

Comparison of Smoking Cessation Practices among Smoker and Non-smoker Health Care Providers: A KAP Study in Northern Saudi Arabia

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ABSTRACT

Background and objectives: health care Providers (HCPs) are epicenters for counseling the smokers to quit smoking and adopt healthy lifestyle based on informed decisions. The effects of smoking status of HCPs on cessation practices are contradictory in published literature. The northern Saudi Arabia has high smoking prevalence so is the need for cessation interventions. We carried out the KAP study to determine the difference in knowledge, attitude and practices between smoker and non-smoker HCPs. **Materials and Methods:** using non-probability consecutive sampling, 268 HCPs including physicians, dentists, pharmacists, nurses, and paramedical staff were included from governmental Hospitals and primary health centers of Aljouf region. A self-administered questionnaire containing Global Adult Tobacco Survey and standard practice *guidelines* for smoking cessation intervention in Hospitals and primary care centers was used for data collection. **Results:** we found that HCPs (14.92%) were current smokers, 2.6% were former smokers. Among female HCPs, there was no reported active smoking but 48.94% reported passive smoking. Knowledge of hazards of smoking among HCPs was up to standard. In addition, there was obvious misbelieve that Certain Types of Cigarettes Can Be Less Harmful Than Other among all HCPs (Smokers and non-smoker HCPs significantly differed in advising smoking cessation (p value < 0.01). Among other variables, increasing taxes on tobacco sale (p value < 0.01) and applying standard guidelines for smoking cessation intervention (p value < 0.01) were significantly different between groups. Lacking skills and facilities e.g. medical supply were the most frequency reasons for not starting smoking cessation intervention. **Conclusion:** because of high prevalence of smoking among HCPs and its negative effects on patient counseling, we suggested that there should be systematic and quality mechanism intact for quitting smoking independent of personal attitude of health care providers and initiate training center along with providing pharmacological supply for smoking cessation intervention in Aljouf region.

Keywords: Smoking, KAP, Hazards, Aljouf.

INTRODUCTION

Worldwide, all forms of tobacco use are an important and a preventable risk factor for a number of diseases such as cardiovascular disease, complications of pregnancy, stroke and a variety of cancers such as lung cancer ^(1,2). Simply smoking cessation may reduce and lessen the danger of death related to smoking by around 90%. The individuals who quit smoking may enjoy ten years increase in life expectancy and better quality of life in contrast to the individuals who proceeded with smoking ^(3,7). Primary Health Care Centers (PHCC's) and hospitals are places to implement smoking cessation interventions. The start of smoking cessation intervention at primary health care level was found more powerful and successful than community-based cessation programs ^(3-6, 8-12). At institutional level, the health care providers (HCPs) play a pivotal role in controlling tobacco smoking by educating the general population about the risks of tobacco. The smoking habits of the HCPs may or may not affect their abilities to use different behavioral models for smoking cessation ^(4, 8-10).

Among HCPs, primary care physician's part is vital for helping smokers quit starting from screening to referral. In hospital-based studies highlighted an absence of training and false convictions about tobacco smoke and smoking cessation that turns off clinicians from offering pharmacologic and mental support ^(13, 14). United States (U.S.) Public Health Service Guidelines known as '5 As' (Ask, Advise, Assess, Assist and Arrange) is recommended and easier guidelines for the HCPs for helping the patients who smoke to quit for life ⁽³⁾. This five A's framework has been developed to allow physicians to incorporate smoking cessation counseling into busy clinical practices ⁽³⁾. Smoking is much prevalent among healthcare providers as compared to general population ⁽¹³⁻¹⁵⁾. The impact of smoking habits of the HCPs on smoking cessation activities is not well documented. Some argue that HCPs could better convince patients to quit smoking in the event that they themselves are not smokers. In the previous study, the northern region has shown a higher prevalence of smoking than other regions of Saudi Arabia ⁽¹⁶⁾. So studies focusing on northern

region of kingdom regarding different aspects of smoking cessation activities are needed. There is scarce literature published about impact of smoking habits of health care providers on the attitude and smoking cessation practices.

AIM OF THE WORK

The current study was carried out to determine the difference in knowledge, attitude and practices between smoker and non-smoker HCPs in Aljouf region, KSA. This study may help us device a systematic method to enhance the smoking cessation activities in the region taking into account the smoking habits of health care providers.

