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PREVALENCE OF SMOKING AMONG HEALTH CARE PROVIDERS IN PRIMARY HEALTH CARE CENTERS SERVICES IN BURAYDAH CITY, SAUDI ARABIA IN 2018

Medicine

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ABSTRACT

Despite the great efforts done by the government, there has been an increase in the number of people adopting smoking habit, among them health care professionals. According to the World Health Organization (WHO), tobacco smoking kills half of its users. Objective of the study is to estimate the prevalence of smoking, attitude and behaviour towards issues related to smoking and associations with socio-demographic factors. A Cross sectional observational study was conducted among different primary health care providers during the period from January 2018 to June 2018 in Buraidah. Data entry and analysis was done by using Statistical package for social sciences (SPSS 21.0 version). In the study population, prevalence of smoking among PHC health care providers was 23.7%. Maximum 34.8% were smokers in the age group of 30-39 years and about 44.4% started smoking at less than 18 years of their age. About influencing factors of smoking, there was 71.4% (45/63) of smoking was influenced by friends.Regarding special smoking cessation clinic question, about 44% of health care providers given response as strongly agree and 0.8% were given opinion as strongly disagree. Based on the study results, prevalence of smoking was noticed high among health care providers in Buraidah city and also noticed smoking on set early. Well-planned control programs are highly required to counter the high prevalence of smoking. Need large scale similar studies are required to substantiate the study findings in Buraidah city.

KEYWORDS

occupation, smoking, health care providers, attitude, Behaviour, Buraidah

INTRODUCTION:

Smoking has become prevalent among both sexes worldwide regardless of their age. However, it is still considered a life threatening habit based on its associated adverse health issues. To avert this, there have been widespread campaigns geared towards encouraging people to stop smoking. Smoking cessation represents an important health issue for both public health policy regulators and primary healthcare providers. It is associated with a wide range of diseases: pulmonary, gastrointestinal and cardiovascular diseases and different kinds of cancers.[1]Smoking represents a universal problem with multi-adverse effects on health and economical growth. Nearly 4 million people die prematurely due to smoking and this figure is expected to rise to 10 million within the next 30 years. 70% of the smokers belong to developing countries.[2]

Tobacco consumption is a major risk factor for morbidity and mortality. The Saudi Ministry of Health started a national tobacco control program in 2002 with increased and intensified efforts after joining the World Health Organization Framework Convention for Tobacco Control in 2005. According to the World Health Organization (WHO), tobacco smoking kills half of its users, with one tobacco associated death occurring in every 6 seconds.[1] Additionally, the highest numbers of health complications are associated with smoking. This surpasses deaths resulting from any other disease. WHO considers smoking cessation more cost effective compared to other preventive interventions[4,5]. Quitting smoking greatly reduces cardiovascular morbidity and mortality and the risk of developing smoking-related diseases such as stroke and lung cancer.

Healthcare providers play a key role in the prevention of tobacco smoking as well as counselling patients to stop smoking. Nevertheless, smoking has been prevalent among healthcare providers in many nations. Smoking among health professionals acts as a setback in the campaign among patients. Many patients may see it as not life threatening if those who are well versed with its risks continue to smoke. Most patients consider their healthcare providers as their most trusted source of knowledge and guidance on health matters. Healthcare providers in the primary care sector in particularly considered as community leaders and role models in their centres. Among health care providers, smoking was quite prevalent and ranging from 19% to 34% of daily smokers in Saudi Arabia [9].

In view of the gravity of the problem of smoking among health care providers, I am interested to conduct the study on prevalence of smoking habits, attitude and risk behaviours, perceptions towards smoking among the health care providers in Buraidah city among selected primary health care centres.

Aims and Objectives:

(1) To estimate the prevalence of smoking among health care providers in Buraidah city and its demographic factors association with smoking.
(2) To study the attitude towards issues related to smoking and smoking cessation.
(3) To determine the behaviour of health care providers towards the patient smoking habit and its cessation.

