questionnaire. The Cronbach alpha value for this questionnaire was 0.9. The first section of questionnaire included demographic data as age, gender, designation, and marital status. The second section contained questions about smoking status with options: Yes and No. If anyone ticks yes, followed questions were: whether they are active, occasional or ex-smoker. Smokers were further questioned regarding number of cigarettes they smoke per day, age of starting, influencing factors, reason of continuing it, smoking area, any other addiction apart from cigarettes, habit of smoking after meals and their intention to quit smoking. They were

also evaluated for reasons of failure to quit smoking and factors influencing to quit smoking. Similarly, ex-smokers were asked to point out the reason to quit smoking. The data was entered and analysed using the SPSS-24.0

RESULTS

There were 85% of the participants were males and 15% were females with mean age were 38.15±8.85. A total of 700 participants were included, however only 546 filled the complete questionnaire. The response rate was 78%. Therefore, 546 participants were included for final analysis. Among 546 participants, 132 (24.17%) were active smokers, 307 (56.22%) never smoked in their life, 42 participants (7.69%) smoked occasionally and 65 (11.9%) of the participants were ex-smokers.

When stratified into groups according to age: 333 (60.98%) were in the age range of 25-40 year, while 213 (39.02%) were older than 40 years. Regarding marital status 50.54% were married and 23.26% of the participants were post-graduate trainee at the time of this survey (Table 1).

44.69% participants were used to smoke 5-10 cigarettes daily. Almost 40.15% started smoking in the teenage at 11-18 years. The most prevalent reason to start smoking was friend circle influence that was reported by 39.39% individuals in this survey. Addiction was the main reason to continue smoking in 36.36% of the participants followed by stress relief in 28.06% of the respondents. There were many other addictions like paan, manpuri, gutka, alcohol, sheesha and ice reported. 74.24% of the participants like to smoke after meal (Table 2).

Table.1: Demographic characteristics of smokers, non-smokers, occasional and ex-smokers

Variable	Smoker	Non-smoker	Occasional	Ex-smoker	Total
Total	132 (24.17%)	307 (56.22%)	42 (7.69%)	65 (11.9%)	546 (38.15±8.85)
Age (years)					
25-40	79 (14.46%)	205 (37.54%)	27(4.94%)	22 (4.02%)	333 (32.49±4.96)
>40	53 (9.7%)	102(18.68%)	15(2.74%)	43(7.87%)	213(46.75±6.09)
Gender					
Male	123 (22.52%)	238 (43.58%)	40 (7.32%)	62 (11.35%)	463 (84%)
Female	9 (1.64%)	69 (12.63%)	02 (0.36%)	3 (0.54%)	83 (15%)
Marital status					
Single	45 (8.24%)	153 (28.02%)	22 (4.02%)	27 (%)	245 (44.8%)
Married	77 (14.1%)	148 (27.1%)	15 (2.74%)	36 (%)	276 (50.54%)
Divorced	6 (1.09%)	3 (0.54%)	3 (0.59%)	1 (0.18%)	13 (2.38%)
Widow	4 (0.73%)	3 (0.54%)	2 (0.36%)	1 (0.18%)	10 (1.83%)
Designation					
Teaching Faculty	9 (1.64%)	25 (4.57%)	9 (1.64%)	13 (2.38%)	56 (10.25%)
Postgraduate resident	29 (5.31%)	74 (13.55%)	8 (1.46%)	16 (2.93%)	127 (23.26%)
Medical officer	23 (4.2%)	52 (9.52%)	4 (0.73%)	10 (1.83%)	89 (16.3%)
House officer	16 (2.93%)	46 (8.42%)	3 (0.59%)	8 (1.46%)	73 (13.36%)
Male nurse	8 (1.46%)	28 (5.12%)	2 (0.36%)	4 (0.73%)	42 (7.69%)
Female nurse	1 (0.18%)	33 (6.04%)	1 (0.18%)	2 (0.36%)	37 (6.15%)
Ward boy	18 (3.29%)	27 (4.94%)	4 (0.73%)	1 (0.18%)	50 (9.15%)
Technician	12 (2.19%)	15 (2.74%)	6 (1.09%)	5 (0.91%)	38 (6.95%)
Sweeper	16 (2.93%)	7 (1.28%)	5 (0.91%)	6 (1.09%)	34 (6.22%)

