Research Article

Prevalence of smoking among dentists and physicians and its associated factors: A sample from Erbil city

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ABSTRACT

INTRODUCTION: Tobacco is the single most preventable cause of death in the world today. In the 20th century, the tobacco epidemic killed 100 million people worldwide, it would kill one billion person during the 21st century.

OBJECTIVE: To determine the prevalence of smoking among medical health care providers (dentists and physicians) in Erbil city and the association between smoking and other variables.

METHODS: A cross-sectional study on a sample of 450 candidates was conducted in Erbil Governorate from 1st July to 1st Nov 2015. A simple random sampling was used to select the participants. The participants were physicians and dentists working in 4 hospitals and 6 primary health care providers. Association between smoking status and age, gender, speciality, title, and job description was searched.

RESULTS: Out of 450 participants, 395 (88%) were physicians and 55 (12%) were dentists. About 45 % of participants were in age group (30 - 39) years, followed by (30%) in age group (20 - 29) years. About (16%) 71 participants were current smokers while(3%) 15 participants were previously smokers the rest 364 (81%) were non smokers. The majority of smokers physicians were either board students or specialists. Prevalence of smoking among surgeons were significantly higher than other specialties 35 (70%). Males are significantly outnumbering females as a current smokers; 66 smoker (93%). No significant association was found between smoking habit and being physicians or dentists.

CONCLUSION: About 16% of our health care providers in Erbil city / MOH / KRG were currently smokers. Gender, job description, and speciality have statistically significant association with smoking status.

Key words: smoking, health care providers.

INTRODUCTION

Tobacco kills up to half of its users. Tobacco kills more than 8 million people each year. More than 7 million of those deaths are the result of direct tobacco use while around 1.2 million are the result of non-smokers being exposed to second-hand smoke. Over 80% of the world's 1.3 billion tobacco users live in low- and middle-income countries.[1]

Although lung cancer can be caused by environmental exposures, most efforts to prevent lung cancer emphasize on tobacco control because 80%–90% of lung cancers are attributed to cigarette and second hand smoking.[2]

All forms of tobacco are harmful, and there is no safe level of exposure to tobacco. Cigarette smoking is the most common form of tobacco use worldwide. Other tobacco products include waterpipe tobacco, various smokeless tobacco products, cigars, cigarillos, roll-your-own tobacco, pipe tobacco, bidis and kreteks. Waterpipe tobacco use is damaging to health in similar ways to cigarette tobacco use. However, the health dangers of waterpipe tobacco use are often little understood by users.[1]

Smoking is associated with a wide range of diseases: pulmonary, gastrointestinal and cardiovascular diseases and different kinds of cancers.[3] WHO states that smoking should be considered a pandemic,[4] as it claimed the life of about 5 million individuals worldwide every year.

Quitting smoking substantially reduces smokers' risk for smoking-related morbidity

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and mortality and can increase life expectancy by up to a decade.[5]

Worldwide it is estimated that men smoke nearly five times as much as women.[6] In Iraq in 2015, the prevalence of tobacco use in adults 18 years and above was 38.2 for men and 1.9 for women.[7] Prevalence of smoking in Iraq has been attributed in general to behavioural, social, and cultural factors that may promote smoking. Psychological elements due to post-war conflicts over the last three decades might be the major drive. A study on students in the School of Medicine in Iraq showed the reasons for smoking behaviour were stress, sadness, depression, and anxiety.[8]

Health professionals, including doctors, dentists, pharmacists, nurses, midwives and others, are trusted sources of information and advice, and are themselves role models in matters related to health. They are in contact with a high percentage of the population and can be a tool in helping people change their behavior.[9]

This study is designed to measure prevalence of smoking habit among physicians and dentists in Erbil city and to find any relationship between smoking habit with some of the participants' characteristics.

METHODS

Study Design and Setting: The study is a cross-sectional descriptive study; which was conducted in Erbil city. Time for data collection was from 1st July to 1st Nov 2015.

Sample size and selection: a convenient and simple random sample of 450 candidates of medical staffs working in 4 major hospitals and 6 primary healthcare centres in Erbil city/ KRG was selected for the study. Data collected by visiting theses institutes and selecting every third health care providers in each determined institutes. The study included all health care provider (doctors and dentists) affiliated to MoH/KRG without any exclusion. Permission from the MoH was taken prior to the study. No financial compensation was provided for participation. Data were collected by trained data collector.

Questionnaire: Self - administered anonymous questionnaire, after an interview, in English, included 24 questions designed by the investigators, used to collect data. The questionnaire comprises two parts. ***Part A*** is designed to measure socio-demographic data including age, gender, type of health care provider, specialty, and duration of occupation) while ***part B*** comprised questions regarding the smoking status. The questionnaire is relatively valid and a reliable indicator of prevalence and associated risk factors. This questionnaire is commonly used around the world for tobacco survey.[10] Principal investigator was explaining the nature and purpose of study to all the selected participants. The participants were encouraged to give frank answers by explaining that the survey is anonymous and the privacy of participants will remain protected.

