

Profile of Smoking Among Primary Healthcare Doctors in Doha, Qatar 2007

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Abstract:

Background: Cigarette smoking is universally acknowledged to be a health hazard. Primary care physicians have several important responsibilities, being role models, information providers, and identifiers/modifiers of risk behaviors, and researchers. They are often able to influence the behavior of their own patients as well as the society as a whole in the prevention of illness and promotion of well-being. This can be accomplished by both serving as personal role models and actively promoting healthy behavior among their patients. Doctors who smoke may have a problem in achieving these two objectives, especially when trying to convince their own patients to quit smoking. The purpose of this study was to identify smoking prevalence among primary care physicians in Doha, Qatar, and to explore how the smoking behaviors of physicians, their perceived ability to influence patient smoking behavior, and their knowledge about health outcomes related to smoking can influence their interaction with patients.

Methods: A cross-sectional, self-administered, anonymous survey was conducted in November through December 2007, among 12 primary healthcare centers in Doha. Analyses were based on responses from 151 physicians, representing an 83.8% response rate.

Results: The prevalence of smoking was 23.1% among primary care physicians, 15.8% of them were current smokers and 7.3% were ex-smokers. Smoking prevalence was significantly higher in men than women (12.9% vs. 1.5% regular smokers). Almost two thirds of smokers started smoking before reaching 20 years of age. Among smokers, 28.6% had previously smoked in the presence of patients and 40% of them felt ready to quit smoking within the next six months. Finally, physicians who smoke are less likely to ask their patients

about their smoking behavior or believe their example is likely to influence their patients.

Conclusion: Smoking prevalence is considerably high among physicians in the 12 primary healthcare centers in Doha, and a large percentage of physician smoke in the presence of their patients. Physicians' smoking behavior and attitude to smoking influences whether they counsel patients regarding smoking. These results indicate a need to educate physicians in Qatar about their potential for influencing patients to not start or quit smoking. There is a need for health education campaign not only for the general population but also for healthcare workers.

Background:

The global burden of disease resulting from tobacco smoking is well understood.^(1,2) Tobacco smoking prevention and cessation efforts, primarily in developed countries, have been effective at reducing heart disease, cancer, and other smoking-related illnesses. Prevention efforts in the United States have combined together elements of health education, cessation techniques, and legislative activity to address the smoking problem.⁽³⁾ Large decrease in smoking prevalence illustrates the success of these efforts. In 1965, the percentage of current smokers 18 years of age and older was 51.9 for men, 33.9 for women, 42.1 for whites, 45.8 for blacks, and 42.4 overall.⁽⁴⁾ By 2002, corresponding percentages were 25.2 for men (51% decrease), 20.0 for women (41% decrease); 23.6 for whites (44% decrease), 22.4 for blacks (51% decrease); and 22.5 overall (47% decrease).⁽⁵⁾ Contrary to favorable trends in smoking prevalence in the United States and elsewhere, patterns in smoking prevalence are less favorable in many developing countries. For example, in 2002, the World Health Organization (WHO) estimated that among adults in the Republic of Armenia 64% of males and 1.0% of females were smokers.⁽⁵⁾

Smoking was considered the number one cause of preventable mortality and morbidity in the 20th century. Studies have shown that physicians and other healthcare workers can act as important figures in reducing societal smoking prevalence⁽⁶⁻⁹⁾, and can contribute to stem-

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ming the projected increase in mortality and morbidity from cigarette-related diseases.^(1,2) The WHO recently reported that prevalence of current smokers among doctors in Armenia in the late 1990s was 80.6% of males and 42.0% of females.⁽¹⁰⁾ Smoking prevalence among health workers is found to be of the same extent as in the general population in different studies conducted all around the world.^(11,12) 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).^(13,14) If the present smoking pattern continues, smoking will kill one billion people in the 21st century and 70% of these deaths will be in developing countries.^(15,16) 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.⁽¹⁷⁾ We could not find any study regarding the smoking behavior and attitude among healthcare staff in Qatar. It is necessary to identify essential facts regarding smoking among healthcare workers, as they set examples for the patients. This study was carried out to find out about the smoking behavior and attitude among primary care doctors working in primary healthcare centers in Doha, Qatar.