MATERIALS AND METHODS

This was a facility based cross sectional study among health care providers in Primary Health Care Centres (PHCCs). According to sample size, we initially selected 16 Health care centres based on east, west, north and south of Buraidah (each side 4 centres). However, after responses in pilot study, we included 4 more centres. Finally this data was collected from the 20 primary health care centres. All the primary health care centres were selected by simple random method.

Study period:

This study was conducted from 1st January 2018 to 30th June 2018.

Target Population: The study population consisted of all health care providers who were working in PHCCs in Buraidah City during the study period and those who were physically present on the day of data collection. Health care providers included in our study were doctors, nurses, dentist, pharmacist, technical people like lab technician, others including administrative staff.

Sample Size:

Based on prevalence of smoking in study conducted in Qassim university shown as 40% [6]. This prevalence taken for the calculation of sample size in my study using $4PQ/L^2$ formulae. Based on this formulae and allowable error was 15%, sample size required was 266 participants.

Sampling method:

Simple random sampling method.

Sampling procedure:

Even for the selection of health care providers also simple random method was used. After identifying the health care providers, self administered questionnaire was given to the participants, which was returned after filling. Importance of study and privacy of sharing information and assurance about confidentiality of the information was maintained.

Exclusion criteria:
Housekeeping personnel and Non-cooperating persons were excluded from the study.

Ethical considerations:
There are no major ethical issues in this study as it was carried out within the confinement of Primary Health Centres and participants were working under Ministry of health. Informed consent was taken from each participant. A family medicine physician trainee was also available to answer respondents' queries. Institutional ethical committee certificate was received on 27.02.18 from Regional Ethics committee, registered at National Bio & medical ethics committee, registration No: H-04-Q-001.

RESULTS:

Table1: Age distribution of participants with respect to smoking status

Age in yrs	Smoking	No smoking	Total
Not reported	0 (0%)	1 (100%)	1 (100%)
20-29 in yrs	16 (22%)	57 (78%)	73 (100%)
30-39 in yrs	45 (34.8%)	84 (65.2%)	129 (100%)
40-49 in yrs	0 (0%)	41 (100%)	41 (100%)
>50 in yrs	2 (9%)	20 (91%)	22 (100%)
Total	63 (23.7%)	203 (76.3%)	266 (100%)

Fisher exact test- 24.7, 4df, P- 0.001.

Table 1 revealed that about 23.7% were having smoking habit and 76.3% were not having smoking habit. Maximum 34.8% were smokers in the age group of 30-39 years and more than 50 years age group smokers was only 9%.

Table 2: Socio-demographic variables description in study population:

Sex	Smoking	No smoking	Total	P value
Male	62 (30.5%)	141 (69.5%)	203 (100%)	X2(Yates correction)- 22.3, P<0.001.
Female	1 (1.6%)	62 (98.4%)	63 (100%)	
Occupation				
Not reported	0 (0%)	4 (100%)	4 (100%)	Fisher exact test- 24.7, P<0.001
Physician	6 (6.7%)	83 (93.3%)	89 (100%)	
Nurse	19 (32.7%)	39 (67.3%)	58 (100%)	
Dentist	2 (18.2%)	9 (81.8%)	11 (100%)	
Technical	7 (31.8%)	15 (68.2%)	22 (100%)	
Pharmacist	9 (45%)	11 (55%)	20 (100%)	
Others	20 (32.2%)	42 (67.8%)	62 (100%)	
Nationality				
Not reported	0 (0%)	2 (100%)	2 (100%)	
Saudi	58 (25.7%)	167 (74.3%)	225 (100%)	
Non Saudi	5 (12.8%)	34 (87.2%)	39 (100%)	
Marital status				
Single	14 (28.5%)	35 (71.5%)	49 (100%)	
Married	48 (22.9%)	162 (77.1%)	210 (100%)	
Divorced	1 (1.4%)	6 (98.6%)	7 (100%)	
Family income p.m				
Not reported	4 (25%)	8 (75%)	12 (100%)	Fisher exact test - 18.0, P<0.001.
< 4999 SR	1 (50%)	1 (50%)	2 (100%)	
5000-9999 SR	20 (24.7%)	61 (75.3%)	81 (100%)	
10000-14999 SR	31 (34.8%)	58 (65.2%)	89 (100%)	
> 15000 SR	7 (8.5%)	75 (91.5%)	82 (100%)	
Total	63 (23.7%)	203 (76.3%)	266 (100%)	