Table 2: Responses of smokers regarding smoking addiction (n=132)

Variable	No.	%
How many cigarettes do you smoke daily		
<5	24	18.18
5-10	59	44.69
11-20	46	34.84
Chain smoker	3	2.27
Age of starting smoking in years		
<10	9	6.81
11-18	53	40.15
19-30	44	33.33
31-40	23	17.42
>40	3	2.27
By whom you were influenced to smoke?		
Self for fun, style	26	19.69
Friend	52	39.39
Family member	23	17.42
Media	31	23.48
Reasons for continuation of smoking?		
Stress relief	37	28.03
Sign of masculinity	23	17.42
Gathering with friends	34	25.72
Addicted to it	48	36.36
Smoking area		
Home	13	9.84
Hospital	27	20.45
Public place	14	10.6
Restricted	4	3.03
Every where	74	56.01
Any other addiction		
Alcohol	21	15.9
Shisha	19	14.39
Cocaine	1	0.75
Heroine	1	0.75
Chars	7	5.3
Ice	6	4.54
Manipuri	28	21.21
Ghutka	26	19.69
Pan	29	21.96
Do you smoke after meals?	98	74.24
Do you smoke for to increase gut motility at morning time?	88	66.66
Do you have intention to quit smoking?	53	40.15

Among all participants, 65 (11.9%) participants tried to quit smoking and failed several times. The lack of will power was the most common reason almost in 35.38% participants followed by friends' circle in 27.69% participants and other reasons for failure to quit smoking (Table 3). On the other hand, 20% of the ex-smokers reported will power as the biggest motivation to quit smoking followed by fear of health hazards in 16.92% participants. Other reason to quit smoking among ex-smokers is indicated in Table 4.

Table 3: Reasons for failure to quit smoking who tried to quit

Reasons	No.	%
Lack of will power	23	35.38
Withdrawal symptoms after quitting	17	26.15
Friends smoking circle	18	27.69
Family member is smoker	7	10.76

Table 4: Factors influencing to quit smoking in ex-smokers

Factors	No.	%
Will power	13	20.0
Fear of Health hazards	11	16.92
Life partner insistence	8	12.3
Friends insistence	7	10.7
Bad effect on kids	5	7.69
Bad effect on patients	6	9.23
Multiple	15	23.07

DISCUSSION

The results of our survey indicated that smoking habit was quite prevalent among healthcare professional regardless to their knowledge about smoking hazards. The overall smoking prevalence was 24.7%, which was higher in doctors' community than other healthcare professionals. 45% of the smokers used to smoke 5-10 cigarettes daily. Main reason for continuation of smoking was addiction in 36.36% participants, although, 40.15% of the participants had the intention to quit it. The lack of will was the most common reason for failure to quit smoking in almost 35.38% of the respondents.

In the present study, almost 84.79%of the smokers were males and 15.2% were females. Males are predominant in smoking era as witnessed by various studies. Khan et al[9] reported 59% of male were smokers. Similarly, 64.4% and 85.3% of male smokers were reported by two other studies, conducted in Pakistan respectively.[10,11] However, female smokers are either predominant or similar in number in western countries.[12] This could be due to the cultural aspects of Pakistan or Asian countries. Smoking habit is not socially acceptable in Asian countries, especially in female gender.[9,10] Therefore, most of females do not talk about their smoking status publicly. Hence, true facts and figures could not be explored.

In our study 60.98% of the participants were in the age range of 25-40 year, while 39.02% were older than 40 years. Azizah[13] observed that majority 39.6% of smokers are in the age range of 20-30 year, followed by 32.2% in 31-40 years, 22.7%of the smokers in 41-50 years and the least were of over 50 years. In the study at public and private sector hospitals of Karachi it was observed that 58.9% of smokers are in the age range of 18-35 years and 41.1% in 36-56 year.[9,10] Our findings were consistent with the literature representing more prevalence in youth. Previous literature on the similar topic showed that high prevalence of smoking in married participants as compared to single and divorced.[11] We also witnessed comparable results with higher prevalence of smokers in married group.