Methods:

Study Setting and Population

Qatar is one of the Arabic Gulf countries. The total population is almost 1.4 million with the majority living in Doha, the capital of the country. The 12 primary healthcare centers in Doha are staffed by 180 primary healthcare doctors.

Study Design

A cross-sectional survey was conducted in November to December 2007. Criteria for inclusion in the study were practicing physicians with clinical interaction with patients and currently practicing at a licensed medical facility located in primary health centers inside Doha. Approval for the current study was granted by the research committee in Hamad Medical Corporation prior to administering the survey.

Instrument Validity and Reliability

The questionnaire used items from an instrument developed by the WHO and the International Union against Tuberculosis and Lung Diseases, specifically made for healthcare workers. This instrument was selected because of its use in the peer-reviewed literature^(17,18) and a book.⁽¹⁹⁾ Although the validity of the instrument has been established in other settings, we assumed it was

applicable in Qatar. In addition, the constructs and variables it measures were consistent with the intent of the present study. A few questions were added to ensure the study objectives were met. All forms were in English. The questionnaire was sent by mail to all participants. Follow up by phone and personal visits was done when needed.

Data Collection

Data was collected from all 12 primary healthcare centers in Doha. The survey outline was given to the directors of these health centers, all of whom agreed to participate in the study. Anonymous, self-administered questionnaires were distributed to the primary healthcare centers. The number of questionnaires given to each medical center reflected the number of physicians working there. The directors then asked their physicians to complete and return the questionnaires for collection by the lead author. Of 180 questionnaires distributed to the 12 health centers, 151 were returned (83.8% response rate) and analyzed.

Data Analysis

Frequency distributions were used to describe the data. Bivariate analyses were used to measure associations between selected variables, with statistical significance based on the chi-square (X^2) test for independence. Two-sided tests of significance were based on the 0.05 level against a null hypothesis of no association, unless otherwise indicated. Analyses were performed using SPSS version 13.0.

Results:

Of the 180 questionnaires that were distributed, 151 were returned yielding a response rate of (83.8%) with complete information available in all of them. The non-respondent physicians (16.2%) were mailed but they still did not return the questionnaires apparently because many of them were on leave and others were not interested in the study at the time. A description of the participants according to selected demographic and smoking status (Table 1) shows 85 (56.3%) were male and 66 (43.7%) were female with a mean age of 44 +12 years. Only 26.5% of the physicians were Qatari. Almost 1/3 of the participants (35.8%) had a family and community medicine post-graduate qualification. Nearly 2/3 of the participants were clinician associates (67.5%); consultants represented only (8.6%). Slightly more than half of the participants (55%) had good experience in primary care as general practitioners (>8 years). There were 24 (15.8%) smokers, 11 (7.3%) ex-smokers and 116 (76.8%) non-smokers (Table 2). Male smokers were significantly more (23; 27%); $p < 0.001$) than female smokers (1; 1.5%). Most smokers were non-Qatari physicians (12.6%); while the smoking Qatari physicians represented 3.3% (Table 3). Most started smoking before they reached 20 years of age. Men were much more likely than women to have smoked in front of patients

Table 1: Frequency distribution of the studied physicians according to demographic characteristics (n=151)

Variables		No.	%
Age:	23-34	38	25.2
	35-44	45	29.8
	45-54	55	36.4
	55-60	10	6.6
	60+	3	2.0
Sex:	Men	85	56.3
	Women	66	43.7
Nationality:	Qatari	40	26.5q
	Non Qatari	111	73.5
Qualification:	MBBS	47	31.1
	Family Medicine	54	35.8
	Others	50	33.1
Job Description:	Locum	2	1.3
	Specialist	34	22.5
	Consultant	13	8.6
	Clinical Associate	102	67.5
Years of practicing:	< 4 years	30	19.9
	4-8 years	38	25.2
	> 8 years	83	55.0

