Profile of smoking amongst Health Staff in a primary care unit at a general hospital in Riyadh, Saudi Arabia

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ABSTRACT

Objective: Smoking is a major health problem among healthcare personnel as in other parts of the community. The objective of this study was to find out the prevalence of smoking along with influencing factors related to smoking among our staff in Alkharj Military Hospital.

Methods: A self-administered questionnaire study. EPI-INFO statistical package was used for statistical analysis by calculating x^2 and p value $\leq$ 0.05 as statistically significant.

Results: A total of 230 completed questionnaires, 108 males and 122 females, were included with a response rate of 66%. The prevalence of smokers was (19%) ex-smokers (14%) and non-smokers (67%). Male smokers 31, (29%), x2 =13.42, p< 0.001 were a significantly higher figure than female smokers. Smoking was significantly more among the group of employees with secondary school degres, 6 (35.5%), p< 0.02. The majority of smokers were smoking 11-20 cigarettes per day (46.5%, x^2 = 14.80, p < 0.0001). Friends influenced, 30 (70%), p < 0.0001, smokers to start smoking, with relaxation being the most important reason 22, (51%), p< 0.001) for continuing smoking. Seventy six percent of smokers favored the establishment of a smoking cessation clinic. There was no significant difference regarding the knowledge of harmful effects of smoking among smokers, ex-smokers and non-smokers. The majority of smokers (70%) thought of stopping smoking and 58% attempted to stop smoking but most of the smokers failed due to social reasons or friends influences (44%).

Conclusion: Smoking prevalence is considerably high among our hospital workers. It is not only dangerous for the smokers itself but for the patients who idealize the behavior of hospital staff. Most of the smokers know that smoking is harmful to them as well as others around them but they did not succeed in quitting smoking due to various reasons. Health education combined with help from general practitioners may help to increase the quitting rate among smokers and preventing new smokers from taking up smoking.

Keywords: Smoking, hospital worker, prevalence.

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Smoking was considered the number one cause of preventable mortality and morbidity in the 20th century. Smoking prevalence among hospital workers is found to be of the same extent as in the general population in different studies conducted all around the world.[1,2] It is assumed that hospital workers are more informed than the general population with regards to smoking hazards and are supposed to set an example for the rest of the community regarding smoking habits. The prevalence of smoking in the Kingdom of Saudi Arabia (KSA) is rising as the tobacco import had increased 40 fold from 1961 (1061 tons) to 1987 (41,440 tons) and the KSA moving up, among the tobacco importing countries, from 52nd position (1970-1972) to 23rd (1990-1992).[3,4] If the present smoking pattern continues, smoking will kill one billion people in the 21st century and 70% of these

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deaths will be in developing countries.[5,6] It was estimated that more than 25% of smoke related deaths are in middle age (35-69 years) resulting in the reduced workforce of the affected countries.[7] We could not find any study regarding the smoking prevalence and related influencing factors among health care staff in the KSA. It is necessary to know the facts regarding smoking among health care workers, as they are examples to follow for the patients. This study was carried out to find out the prevalence of smoking and influencing factors related to smoking among health care workers in our hospital.

Methods. This study was carried out in the Department of Family and Community Medicine of Alkharj Military Hospital, KSA. We distributed a self-administered questionnaire in English and Arabic to all the departments in our hospital. The questionnaire was explained to the staff. Staff members were asked to return the completed forms to the Department of Family & Community Medicine. The questionnaire was recirculated as a reminder to those who did not fill it in the first instance. Most of the questions are of yes or no type. No identification was required to fill out the questionnaire. Questions were regarding social and demographic background, attitudes towards smoking, influencing factors for starting and continuing to smoke, knowledge with regards to the harmful effects of smoking, attempts to stop smoking, reason for failed smoking cessation attempt and their views regarding smoking cessation clinic. The smokers were distributed into 3 categories such as current smokers (anyone smoking one or more cigarettes per day), ex-smokers (smokers who had quitted smoking for one month or more) and non-smokers (never smoked cigarette). EPI INFO statistical software, August 2000 release (1.0.3 version), was used for statistical analysis by calculating x^2 and p value of 0.05 or < 0.05 was considered statistically significant.