Our study showed 58.33% ratios of smokers belong to doctors' community, 34.84% paramedics and 6.81% nurses. Among doctors, majority 21.96% were postgraduate residents followed by 17.42% medical officer, 12.12% of the house officers and 6.81% consultants in teaching faculty. Mansoura et al[14] reported two third 67.5% smoking prevalence in clinical associates and 8.6% in consultants. An Italian study done by Ficarra et al[15] reported that the 25.3% nurses, 24.5% medical doctors, 17.1% medical students and 33.1% other healthcare workers were smokers. In the presented survey, smoking habit is more prevalent in doctors than any other profession. These differences in findings in Italian and Pakistani population could be due to more awareness of smoking hazards and better socioeconomic circumstances among Italian doctors. In cross sectional study done by Abdulateef[16] reported that 59% of 82 active smokers, smoke <10 cigarettes daily, Similarly, 44.69% of the smokers in our study were used to smoke 5-10 cigarettes daily and 34.84% of smokers smoke 11-20 on regular basis. Therefore, our findings are consistent with the previous literature.

A descriptive cross-sectional survey was carried out in the University Hospital Centre Osijek.[17] They reported 35.1% of the participants as active smokers, 5.8% as former smokers, and 59.1% non-smokers[1]. In our study, 24.17% were active smokers, 11.9% were ex-smokers, 56.22% never smoked in their life and 7.69% of the participants smoked occasionally. In the study conducted by Sarna et al[17] regarding changes in smoking prevalence among 2975 health care professionals from 2003 to 2010-2011 showed a decline in prevalence of smoking to 8.34% in mentioned period. In our study, 39.39% individuals were influenced by friend circle to start smoking followed by 23.48% by media, 19.69% started for fun and 17.42% by family members. While in other studies friend circle was also reported as a leading influencing factor to develop smoking habit.[18] These findings of previous literature are consistent with our study. Reasons for continuation of smoking in our study were addiction in 36.36%, participants, stress relief in 28.03%, friend circle in 25.72% and sign of masculinity in 17.42%. These findings are comparable to the results of a survey conducted in Karachi regarding reasons smoking among male smoking medical students.[2] However, in our study, participants also reported other addictions like Paan (21.96%), Manpuri (21.21%), gutka (19.69%), alcohol (15.9%), shisha (14%) and ice (4.54%).

In systematic review and meta-analysis regarding prevalence of tobacco use in healthcare workers by Nilan[5] reported that 21% overall pooled prevalence of tobacco use in healthcare worker was 31% in males and 17% in females. In presented study, prevalence of smoking in health care professionals was 24.17% in which 22.52% were in males and 1.64% in females. 1.64%. According to the Global Adult Tobacco Survey (GATS) among 7831 individuals in Pakistan, 19.1% adults were currently utilizing tobacco products. Among them, 12.4% smoked tobacco, and 7.7% smokeless tobacco[19]. This is quite an alarming situation as according to our study, prevalence of smoking 24.7% in healthcare professionals more than general population which is 19.1%. The possible reason could be occupational stress, overtime working hours and addiction.[15,20]

There are some limitations of this cross-sectional survey. Firstly, all the responses of this survey were entirely based on participant's responses that make it prone to response bias. The data was collected only from one hospital and findings were based on a small sample size especially female minority in the sample made it difficult to report smoking habits among female healthcare workers. There were total 22% non-respondents in this survey that could provide more information about the smoking habits. Therefore, it is recommended to conduct large sample size and comprehensive studies on the same topic to evaluate the exact prevalence of smoking among healthcare workers and also find out the best possible way to reduce this trend. However, findings of our survey can serve as frame work for future studies on smoking prevalence among healthcare workers.

CONCLUSION

The smoking prevalence was 24.7% among our hospital workers. Most of them were male, married and young. The highest prevalence of smoking was reported in postgraduate residents followed by house officers and medical officers. Friend circle was the leading influencing factor to start smoking during the teenage. However, lack of will power was a main hurdle to quit smoking habit.