Table 2: Frequency distribution of the studied physicians according to smoking status (n=151)

Smoking Behavior*	No.	%
Never smoked	116	76.8
Former smoker	11	7.3
Occasional smoker	12	7.9
Regular smoker	12	7.9
Total	151	100.0

*Respondents were not provided definitions for the terms regular smoker, occasional smoker, or former smoker. Each respondent defined these terms individually

but almost all smokers did not smoke regularly in front of patients. Finally 40% of smokers indicated a readiness to quit within the next six months (Table 4).

Physicians were asked their level of agreement with nine statements about their perceived role in interacting with patients in the context of smoking. The highest levels of agreement were with statements that health professionals should routinely advise patients who smoke not to smoke in front of children; to quit smoking, and that they regularly ask patients if they smoked. Physicians also had a high level of agreement with the statement that health professionals should not smoke in front of patients and that they should set a good example to their patients. The

highest level of being unsure and lowest level of agreement were with the statement health professionals who smoke are less likely to advise people to stop smoking. Physicians' smoking behavior may influence how and whether they counsel their patients regarding smoking (Table 5). The questions for which smoking status influenced their responses to the opinion questions at the 0.1 level of significance are given in (Table 6). Disagreeing with these statements was consistently associated with a higher chance of being a current smoker.

Discussion:

Healthcare workers have been shown to play an important role in the prevention of tobacco smoking.⁽²⁰⁻²²⁾ Primary care physicians in particular are one of the most powerful groups at lowering the acceptability of smoking in various social contexts, a process often called "denormalization".⁽²³⁾ The current study provides information that may be useful in designing smoking prevention and cessation programs that involve physicians in Qatar. The results of this study demonstrate that many physicians in Qatar, rather than acting as the important resource they could be, may in fact be eroding the effect of tobacco prevention and control efforts by reinforcing the normalization of tobacco through their attitudes and practices. Approximately 23.1% of physicians were smokers, which were found to be relatively fewer than in other studies in Saudi Arabia⁽²⁴⁾ and some other countries which showed prevalences of smoking among primary care physicians ranging between 55% and 39%.⁽²⁵⁾ It was, nevertheless, a high prevalence considering the expected physicians role. Smoking among males was found to be statistically significantly higher than female physicians. This may be explained by Arabic culture accepting male smokers rather than female smokers. This was demonstrated in results of studies in Armenia which contradictorily showed that 42% of female physicians were smokers.⁽²⁶⁾

Nearly 1/3 of smoker physicians had smoked in front of the patients. Those who had smoked in the presence of patients may believe that their behavior does not influence them, or that they do not fully understand the harmful effects of smoking. Recall that those who disagreed with statements: "healthcare workers are examples for their patients and the public," "healthcare workers should set a good example by not smoking," and "healthcare workers should regularly ask their patients about their smoking habits," were more likely to be smokers. Almost two-thirds of the studied physicians were ready to quit smoking and this agreed with other studies which have shown that physicians have often been at the forefront at quitting smoking.^(27,28) An older study showed that California physicians who currently smoked decreased from 53% in 1950 to 10% in 1980.⁽²⁹⁾ In comparison, the decrease in American men who smoked cigarettes was from 53% to 38% during the same time period. Two

Table 3: Frequency distribution of the studied physicians according to smoking status and demographic variables (n=151)

