Original Article

Physicians Awareness about Smoking Cessation Counselling at King Abdulaziz University Hospital, Jeddah – Saudi Arabia: A Cross Sectional Study

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ABSTRACT

Introduction: Besides being associated with many diseases, smoking has negative impacts on national economy regarding the costs of treating conditions caused by smoking, loss of productivity due to premature death or absenteeism secondary to smoking-related illnesses, and other costs associated with smoking. Smoking cessation has proven to improve survival and to decrease the risk of having cardiac diseases, respiratory diseases and different types of cancers. Aim: The aim of our study was to investigate health care provider awareness about the importance of smoking cessation. Method: A cross-sectional study was conducted in King Abdulaziz University Hospital. Patients were recruited in medical and surgical wards and the outpatient department during the period April-May 2015. Patients who refused to complete the questionnaire, were unable to complete the questionnaire, or those younger than 18 years of age, were excluded. The World Health Organization’s “Global Adult Tobacco Survey” was used. Results: Out of the 303 patients who completed the questionnaire, 27 patients were current smokers, 73 were former smokers and 203 have not smoked at all. We have found that patients with high income are more likely to be smokers (p-value= 0.007) while no significant association was found between smoking and level of education. Out of the 303 patients, 223 have visited a health care provider in the last 12 months and only 124 of them were asked if they were smokers. Out of 15 patients who were current smokers and visited a health care provider during the last 12 months, only 7 of them were encouraged to quit smoking and none of them was given an action plan to do so. Conclusion: As smoking is detrimental to health, cessation should be encouraged. This study provides evidence that physicians practicing in Saudi Arabia need additional training related to counseling patients to cease smoking.

Introduction

In recent years, the prevalence of smoking has increased in Saudi Arabia at an alarming rate. It is estimated that among Saudi adults (> 15 years of age) 35% of males and 5.7% of females smoke daily (22% total in this age group) [1]. Daily cigarette smoking among younger Saudi adolescents (13-15 years of age) has reached a new climax: 13% in males and 5% in females (8.9% total in this age group) [2].

According to a report titled “The Health Consequences of Smoking—50 Years of Progress” published by The U.S. Department of Health and Human Services, smoking is a risk factor for developing various types of cancers (lung, oropharynx, larynx, esophagus, trachea, stomach, colorectal, bladder, pancreas, cervix, kidney, ureter, liver and acute myeloid leukemia) and chronic diseases (coronary heart disease, stroke, chronic obstructive pulmonary disease, diabetes, atherosclerotic peripheral vascular disease, erectile dysfunction in men and decreased fertility in women) [3].

A report released in 2014 titled “Action on Smoking and Health”, concluded that an increased burden on the national economy was caused by smoking and its consequences. In England, smoking was found to cost £12.9 billion annually with £2 billion allocated to treating diseases caused by smoking. Other estimated costs were: loss of productivity due to premature death (£3 billion), costs on the business due to smoking breaks (£5 billion), smoking-related sick days (£1 billion), social care costs for older smokers (£1.1 billion) and fires caused by smoked materials (£391 billion) [4].

It has increasingly been appreciated that smoking cessation positively influences individual health. One study found that the risk of developing coronary artery disease decreases to half the risk of smokers after 5 years and further drops to non-smoker risk
The level of significance was $p < 0.05$. Missing data were defined to SPSS and omitted in the analysis to find any significant difference of ages between smoker and nonsmoker. Smoking status, level of education and marital status are shown in Table 1. Gender distribution and mean age of smoking are shown in Tables 2 and 3, respectively.

RESULTS:

1. Participant and descriptive data:
   A total of 330 patients were interviewed during the study period, 116 (50.3%) were male and 164 (49.7%) were female. A total of 303 (91.9%) patients accepted to be interviewed and completed the survey. The mean age of the sample was 44.26 ± 17.8. Smoking status, level of education and marital status are shown in Table 1. Gender distribution and mean age of smoking are shown in Tables 2 and 3, respectively.

2. Smoking influences:
   Using Spearman Rank correlation, no correlation was found between smoking status and the level of education $rs = 0.049 (p=0.391)$. Income was graded as low (0-3K), intermediate (3-15K) and high (>15K). Higher income was found to have a weak positive correlation with smoking status $rs = 0.163 (p=0.007)$. Among daily smokers, there was no correlation between the duration and the risk ($p=0.454$).

   We found no correlation between smoking status and the level of education $rs = 0.049 (p=0.391)$.