REFERENCES

1. Juranić B, Rakošec Ž, Jakab J, Mikšić Š, Vuletić S, Ivandić M, et al. Prevalence, habits and personal attitudes towards smoking among health care professionals. J Occupa Med Toxicol 2017;12(1):1-8.
2. Zafar M. Prevalence of smoking and associated risk factors among medical professionals in hospitals of Karachi, Pakistan. Int J Preventive Med 2014;5(4):457
3. Ding N, Sang Y, Chen J, Ballew SH, Kalbaugh CA, Salameh MJ, et al. Cigarette smoking, smoking cessation, and long-term risk of 3 major atherosclerotic diseases. J Am Coll Cardiol 2019;74(4):498-507.
4. Vrazic H, Ljubicic D, Schneider NK. Tobacco use and cessation among medical students in Croatia–results of the Global Health Professionals Pilot Survey (GHPS) in Croatia, 2005. Int J Public Health 2008;53(2):111-7.
5. Nilan K, McKeever TM, McNeill A, Raw M, Murray RL. Prevalence of tobacco use in healthcare workers: A systematic review and meta-analysis. PloS one 20195; 14(7): e0220168.
6. Yan J, Xiao S, Ouyang D, Jiang D, He C, Yi S. Smoking behavior, knowledge, attitudes and practices among health care providers in Changsha city, China. Nicotine Tob Res 2008; 10:737-44.
7. Movsisyan NK, Varduhi P, Arusyak H, Diana P, Armen M, Frances SA. Smoking behavior, attitudes, and cessation counseling among healthcare professionals in Armenia. BMC Public Health 2012;12(1):1-8.
8. Abdulateef DS, Ali AJ, Abdulateef DS, Mohesh MG. Smoking knowledge, attitude, and practices among health care professionals from Sulaymaniyah City/Iraq. Tobacco use insights. 2016;9:TUI-S38171.
9. Khan FM, Husain SJ, Laeeq A, Awais A, Hussain SF, Khan JA. Smoking prevalence, knowledge and attitudes among medical students in Karachi, Pakistan. Eastern Mediterranean health journal= La revue de sante de la Mediterranee orientale= al-Majallah al-sihhiyah li-sharq al-mutawassit. 2005; 11: 952.
10. Zafar M. Prevalence of smoking and associated risk factors among medical professionals in hospitals of Karachi, Pakistan. Int J Preventive Med 2014;5(4):457.

11. Malik M, Javed D, Hussain A, Essien EJ. Smoking habits and attitude toward smoking cessation interventions among healthcare professionals in Pakistan. J Fam Med Primary Care 2019;8(1):166.

12. Peters SA, Huxley RR, Woodward M. Do smoking habits differ between women and men in contemporary Western populations? Evidence from half a million people in the UK Biobank study. BMJ Open 2014 ;4(12).

13. Azizah AM, Ayat AZ, Laila AD, Tahra AH. Prevalence of smoking among health care providers ineastern province, Saudi Arabia, Pakistan Oral Dent J 2008; 28 (2): 295-300.

14. Mansoura FI, Abdulmalik MA, Salama RE. Profile of smoking among primary healthcare doctors in Doha, Qatar 2007. Qatar Med J 2010; 2010(2):14.

15. Ficarra MG, Gualano MR, Capizzi S, Siliquini R, Liguori G, Manzoli L, et al. Tobacco use prevalence, knowledge and attitudes among Italian hospital healthcare professionals. Eur J Public Health 2011;21(1):29-34.

16. Abdulateef DS, Ali AJ, Abdulateef DS, Mohesh MG. Smoking knowledge, attitude, and practices among health care professionals from Sulaymaniyah City/Iraq. Tobacco use insights. 2016;9:TUI-S38171.

17. Sarna L, Bialous SA, Nandy K, Antonio AL, Yang Q. Changes in smoking prevalences among health care professionals from 2003 to 2010-2011. Jama 2014;311(2):197-9.

18. Malik AK, Chaudhry A, Karamat A, Arif N, Cheema MA, Rauf A. Cigarette smoking and health care professionals at Mayo Hospital, Lahore, Pakistan. JPMA 2010;60(6):509-12.

19. Saqib MA, Rafique I, Qureshi H, Munir MA, Bashir R, Arif BW, et al. Burden of tobacco in Pakistan: Findings from global adult tobacco survey 2014. Nicotine Tobacco Res 2018;20(9):1138-43.

20. Mubeen SM, Morrow M, Barraclough S. Medical students' perspectives on gender and smoking: A mixed methodology investigation in Karachi, Pakistan. JPMA 2011;61(8):773.