	SMOKING STATUS										Sig. Test
	Never Smoked		Former Smoker		Occasional Smoker		Regular Smoker		Total		
	No.	%	No.	%	No.	%	No.	%	No.	%	
AGE											
23 - 34	30	19.9	1	0.7	4	2.6	3	2.0	38	25.2	$X^2 = 13.814$ $p = 0.313$
35 - 44	36	23.8	2	1.3	5	3.3	2	1.3	45	29.8	
45 - 54	41	27.2	5	3.3	3	2.0	6	4.0	55	36.4	
55 - 64	6	4.0	3	2.0	0	0.0	1	0.7	10	6.6	
> 60	3	2.0	0	0.0	0	0.0	0	0.0	3	2.0	
Nationality											
Qatari	35	3.2	0	0.0	1	0.7	4	2.6	40	26.5	$X^2 = 7.092$ $p = 0.691$
Non-Qatari	81	53.6	11	7.3	11	7.3	8	5.3	111	73.5	
Postgraduate Qualification											
MBBS	38	25.2	5	3.3	1	0.7	3	2.0	47	31.1	$X^2 = 13.915$ $p = 0.031$
FM Qualification	41	27.2	2	1.3	3	2.0	8	5.3	54	35.8	
Others	37	24.5	4	2.6	8	5.3	1	0.7	50	33.1	
Job Description											
Locum	1	0.7	0	0.0	0	0.0	1	0.7	2	1.3	$X^2 = 11.498$ $p = 0.243$
Specialist	1	7.2	0	0.0	2.0	5	3.3	34	2	2.5	
Consultant	10	6.6	1	0.7	1	0.7	1	0.7	13	8.6	
Resident	79	52.3	10	6.6	8	5.3	5	3.3	102	67.5	
Total	116	76.8	11	7.3	12	7.9	12	7.9	151	100.0	

Distribution of physicians according to smoking status and gender (n=151)

Smoking Status*	Men		Women		
	No.	%	No.	%	
Never Smoked	52	61.2	64	97.0	$X^2 = 26.975$ $p = 0.000$
Former Smoker	10	11.8	1	1.5	
Occasional Smoker	12	14.1	0	0.0	
Regular Smoker	11	12.9	1	1.5	
Total	85	56.3	66	43.7	

* Respondents were not provided definitions for the terms regular smoker, occasional smoker, or former smoker. Each respondent defined these terms individually.

US studies conducted in the 1990s found that physicians displayed considerably lower smoking prevalence than the general population.^(30,31) These studies identified smoking prevalence among physicians at 3%-4%, which is consistent with physicians having healthier lifestyle behaviors than the general population.⁽³²⁾

In the current study, most of the studied physicians agreed that healthcare professionals should routinely advise patient to quit smoking. Healthcare professionals can help patients stop smoking by ensuring that counseling and pharmacological therapy is available⁽³³⁾, and actually counseling them about quitting.⁽²²⁾ A study

involving the Women Physicians' Health Study in 1993 found that practicing a specific health habit (e.g., not smoking) significantly increased the likelihood of counseling patients about that habit.^(32,34) Patients also find physicians more believable and motivating if the physician discloses their own positive health practice.⁽³²⁾ Physicians who do not smoke are more likely than those who do to provide advice to quit.⁽³⁴⁾ Our study showed that smoking prevalence is quite high among primary care physicians. Research is warranted in Qatar to determine the feasibility of smoking prevention interventions. A study targeting the population of healthcare workers,

Table 4: Distribution of smoker physicians' according to gender (n = 35)

Variables	Men		Women		Total		Sig. Test
	No.	%	No.	%	No.	%	
Age started smoking (years.)*							
< 20	20	57.1	1	2.9	21	60.0	$\chi^2 = 0.450$ p = 0.799
21–34	10	28.6	1	2.9	11	31.4	
35–44	3	8.6	0	0.0	3	8.6	
Have you ever quit for at least a week?							
Yes	26	74.3	2	5.7	28	80.0	$\chi^2 = 0.530$ p = 0.466
No	7	20.0	0	0.0	7	20.0	
Have you ever smoked in front of patients?*							
Yes	10	28.6	0	0.0	10	28.6	$\chi^2 = 0.848$ p = 0.357
No	23	65.7	2	5.7	25	71.4	
Do you regularly smoke in front of patients?							
Yes	0	0.0	0	0.0	0.0	0.0	--
No	33	94.3	2	5.7	35	100.0	
How ready are you to quit?							
Not ready within the next 6 months	14	40.0	2	5.7	16	45.7	$\chi^2 = 2.519$ p = 0.284
Considering quitting within the next 6 months	5	14.3	0	0.0	5	14.3	
Ready to quit now	14	40.0	0	0.0	14	40.0	
Total	33	94.3	2	5.7	35	100.0	