Results. A total of 230 completed questionnaires were included in the analysis. The response rate was 66%. The reasons for a poor response rate was refusal to complete the form. Data showed that there were 43 (19%) smokers, 32 (14%) ex-smokers and 155 (67%) non-smokers. A detailed profile of smokers, ex-smokers, and non-smokers and distribution according to different departments are shown in Table 1 and 2. Data showed that the number of male smokers were significantly more 31, (29%), $x^2 = 13.42$, $p < 0.001$) than female smokers 12, (10%). Prevalence of smoking was significantly more among secondary school degree holders than the smokers holding a university degree, 6 (35%), $p < 0.02$) (Table 1). Table 3 shows the smoking pattern of smokers and ex-smokers according to the number of cigarettes smoked per day. Most of the smokers were smoking 11-20 cigarettes per day (46.5%, $x^2 = 14.80$, $p < 0.0001$) followed by smokers smoking 1-10 cigarettes per day (37%, $x^2 = 9.38$, $p < 0.002$). Most of the smokers (78.5%, $x^2 = 14.58$, $p < 0.0001$) in the age group of 20-30 years were smoking 11-20

Table 1 - Detailed profile of smokers, ex-smokers and non-smokers.

Details	Smokers n %	Ex-smokers n %	Non-smokers n %	Total n %
20-30 yrs	14 (23)	10 (16)	37 (61)	61 (26)
31-40 yrs	13 (18)	9 (12)	51 (70)	73 (32)
41-50 yrs	13 (17)	8 (11)	54 (72)	75 (33)
>51 yrs	3 (14)	5 (24)	13 (62)	21 (9)
Average age (yrs)	36.4 (SD±9.8)	36.2 (SD±9.6)	38.7 (SD±9.2)	
Sex				
Male	31 (29)	19 (18)	58 (54)	108(47)
Female	12 (10)	13 (11)	97 (80)	122(53)
Education				
Primary	6 (32)	0 -	13 (68)	19 (8)
Secondary	6 (35)	4 (23.5)	7 (41)	17 (7.5)
College	10 (21)	8 (17)	30 (62.5)	48 (21)
University	21 (14)	20 (14)	105 (72)	146(63.5)

n=number, yrs=years, >=more than, SD= standard deviation

Table 2 - Details of smokers, ex-smokers and non-smokers in different departments.

Departments	Smoker %	Ex-smoker	Non-smoker
Nursing	8 (19)	12	73
Pathology	1 (2)	3	9
Transport	6 (14)	3	11
Doctors	4 (9)	2	14
Medical records	8 (19)	2	13
Pharmacy	2 (5)	3	9
Security	11 (25)	4	23
Miscellaneous	3 (7)	3	3
Total	**43 (100)**	**32**	**155**

Table 3 - Comparison of cigarette consumption pattern of smokers and ex-smokers according to age groups.

n of cigarettes	20-30 years		31-40 years		41-50 years		> 50 years	
	Smoker	Ex-smoker	Smoker	Ex-smoker	Smoker	Ex-smoker	Smoker	Ex-smoker
1-10	1	6	5	6	8	4	2	3
11-20	11	4	4	2	4	4	1	2
21-30	1	0	2	1	1	0	0	0
>30	1	0	2	0	0	0	0	0
n=number								