3. Frequency of smoking product types:
   A total of 27 patient were currently smokers at the time of obtaining the questionnaire, multiple smoking habit is considered.

4. Frequency of modalities that helped in smoking cessation:
   A total of 73 former smoker interviewed were asked what factor helped them the most to achieve cessation. 64 (87.7%) depended on their own will power, 13 (17.8%) stopped due to their illness, 9 (12.3%) benefited from clinical counselling with physician, 2 (2.7%) took nicotine replacement therapy, 2 (2.7%) used traditional medications or herbs and only 1 (1.4%) went to psychology clinic, multiple modalities of smoking aids is considered.

5. When did current smokers plan to achieve cessation?
   Out of 27 smokers interviewed, 11 (40.7%) were not interested to quit smoking, 7 (25.9%) planned to stop within the next month, 2 (7.4%) intended to quit within the next 12 months, 6 (22.2%) wanted to quit but not within the next year, and 1 (3.7%) refused to answer the question.

6. Awareness about patient smoking status and counseling by physicians regarding cessation:
   Out of 303 interviewed patients, 223 (73.6%) visited doctors during 12 months from the time of interview. Out of these patients 124 (55.6%) had been asked about their smoking status and out of 15 current smokers only 7 (46.7%) had been advised to stop smoking and none of the 15 had been given an action plan to achieve cessation.
7. Percentage of smokers who smoked during their hospital stay:

Ten (11.2%) of inpatient smokers were smoking during their hospital stay.

8. For smokers, did they encounter any delay in medical procedure because of their smoking? Three (3%) patients experienced a procedure delay because of smoking.

9. Willingness to participate in a cessation program? Out of 27 current smoker patients, 16 (59.3%) were willing to participate in a smoking cessation program.

<table>
<thead>
<tr>
<th>Smoking status</th>
<th>Level of Education</th>
<th>Marital Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Detailed</td>
<td></td>
</tr>
<tr>
<td>Smoker 27 (8.2%)</td>
<td>Daily 19 (70.4%)</td>
<td>10 (3.7%)</td>
</tr>
<tr>
<td></td>
<td>LTD 7 (25.9%)</td>
<td>1 (3.7%)</td>
</tr>
<tr>
<td></td>
<td>LTD -- FD 1 (3.7%)</td>
<td>7 (25.9%)</td>
</tr>
<tr>
<td>Former smoker 73 (22.1%)</td>
<td>Daily 52 (71.2%)</td>
<td>2 (2.7%)</td>
</tr>
<tr>
<td></td>
<td>LTD 21 (28.8%)</td>
<td>1 (1.4%)</td>
</tr>
<tr>
<td>Not smoker at all 203 (61.5%)</td>
<td>3 (1.5%)</td>
<td>66 (32.5%)</td>
</tr>
<tr>
<td></td>
<td>Unconscious 22 (81.5%)</td>
<td>1 (0.5%)</td>
</tr>
<tr>
<td></td>
<td>Refused 5 (18.5%)</td>
<td>52 (25.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>19 (9.4%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20 (9.9%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>29 (14.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 (1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>61 (30%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>131 (64.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 (1.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 (3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 (1%)</td>
</tr>
<tr>
<td>Not fit 27 (8.2%)</td>
<td>Not Applicable</td>
<td></td>
</tr>
</tbody>
</table>

Smoking status: LTD: Less than daily, FD: Former daily, Do: Doctorate, M: Master, B: Bachelor, Di: Diploma, H: High school, I: Intermediate, E: Elementary, N: No formal schooling, R: Refused, S: Single, M: Married, D: Divorced, Wi: Widowed. % are within the same group - detailed percentages were calculated from general categories.

Table 4: Percentage of daily and weekly smokers according to tobacco types

<table>
<thead>
<tr>
<th>Tobacco Type</th>
<th>Daily</th>
<th>Weekly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufactured cigarettes</td>
<td>73.7%</td>
<td>37.5%</td>
</tr>
<tr>
<td>Hand-rolled cigarettes</td>
<td>None</td>
<td>12.5%</td>
</tr>
<tr>
<td>Cigars</td>
<td>5.3%</td>
<td>None</td>
</tr>
<tr>
<td>Pipes</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Shisha or Me’aseel</td>
<td>15.8%</td>
<td>75%</td>
</tr>
<tr>
<td>Tambol</td>
<td>5.3%</td>
<td>None</td>
</tr>
</tbody>
</table>

**DISCUSSION:**

The prevalence of current cigarette smokers in our sample was 8.2%. With regards to gender, 20% of males and 2.4% of females were current smokers [Table 2]. A study carried out in Saudi Arabia by Jamal S Jarallah et al similarly found that the prevalence of current smokers was 12%, and that with regards to gender, 21.1% of males and 0.9% of females were current smokers [6].