MATERIALS AND METHODS

A cross-sectional descriptive study was conducted from 1st December 2016 to 28th February 2017 covering health providers in governmental hospitals and primary health care centers of Aljouf region, Kingdom of Saudi Arabia. Health care providers included physicians, dentist, pharmacists, nurses, and paramedical staff. The estimated sample size was 266 taking expected prevalence rate of smoking from previous study about 23.3%, (16) with 5% margin of error at 95% level of confidence. A consecutive non-probability sampling procedure was adopted to enroll participants in this study. **Study design:** A self-administered questionnaire was used in the study consisted of three sections (i.e. Demographic information like age, gender) modified Adult Tobacco Survey) physicians attitude toward smoking cessation intervention. Adult Tobacco Survey is a standard questionnaire made by World Health Organization and Centers for Disease Control for obtaining data regarding smoking habits, attitude and knowledge to tobacco smoking and it has many languages include Arabic language. United States Public Health Service guidelines (5As i.e. Ask, advise, asses, assist and arrange) were taken as standard practice guidelines Questions for the physicians and dentist (4, 6, 12). We made two versions of questionnaire, Arabic based and English based questionnaire. The respondent had the choice to choose which of them are comfortable with it. Both the questionnaire was pretested among 104 HCPs and we interviewed them to get their opinion to reach our final Questionnaire and to be sure of validity of questionnaire, we excluded the results of the piloted study. Current smokers were individuals

who have smoked at least 100 cigarettes in their lifetime and who, at the time of the survey, smoked either consistently or three days a week. Former smokers were individuals who had smoked at least 100 cigarettes in their lifetime and who, at the time of the study, did not smoke by any means. Respondents, who have not smoked 100 cigarettes, were labelled as never smokers. Passive smoking was labelled if the respondent shares a house with the current smoker. Local ethical committee and Aljouf University approved the proposal of the study and data were collected after informed consent from the participants. Data were analyzed using SPSS version-21. Categorical data is presented as frequencies and percentages. Data were categorized for smoker and non smoker health care providers. Relationship between these two categories was assessed using chi square test, or Fisher's exact test, as appropriate with 95% confidence intervals. A p value < 0.05 was considered statistically significant.

RESULTS

Four hundred (400) questionnaires were distributed among the study participants population. Only 268 HCPs completed the questionnaire giving a response rate of 67%, 127 (47.38%) of respondents were male. Mean age of the sample was 33 ± 9 years. Among sampled population, 111(41.41%) were nurses, 89(33.20%) were physicians, 38(14.17%) were paramedical, 20(7.5%) were pharmacists, and 10(3.73%) dentist. Saudi HCPs represented 148(55.22%) of the sample.

Table 1: Sociodemographic profile of sampled population (n=268)

Characteristic		Current Smokers (n=73)	Former smokers (n=10)	Non-Smokers (n=189)
Gender	Male	40	7	80
	Female	0	0	141
Age group (in years)	22-36	23	2	169
	37-51	14	2	42
	52-64	3	3	10
Nationality	Saudi	22	2	124
	Non-Saudi	18	5	97
Position	Physician	17	5	67
	Dentist	4	0	6
	Nurse	9	1	101
	Pharmacist	2	0	18
	Paramedical	8	1	29

In our study, 17.54% (14.92% were current smokers and 2.6% were former smoker) were ever smokers. None of the females reported smoking. In addition, 82.5% of current smokers exposed their families and friends to second hand smoke. Cigarettes were the modality for tobacco consumption. Passive smoking among non-smokers female 69(48.94%) and male 35(40.23%) were high. Almost all current, former and never smokers were of the opinion that smoking causes serious illness. The participants (current, former and never smokers) have good knowledge about various diseases caused by smoking. There was obvious misbelieve that Certain Types of Cigarettes Can Be Less Harmful Than Other among all HCPs.