Table 2 revealed that 23.7% (63/266) were females and 76.3% (203/266) were males. Among the males, the prevalence was 30.5% and among the females, the prevalence was 1.6%. In the study population, a high prevalence of smoking was observed in single unmarried people was 28.5% compared to 22.9% among married people.

Table: 3 - Age at onset of smoking, smoking duration, influencing factors and other characteristics among the study population:

Age at smoking	Number	Percentage
<18 years	28	44.4%
18-21 years	32	50.8%
22-25 years	3	4.8%
Smoking status		
Smoker	63	23.7%
Non smoker	203	76.3%
Duration of smoking		
Not reported	2	3.17%
< 5 yr	5	7.9%
6-10 yrs	7	11.11%
> 10 yrs	49	77.77%
Type of smoking		
Cigarette	46	73%
Shisha	17	27%
Frequency of smoking		
< 10 cigars	5	10.9%
11-20 cigars	33	71.8%
>21 cigars	8	17.3%
Influencing factors		
Friends	45	71.4%
Advertisements	2	3.2%
Personal choice	10	15.8%
Work pressure	5	8%
Any other (Specify)	1	1.6%

Table 3 depicts that in the study population, about 44.4% were started smoking at less than 18 years of age group and very less people (4.8%) started smoking after 22 years of age group. About influencing factors of smoking there were 71.4% (45/63) influenced by friends.

Table: 4 - Attitude of Primary health care providers towards smoking:

Different parameters	Strongly agree	Agree	Average	disagree	Strongly disagree
Smoking is a personal matter and can be performed at any place: (n-264)	4 (1.5%)	3 (1.1%)	18 (6.8%)	113 (42.5%)	126 (47.4%)
Smoking in enclosed public places prohibited (n-261)	182 (68.4%)	59 (22.2%)	13 (4.9%)	5 (1.9%)	2 (0.8%)
The price of tobacco products should be increased sharply (n-259)	70 (26.3%)	47 (17.7%)	58 (21.8%)	64 (24.1%)	20 (7.5%)
Hospitals and health care centres should be smoke free (n-258)	147 (55.3%)	83 (31.2%)	12 (4.5%)	11 (4.1%)	5 (1.9%)
Special smoking cessation clinic are the best for smoking control activities (n-260)	117 (44%)	100 (37.6%)	30 (11.3%)	11 (4.1%)	2 (0.8%)
All the health team members are responsible for providing tobacco control activities (n-262)	103 (38.7%)	112 (42.1%)	37 (13.9%)	8 (3%)	2 (0.8%)

Fisher exact test- 1090, 20df, P- 0.0001
Table 4 revealed that smoking is a personal matter question, about only 47.4% health care providers given response as strongly disagree and only 1.5% were given response as strongly agree.

Table: 5 - Health care workers opinion on patient smoking use, Quantity of smoking advise as behavioral dimension:

Response	Number	Percentage
Not given answer	2	0.8%
Never	101	38%
Occasional	130	48.8%
Frequently	33	12.4%
Total	266	100%

Response		
Not given answer	2	0.8%
Never	130	48.7%
Occasional	100	37.5%
Frequently	32	12%
Advise the patient to quit tobacco use		
Not given answer	10	3.8%
Never	16	6%
Occasional	140	52.6%
Frequently	100	37.6%

Table 5 revealed that about 52.6% were giving advice to patient occasionally towards patient to quit smoking.