Data entry and analysis: Statistical package of social sciences (SPSS V. 20) was used for the data entry & data analysis. Descriptive & analytic data analysis was used; p-value < 0.05 was regarded as statistically significant.

Definitions: Smoking is defined in this study as the inhalation of the smoke of burning tobacco encased in cigarettes, pipes, and cigars.

RESULTS

In this study, the response rate was 100 %, the total number of participants involved was 450 physicians; 395 (88%) were medical doctors and 55 (12%) were dentists, 287 (64%) were men while 163 (36%) were women. Table 1 shows that 71 participants (16%) were current smokers, 15 participants (3%) were previously smokers, and the rest 364 (81%) were nonsmokers.

Table 2 shows that (43%) of physicians participated in the study were senior house officers, (38%) were specialists, (15%) were intern doctors, and (4%) were general practitioners. The majority of smoker physicians (59 smoker doctors) were either board students (44%) or specialists (39%). (p- Value equal to

Table 1 | Status regard smoking

Smoking status	Frequency	Percent (%)
Non Smoker	364	81
Previously Smoker	15	3
Smoker	71	16
Total	450	100

0.044).

Regard the distribution of the specialty for the participants it was shown that (49 %) were practicing general surgery or its branches while (28%) were practicing general medicine or its branches, (6%) for family medicine or community, (5%) equally for paediatrics, gynaecology, and others. The rest 2% were for the radiologists. Surgeons are significantly outnumbering other specialty in smoking habit; out of total 50 smokers, 35 were surgeons (70 %) and 9 were physicians (18%). (p- Value equal to 0.027). See table 3

Table 4 shows that males significantly outnumbering females in smoking (93%) 66 smoker of the total were males while smoker females represents only (7%) 5 females. (p- Value equal to 0.000).

Table 5 shows that 12 dentists out of the total 55 were smokers (21%), while 59 medical doctors out of 395 were smokers (15%). However, this difference is statistically non significant (p- value is 0.41).

Table 6 The study shows that 169 participants (46.3%) of the participants were in the age group (30 - 39) years and 31 of them (44%) were smoker, then 109 (30%) were in the age group (20 - 29) years 20 of them (28%) were smoker. No significant association was found between age groups and smoking habit.

DISCUSSION

The result of our study indicated that healthcare professionals, though aware of risks and hazards of smoking, had a quite prevalent smoking habit. There are several risk factors which contribute to raise the prevalence of smoking and if these factors are addressed on time, prevalence will be reduced. Smoking among medical health care providers, which are usually considered by the community as a role model, has many detrimental effect on the

Table 2 | Relation between smoking and job description.

	Status of smoking						Total	%	P
	Non smoker	%	Previous smoker	%	Smoker	%			
Intern	49	15	2	15	9	15	60	15	0.044
Senior house officer	141	44	3	23	26	44	170	43	
General practitioner	13	4	3	23	1	2	17	4	
Specialist	119	37	5	39	23	39	147	38	
Total	322	100	13	100	59	100	394	100	

Table 3 | Relation between smoking and specialty.

	Status of smoking						% Of smokers per speciality	Total	%	P
	Non smoker	%	Ex smoker	%	Smoker	%				
Internal Medicine*	84	30	4	31	9	18	9,2	97	28	0.044
Surgery†	124	45	7	54	35	70	21.1	166	49	
Paediatrics	15	5	0	0	2	4	11.7	17	5	
Gynaecologist	17	6	0	0	0	0	0	17	5	
Radiologist	6	2	0	0	0	0	0	6	2	
FM & CM	21	8	0	0	0	0	0	21	6	
Others	11	4	2	15	4	8	47	17	5	
Total	278	100	13	100	50	100		341	100	

*:Including its branches. †: Including its branches. FM&CM: family medicine and community medicine

Table 4 | Relation between smoking and gender.

	Status of smoking						Total	%	P
	Non smoker	%	Previous smoker	%	Smoker	%			
Male	208	57	13	87	66	93	287	64	0.00
Female	156	43	2	13	5	7	163	36	
Total	364	100	15	100	71	100	450	100	

Table 5 | Relation between smoking and Title.

	Status of smoking						Total	%	P
	Non smoker	%	Previous smoker	%	Smoker	%			
Doctors	323	89	13	87	59	83	395	88	0.41
Dentists	41	11	2	13	12	17	55	12	
Total	364	100	15	100	71	100	450	100	

Table 6 | Relation between smoking and age group.