Table 2: Knowledge and beliefs regarding hazards of smoking tobacco

Believe that smoking causes following	Current Smoker (n=40)	Former Smoker (n=7)	Never Smoker (n=221)
Serious illness	40(100%)	7(100%)	221(100%)
Stroke	36 (90%)	5 (71.42%)	205(92.76%)
Heart attack	39(97.5%)	7 (100%)	215(97.28%)
Lung cancer	39(97.5%)	7(100%)	221(100%)
Bronchitis	40 (100%)	7(100%)	212(95.92%)
Peptic ulcer	34 (85%)	7 (100%)	200(90.49%)
*Pregnancy complication	34 (85%)	6(85.71%)	215(97.28%)
Believe that all Types of Cigarettes equally harmful	24 (60%)	4 (57.14%)	154(69.68%)
Believed cigarettes caused an addiction	28 (70%)	6 (85.71%)	197(89.14%)
Believe that Smokeless Tobacco Causes Serious Illness	37(92.5%)	5(71.57%)	208(94.11%)
*Such as (pregnancy losses, placenta previa, Abruptio placentae, and Fetal death)			

Significant difference in attitude was observed between smokers and non-current smokers (Never and Former smokers) regarding the statements about prohibiting smoking and increasing the tax on tobacco products (92.5% vs 100% and 55% vs 91.23%), however, no difference was observed about the law prohibiting advertising

tobacco products (100% vs 100%). Significant difference was also observed between current and non-current smokers (Never and Former smokers) regarding advice on quitting smoking among smokers (57.5% vs 76.75).

Table 3: Comparison of reported attitude between Smoker and Non-smokers Health care providers regarding tobacco control activities

Statements	Current-Smokers (n = 40)	Non-smoker (n = 228)	P-Value
In favour of prohibit smoking at home, public places and work places	37 (92.5%)	228(100%)	0.001
In favour of increasing taxes on tobacco products	22 (55%)	208(91.23%)	0.001
In favour of a law prohibiting all advertising of tobacco products	40 (100%)	228(100%)	<0.5
Always/often Advise smoking people to quit smoking	23 (57.5%)	175(76.75%)	0.001

Among both physicians and dentist, 94 (94.95%) completed the questionnaire regarding their practice for smoking cessation for patients. Only 4 (4.25%) physicians and dentist followed all five recommendations of “5-A”. However, there was a significant difference between smoker and non-smoker in first two guidelines (Ask and Advise). In general, 89 physicians (71.77%) reported that they ask patients about their smoking status and recorded it in the medical files, 70.96% routinely advise patients to quit, and 32% assess their motivation to do so. Fewer physicians were assessing intention/motivation to quit, assisting with quitting, and arranging follow-up for quitting and relapse prevention (35.10%, 6.38% and 4.25%, respectively). In addition, Non-smoking physicians were more willingness to be trained. Majority of them did not receive any training from ministry of health or any other organizations.

Table 4: Comparison of reported attitude between Smoker and Non-smokers Physician and dentist regarding smoking cessation in their clinical practice

Statements	Current Smoking Status		P-Value
	Smoker n=21	Non Smoker n=73	
* Always or often Ask patients about smoking habits	2(9.52%)	58(79.45%)	0.001
*Always or often Advising the smoking patients to quit smoking	3(14.28%)	59(80.82%)	0.001
*Always or often Ask the patient about willingness to quit	2(9.52%)	31(42.46%)	0.046
*Consulting the patient and using medication to help them to quit	1(4.76%)	5(6.84%)	<0.5
*Follow up the patient who start the intervention	1(4.76%)	3(4.10%)	<0.5
Receiving a training offers from any organization	1(4.76%)	2(2.73%)	<0.5
Willingness to be trained	16(76.19%)	52(71.23%)	<0.5
*Note: these are The United States Public Health Service (USPHS) Guidelines			

Both Physicians and dentists who did not adhere with guidelines were also asked with a multiple-choice format question to justify their noncompliance. The most frequently reasons that make them less attractive to initial smoking intervention were no facilities available 94(100%), lack of skills 92(97.87%), do not consider as part of my job 5(5.31%) and lack of time 3(3.19%) and other reasons 3(3.19%).

DISCUSSION

Health care providers (HCPs) are uniquely positioned to provide patients with information about the harmful effects of tobacco use and assistance in quitting smoking. If they are knowledgeable about the hazards of tobacco use and are well trained in delivering effective tobacco intervention strategies, the tobacco usage in the population can be reduced (17). Many studies have measured the smoking prevalence among health care providers but their effect on the practices was scarcely discussed (1, 3, 4, 8-12, 18, 19). In our study in Aljouf province of Saudi Arabia, 14.92% of the sampled population was current active smoker. These results are comparable with previous studies.