cigarettes per day (Table 3). The majority of the smokers started smoking due to friends influences (30, 70%) followed by the influence of a family member smoker (12, 28%, $x^2 = 15.08$, $p < 0.0001$) and advertisement (1, 2%, $x^2 = 42.42$, $p < 0.00001$). Twenty two (51%) of smokers smoked for relaxation. The other reasons for continuing smoking were recreation (8, 19%, $x^2 = 10.03$, $p < 0.001$), social smoking (7, 16%, $x^2 = 11.71$, $p < 0.001$) and combination of reasons (6, 14%, $x^2 = 13.56$, $p < 0.001$). Seventy six percent of smokers, 69% ex-smokers and 44% of smokers favored a smoking clinic. About 30 (70%) smokers thought of stopping smoking and 24 (58%) attempted to stop smoking. Average attempts were 6 times per person. The reasons for failed attempts were social pressure or friends company 19 (44%), no obvious reason 12 (28%), and withdrawal effects (23%) 10. The knowledge regarding harmful effects of smoking and passive smoking among smokers, ex-smokers and non-smokers was similar. Smoking was regarded as a risk factor for esophagus cancer, mouth cancer, throat cancer, diabetes mellitus, heart disease and hypertension by more than 80% of smokers. Other associated risk factors like urinary bladder cancer, cervical cancer, cancer of kidney, pancreas cancer, low birth weight infants and child becoming smoker were recognized by more than 70%. Only 16% of smokers realized that smoking is related to gastritis. The pattern of common diseases found among smokers and non-smokers are shown in Table 4.

Table 4 - Comparison of pattern of chronic diseases among smokers and non-smokers.

Chronic Diseases	Smoker	Non-smoker
Diabetes	2	5
Hypertension	3	9
Heart Disease	1	2
Bronchial Asthma	2	11
Gastritis	7	12

Discussion. Alkharj Military hospital is a peripheral branch of Riyadh Military hospital with a total staff of 411. The health care workers behavior is an example for patients as well as other members of the community and out to be focus for dissemination of information. The prevalence of smoking was 39% among our staff (males 29% and female 10%). We believe that the actual prevalence of smoking is higher than reported, and many smokers did not volunteer the true information due to social and cultural inhibitions. King Abdulaziz banned smoking in 1926 as being an unislamic practice.[8] A similar study was carried out in Riyadh in the College of Applied Medical Sciences for Health Sciences, university students showed a smoking prevalence of 29% (male 20% and female 9%).[9] Other studies for hospital health care workers showed a prevalence range of 37% to 39%.[1,2] Table 2 showed that the highest prevalence of smoking was in the Medical Records Department and the lowest prevalence of smoking was in the Nursing Department. The possible reasons for this difference in smoking pattern can be the kind of work in different departments as nicotine has a relaxing effect and pleasure enhancing effect[10,11] and personality of the workers in the department starting smoking under the influence of other fellow smokers. Relaxation was found to be the most common reason 22 (51%), for continuing smoking. A contributing factor can be expatriates working as nurses, pharmacists, medical records personnel, such as having social, cultural and economic pressures as well as lack of other relaxing and recreational activities in our community. Most of the smokers (70%), $p<0.0001$) started smoking due to smoker friends. It shows that social influence plays a major role in our community as documented in other studies.[12] The majority of respondents favored a smoking cessation clinic. Smoking cessation clinics

can be really useful in the view of availability of nicotine replacement therapy and other medications like slow release form of bupropion as these are found to be helpful for quitting smoking.[13,14] Until the establishment of these clinics, simple opportunistic advice by general practitioners and individual counseling by nurses can be effective as documented in other studies.[15,16] Awareness regarding harmful effects of smoking was 96% among our workers, which was more as compared to the awareness documented in other studies.[9,17] This increased awareness regarding harmful effects may be due to strong social and cultural consensus against smoking in our community. Seventy percent of smokers expressed desire to quit smoking but failed to quit due to social influences, withdrawal effects, etc. All these reasons for failed attempts reinforce the addictive nature of nicotine.[18] Limitations of our study are a low response rate of the questionnaire. It is carried out in a peripheral branch of Riyadh Military Hospital so it cannot be a representative of all health care workers working in Riyadh Military Hospital program.

Our study showed that smoking prevalence is quite high among health care workers even though they know the harmful effects of active and passive smoking. Smokers were concentrated in a few departments so targeted health education offering help in the form of nicotine replacement therapy can increase the quitting rate. There is a need for health education campaign not only for the general population but also for the health care workers. A smoking ban should be reinforced strictly and this ban should be extended to the whole area of the hospital whether indoor or outdoor.

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