	Status of smoking						Total	%	P
	Non smoker	%	Previous smoker	%	Smoker	%			
20 - 29	109	30	4	27	20	28	133	30	0.320
30 - 39	169	46.3	5	33	31	44	205	45	
40 - 49	58	16	4	27	8	11	70	15.6	
50 - 59	27	7.4	2	13	11	16	40	9	
> 60	1	0.3	0	0	1	1	2	0.4	
Total	364	100	15	100	71	100	450	100	

national efforts to combat this bad habit. Yet, only few studies have examined the extent of this problem. Most of the previous studies have addressed smoking habits among general population.

In this study the prevalence of smoking among medical professionals was 16% (71 out of 450). This result is less than that reported by another study conducted in Sulaymaniyah, KRG/ Iraq on physicians and dentists in October 2016 that was 26.5%.[11] Also, it is a bit lower than the overall prevalence in both sexes in Iraq which is 20.7%.[7] Many other countries in Asia have reported higher prevalence among health care providers in Bangladesh (23.9%),[12] China (23%),[13] Jordan (38.8%),[14] Alexandria (45%), and in Saudi Arabia (45%). However, our prevalence rate is higher than that reported in Abu Dhabi (8.3 %) and Bahrain (8.6%).[15]

Analyses of data on smoking prevalence among US physicians 20 years of age and older using combined National Health Interview Survey data sets from 1974, 1976, and 1977; 1978, 1979, and 1980; 1983 and 1985; 1987 and 1988; and 1990 and 1991.found that by 1990 and 1991 cigarette smoking prevalence had declined from 18.8% to 3.3% among physicians.[16] While a survey in Chicago of health care professionals in 2010-2011, data from 2,975 health care professionals indicated that approximately 8 percent were current smokers.[17]

We are reported that smoker in more in senior house officers and specialists than in junior doctors; a result which is consistent to that shown from China where total career length was correlated with smoking habit, [18]

Although our study has included small number of participants from certain specialities that makes analysis difficult, surgeons are using tobacco smoking commoner that others. The reason for that might be due to the stress accompanying surgical procedures and interventions making surgeon more prone to use cigarette as a stress reliever. The incidence of smoking among physicians appears to have varied markedly by specialty.[19] A survey done in the United State by taking a random sample

of 50 percent of family and general practitioners, surgeons, and obstetricians/gynaecologists, all members of a county medical society in California, showed that 15 percent were smokers.[20] However, Stamler's survey of 500 cardiologists found that only 7.1 percent of the respondents said they smoke.[21] In a 1973 sample of pulmonary physicians, only 4.6 percent were cigarette smokers.[22] While a study done in Brazil showed that there were no significant differences in prevalence based on medical specialty.[23] In China a study showed that Smoking was not correlated with department of employment, although one of the highest rates was seen in orthopaedics, where exactly half the respondents were current smoker.[18]

In our study only a small percentage of female physicians smoke (7 %) and this is comparable to that reported from Sulaymaniyah,[11] but it is a bit higher than that reported from China (41% for men and 1% for women).[13] In general, patterns of smoking in male and female differ between developing and developed countries. Significantly, more male (40-60%) but fewer female (2-10%) smoke in developing countries compared with 25-30% of both male and female in developed countries.[24] Female in developing countries tend to lower the rate of smoking, starts smoking at a later age compare to male, and consume less cigarette daily. Smoking is not common among Muslim female because Islamic teaching forbid smoking, considering it to be both distasteful and unlawful.[25] Another reason for low rate in female may be the social unacceptability of female smoking leading to female refrain to disclose being smoker in public.[26]

This study showed that there was no significant association between doctors and dentists regard smoking habit. This may reveal that both have same work environment and influencing factors. Cancer Prevention Study II data in a study done in 1986 showed that 16.7 percent of doctors currently smoke cigarettes, as do 14.1 percent of dentists,[27]

The highest smoking rates were seen in the older age group of 30 to39 years (44%), which corresponds to previous studies like, CPS II which revealed that smoking rates among Physician's age 50 to 59 smoke was more than younger doctors, and the smoking rate diminishes in older doctors. Same finding was also in Japan.[27] Smoking patterns among dentists were similar.[19] Nevertheless, in some countries such as Mexico;[28] and India[29] the highest smoking rates were found among younger age group.

This study could be the first study to provide data on the prevalence of smoking among primary healthcare providers in Erbil city using a validated questionnaire with a high response rate. However, the small sample size and being a cross sectional study and the effect of recall bias are limiting factors.

CONCLUSION

About 16% of our health care providers in Erbil city / MOH / KRG are currently smokers. Cigarette smoking is more prevalent in males than in female doctors and dentists. Job description and specialty affect the status of smoking and there is no difference in prevalence of smoking between physicians and dentists.

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Abbreviations list: Community Medicine (**CM**), Family Medicine (**FM**), Kurdistan regional Government (**KRG**), Ministry of Health (**MoH**), Statistical package of social sciences (**SPSS**), World Health Organization (**WHO**)

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