Table: 6 - Status of interest towards receiving training in counseling skills on smoking cessation:

Counseling training skills	Number	Percentage
Not reported	4	1.5%
Very interested	75	28.2%
Somewhat interested	151	56.8%
Not interested	36	13.5%
Total	266	100

Table 6 revealed that about 56.8% were showing somewhat interest towards training in counseling skills.

DISCUSSION:

In the present study prevalence of smoking habit was 23.7% and smoking prevalence among males was 30.5% and among the females was 1.6%. Similar prevalence was observed by Darya Saeed Abdulateef, AzheenJamil Ali,et al [10] conducted in a study with the aim to estimate the smoking rate among physicians and dentists from Sulaymaniyah, Iraqi Kurdistan, Iraq and stated that overall prevalence was of smoking among physicians and dentists was 26.5%, with a significantly higher rate among male compared to female health care professionals.

Some other studies reported lower prevalence of smoking among health care providers in eastern province, Saudi Arabia done by azizah al-mobeeriek et al revealed that out of 578 individuals only 15.1% prevalence (87) were smokers [2]. Another study done in Saudi Arabia by MaziarMoradi-Lakeh, et al revealed that overall prevalence of current smoking was 12.2 % and males were more likely to smoke than females (21.5 % vs. 1.1 %). Mean age of smoking initiation was 19.1 years (±6.5 years)[15].

The prevalence rate of smoking physicians in UAE was 33.6%. Lower rates of tobacco usage among physicians were reported in neighbouring countries with rates of 31%, 23%, 14.2%, 12% and 11% in Kuwait, Bahrain, Saudi Arabia, Qatar, and Oman respectively [20]. In countries where there has been a great public health promotion against smoking such as Canada, USA, Sweden, Australia and UK, physician smoking rates have been found to be very low. In many other countries it has been found that the smoking physician rate is similar to that of the general population [21]. The success of ceasing smoking depends on ability to overcome addiction that is caused by nicotine. Other studies conducted in Saudi Arabia[27]revealed that prevalence of smoking among males and females of Saudi Arabia was reported as high. The prevalence of smoking in males is 54.2% (n=725), while in females is 6.9% (n=11). The general pattern of lesser smoking prevalence and minor daily cigarette use among women is reported for almost all developing societies.

Maximum 34.8% were smokers in the age group of 30-39 years and more than 50 years age group smokers was only 9%. About 44.4% were started smoking at less than 18 years of age group and very less people (4.8%) started smoking after 22 years of age group. Other study revealed the same finding that mean age of smoking initiation was 19.1 years (±6.5 years) with 8.9 % of ever smokers starting before the age of 15 years [15].

Among the males, the prevalence of smoking was 30.5% and among the females, the prevalence was 1.6%. Similar findings and statements were observed study conducted in middle east region [23].Cultural factors may explain the gender differences as a reflection of the background differences in societies within the Middle East and North Africa region [23]. In the study population, high prevalence of smoking observed among pharmacist occupation was about 45%.

In the study population, there is high prevalence of smoking was observed in single unmarried people 28.5% and 22.9% in married people. Other study revealed that prevalence of smoking is high among the married people. The high smoking prevalence among married people observed in study of AlAteeq MA et al [22]. Among primary Health care physicians revealed as serious impact resulting in a greater risk of smoking initiation among children and other family members and the more adverse health effects of passive smoking among those in the same household. In the current study population, about influencing factors of smoking there was 71.4% of smoking was influenced by friends, 15.8% was personal choice and 8% was noticed as work pressure by the participants. This can be inferred from the findings that participants ranked influencing factors of friends, family and personal at the top. Similarly, one of the strongest risk factors for smoking is exposure to peers, especially close friends, who smoke, with relaxation being the most important reason for continuing smoking [22].

Among the smokers, about 73% were cigarette smokers and 27% were Shisha smokers. Among the smoking population, about 71.8% were smoking 11-20 cigars per day and only 10.9% were smoking < 5 cigars per day. Similar findings of cigars smoking prevalence and also prevalence of shisha smoking observed in the study conducted by Salama Al Hosani et al in Abu Dhabi, United Arab Emirates in the year 2013 [1].