* No one started smoking after the age of 44 years.

Table 5: Level of agreement with selected smoking-related statements among the studied physicians (n = 151)

Item	Agree		Unsure		Disagree	
	No.	%	No.	%	No.	%
Health professionals should routinely advise patients who smoke to avoid smoking around children.	148	98.0	3	2.0	0	0.0
Health professionals should routinely advise their smoking patients to quit smoking.	140	92.7	9	6.0	2	1.3
Health professionals should regularly ask their patients about their smoking behaviors.	138	91.4	13	8.6	0	0.0
Health professionals should set a good example by not smoking.	142	94.0	8	5.3	1	0.7
Health professionals are an example for their patients and the public.	139	92.1	12	7.9	0	0.0
Health professionals should speak to lay groups about smoking.	127	84.1	22	14.6	2	1.3
Chances of a patient quitting increase when a doctor tells them to.	109	72.2	34	22.5	8	5.3
Health professionals should get specific training on cessation techniques.	136	90.1	14	9.3	1	0.7
Health professionals who smoke are less likely to advise people to stop smoking.	91	60.3	41	27.2	19	12.6

Table 6: Odds of being a current smoker according to level of agreement with selected statements for the studied physicians (n=151)

Statements	% of Total Respondents	% Who are current smokers	X ²	P= value
Health professionals should regularly ask patients about their smoking behaviors.				
Agree	91.4	83.3	4.239	0.237
Not sure	8.6	16.7		
Disagree	0.0	0.0		
Health professionals should set a good example by not smoking.				
Agree	94.0	66.7	33.469	0.000
Not sure	5.3	33.7		
Disagree	0.7	0.0		
Health professionals are an example for their patients and the public.				
Agree	92.1	66.7	13.936	0.000
Not sure	7.9	33.7		
Disagree	0.0	0.0		
Health professionals should get specific training on cessation techniques.				
Agree	90.1	91.7	1.412	0.965
Not sure	9.3	8.3		
Disagree	0.7	0.0		
Health professionals who smoke are less likely to advise people to stop smoking.				
Agree	60.3	33.3	8.230	0.222
Not sure	27.2	41.7		
Disagree	12.6	25.0		

*Adjusted for age and sex

as well as the population as a whole, would help us understand the potential impact of such interventions on the society of Qatar. Such studies could measure the percentage of the population who visit healthcare facilities, how often do they do so, and the extent of which a physician's advice influences patient decisions. Studies could also ascertain whether the physicians would use smoking cessation materials if they were provided, and whether physicians are actively involved in promoting health policy related to smoking prevention and control. The present study has several limitations. First, as with many physicians' surveys, the response rate was lower than desired. Consequently, results should be interpreted with caution because those with strong feelings toward smoking (for or against) may have been more likely to respond to the survey. The survey also is limited in that it only included physicians within the primary care whom could be considerably different from physicians in different healthcare levels.

Conclusion:

A high prevalence of smoking was identified among physicians in Qatar. Male physicians have a much higher smoking prevalence than female physicians. A high percentage of smokers have smoked in the presence of their patients. Physicians who smoke are less likely to ask their patients about their smoking behavior or believe their example is likely to influence their patients. These results indicate a need to educate physicians in Qatar of their potential for influencing patients to not start or quit smoking. There is a need for health education campaigns not only for the general population but also for healthcare workers.

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