In previous studies carried out in Asser, eastern and Makah province the prevalence of smoking was 19,3%, 18.4% and 26% respectively among health care providers (10, 14). Contradictory to the population statistics of smoking & tobacco usage (4.55%-16.64% vs 18.3 respectively), this prevalence is too high. The observed difference may be attributed to social and cultural diversities in different regions. The present study revealed that male HCPs are significantly more smokers than females but about half of female HCPs reported exposure to second hand tobacco smoke. The WHO Framework Convention for Tobacco Control recognizes “the need for gender-specific tobacco control strategies,” as well as for the “full participation of women at all levels of policymaking and implementation of tobacco control measures. Thus, we need to foster gender sensitive tobacco prevention intervention programs, starting as early as possible. Women should be always encouraged to take proactive roles in building health educational programs to combat smoking. In this study, majority of the participants had good knowledge that cigarette smoking is associated with health problems. This knowledge of smoking hazards seems not influence them to quit smoking and prevent second hand smoke. Though there is no substantial evidence demonstrating actual reduction in risk from 'less harmful, low-tar' cigarettes, Knowledge was obvious misbelieve that Certain Types of Cigarettes Can Be Less Harmful Than Other among all HCPs (20). In our study, we found a significant difference between smoking cessation practices between the smoker and non-smoker health care providers. Nonsmoker HCPs were more likely to advice people to quit smoking, more supportive to increases taxes on tobacco products and more encouraging to prohibit smoking in public and work places. Encouraging smoking cessation has been recognized for many years as one of the most effective and least time-consuming methods in which physicians can improve their patients’ quality of life and increase their lifespan (19). United States Public Health Service (USPHS) guidelines are the most comprehensive and successful guidelines briefly known as ‘5 As’ (Ask, Advise, Assess, Assist and Arrange). The guidelines note that the 5As can be covered in as little as 3 min without loss of efficacy of the intervention (15). In our study, we found that there was a statistically significant difference between identification of smokers and smoking status of

HCPs. The nonsmoker HCPs ask and advise usually about smoking as compared to smoker HCPs. This phenomenon is similar as reported in previous studies ^(7, 15). Using of pharmacologic intervention such as nicotine replacement therapies, bupropion, and varenicline during smoking cessation will double the rate of successful abstinence ⁽²¹⁾. Unfortunately, consulting the patient and prescribing medication for smoking cessation was noted as a rare practice (6.38%) in our study. These findings do coincide with findings from the literature reporting that physicians were more likely to advise patients to quit smoking, but less likely to assist in quitting or arrange for follow-up to help them quit ⁽¹⁾. Knowing the reasons for non-advising the patients to quit smoking will help to make smoking cessation programs effective and productive. Frequent reported reasons were “no facilities available” and “lacking of skill”. These reasons are different from those reported in other studies. Two studies conducted in Italy and Riyadh reported the lack of time, lack of skill or fear of increased patient burden as major reasons for non-adherence to USPHS guidelines ^(1,8). These differences showed much the facilities (e.g. medical supply), job responsibility and enchanting and continue smoking cessation program. In our study, we found a deficiency in training facilities for the health care providers. Most of the physicians in our sampled population wish to be trained for smoking cessation workshops. Furthermore, personal smoking habits had no influence the physicians’ willingness to be trained in patient smoking cessation interventions in our study. This means that the training could also be a good opportunity for physicians to think about their own smoking behavior, to come to the decision of quitting, and to start a smoking cessation program.

CONCLUSION

It is concluded that the prevalence of smoking among health care providers in Aljouf region of Saudi Arabia is high which is associated with poor smoking cessation activities in their clinical practices. There is a reported unmet need for training of healthcare providers for learning smoking cessation strategies for the patients. Because of high prevalence of smoking among HCPs and its negative effects on patient counseling, we suggest that there should be systematic and quality mechanism intact for quitting smoking independent of personal attitude of health care providers.

CONFLICTS OF INTEREST

There are no conflicts of interest.

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