Among the smokers population, about 36.5% (23/63) did not given any answer for failure in smoking cessation, 28.6% (18/63) were revealed as friends and 14.3% (9/63) were revealed as work pressure as the cause of failure of smoking cessation. Similar findings were observed with study conducted in the areas of Al-Dammam, Al-Dhahran and Al-Khobar by Azizah al-mobeeriek et al in published in Pakistan Oral & Dental Journal volume 28 [2].

In the study population, about 48.8% of health care workers occasionally asking the patient in smoking cessation activities, 38% were never asking and only 12.4% were frequently asking the patients towards smoking use. In this study, about 48.7% were never asking the patients, 37.5% were asking occasional and 12% were frequently asking the quantity of smoking use whenever they come in contact with them. In the present study population, about 52.6% were giving advice to patient occasionally towards patient to quit smoking, 37.6% were giving frequently to quit smoking and 3.8% did not give any response towards quitting smoking. The other studies Kottke TE, Battista RN,Al [24]and Hosani, Salama, et al[1]also revealed that, only 45.8% PHC personnel strongly agreed that patient chance of quitting smoking was increased if a health care provider advised him/her to quit and that 42% of the PHC personnel in this study believed that smoking patients would not stop smoking even if they were advised to quit. 43.3% of the participants agreed that health care providers who smoked were less likely to advise patients to stop smoking. On the other hand, 47.5% of the PHC personnel agreed that special smoking cessation clinic were the best for smoking control activities and 46.7% agreed that all health team members were responsible for providing tobacco control activities [24,25].

In the present study regarding the attitude of primary health care providers towards smoking and its cessation as smoking is a personal matter question, about only 47.4% health care providers given response as strongly disagree and only 1.5% were given response as strongly agree. another question as smoking in enclosed public places, about 68.4% health care providers given response as strongly agree and very less proportion of people 0.8% were given response as strongly disagree. Regarding a question of hospitals and health care centres should be smoke free question, 55.3% of health care providers given response as strongly agree and 1.9% were given opinion as strongly disagree.

Al Hosani, Salama et al [1]revealed his study findings as 7.4% of the PHC personnel regardless of their smoking status didn't know what the smoke-free policy at their work place was. 12.4% of the PHC personnel regardless of their smoking status didn't know whether the smoke free policy was enforced. 72.1% of the PHC personnel have not received specific training on smoking cessation. The most common intervention that was available for the PHC personnel to help patient to quit smoking was brief counselling (70.5%), followed by self help material (61.5%) and medication. Behaviour of the PHC personnel regardless of their smoking status towards smoking cessation activities. Only half of the PHC providers (49.2%) always asked the

patient about tobacco use and 40.2 % routinely assess the quantity of the tobacco use. Only 63.6% of PHC personnel were very interested in receiving specific training on smoking cessation [1,26].

One of the limitation of the study is the small sample size and being a cross sectional study and the effect of recall bias are limiting factors. We used self-administered questionnaire there may be chances of getting false data due to reporting bias as it is a sensitive issue and especially in female health care providers. We conclude current smoking among PHC personnel among females was very low and among males was high. The majority of PHC personnel regardless of their smoking status had average attitudes towards smoking cessation policy. Smoking cessation activities should be an integral part of the already existing PHC system, and to be provided by all PHC staff at every clinic visit, including asking about tobacco use, assessing willingness to quit, advising quitting and arranging for cessation services as a social responsibility of the citizen apart from health care.

CONCLUSIONS:

The overall prevalence of smoking among health care providers working in Primary Health Care Centres was high and the prevalence of smoking among males was high comparatively females. In the present study, high prevalence of smoking observed among pharmacist occupation followed by nurse, low prevalence of smoking was noticed among physician. Health care providers behaviour towards smoking, about half of participants were giving advice to patient occasionally to quit smoking. On the whole, as far as possible health care providers are direct contact to patients and relatives. Hence, self realization towards quitting of smoking is essential.

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