As subjects interviewed were patients in a MEDICAL setting, our results may not represent the community at large. Some patients fear to confess their smoking status inside a hospital, especially in the presence of family members. A study done in Brazil concluded that underestimation of smoking prevalence occurred when subject recruitment was done in an entirely medical setting[7].

(a) Not Fit: deemed medically unfit and those who refused to be interviewed
The mean ages of patients in SD in our study were 39.5 ± 17.2 and 42.5 ± 17.6 years for smokers and non-smokers respectively (P<0.05). Compared to a cross-sectional study done in Saudi Arabia, the mean ± (SD) ages were 33.1 ± 12.5 years and 32.9 ± 15.1 for smokers and non-smokers respectively (P<0.05) [6]. Moreover, 51.9% of those who smoked were married. This result was similar to that found by Jamal S Jarallah et al [6] which shows OR = 5.31, 95% CI = 2.18 to 12.96, p<0.001. The relatively young age of smokers and marriage ties emphasizes the need to raise awareness in the community about the harmful effects of smoking as well as passive smoking.

With regards to level of education, our findings showed no significant relationship between smoking status and level of education (p=0.391). In contrast, a prospective population study carried out in Copenhagen and a survey done by the 2013 National Health Interview Survey (NHIS) both concluded that those with the lowest level of education were most frequently heavy smokers [8, 9].

Moreover, we found that there was a weak positive correlation between income and smoking status (p=0.007). This is in contraindication to what was found by the NHIS- that the prevalence of smoking is higher among people living below the poverty line [8].

Tobacco products available to consumers are cigarettes (Manufactured or Hand-rolled), Cigars, Pipes, Shisha (or Me’asal), and Tambol. Our data showed that the most common product that daily smoker used was manufactured cigarettes (73.7%) [Table 4]. According to a study done in US, cigarettes accounted for most of the tobacco use (28.5% current prevalence) [16].

A total of 73 former smoker interviewed were asked about the factor that helped them most achieve cessation. 64 (87.7%) depended on their own will power, 13 (17.8%) stopped due to illness, 9 (12.3%) benefited from clinical counselling with physician, 2 (2.7%) used nicotine replacement therapy, 2 (2.7%) traditional medications or herbs and only 1 (1.4%) went to psychology clinic. Anjum Memon et al found that the majority of former smokers (75.1%) had “just quit” without any formal plan. Other methods used for cessation were to gradually decrease the number of cigarettes smoked (14.2%), switch to low-tar/low-nicotine brands (4.7%), to use nicotine chewing gum or a patch (2.1%) and attend a smoking cessation program (1.8%) [10].

Out of 27 smokers interviewed, 11 (40.7%) were not interested to quit smoking, 7 (25.9%) planned to stop within the next month, 2 (7.4%) intended to quit within the next 12 months, 6 (22.2%) wanted to quit but not within the next year; and 1 (3.7%) refused to answer the question.

In addition, from the 27 patients currently smoking, 16 (59.3%) were willing to participate in a smoking cessation program. A study done in Kuwait on similarly found that almost half (47%) of smokers stated that they desired to stop smoking, and 56% attempted to quit. The biggest perceived barrier to smoking cessation (42%) was uncertainty about “how to quit” [10]. We believe physicians should play a more active role in counseling patients towards smoking cessation.

Until the time of writing, there was no study conducted in Saudi Arabia that investigated physician smoking cessation counseling. Out of 303 interviewed patients, 223 (73.6%) visited doctors during 12 months from the time of interview. Out of these patients 124 (55.6%) had been asked about their smoking status and out of 15 current smokers questioned, only 7 (46.7%) had been advised to quit smoking. None of the 15 had been given an action plan to achieve cessation. In the Kuwaiti study, about half (47%) of the smokers had been advised by their physician that smoking was harmful to health and were encouraged to stop [10].

According to a systematic review, there were negative beliefs and attitudes held by physicians towards discussing smoking cessation with patients. A systematic review across 19 studies, identifies eight negative beliefs and attitudes. Some physicians think that such discussions were too time-consuming (with a range of 15-73%), that they were ineffective (with a range of 13-85%). Some physicians reported lacking confidence in their ability to discuss smoking with their patient’s (with a range of 10-37%), felt such discussions were unpleasant personal experience (with a range of 3-39%), lacked confidence in their knowledge (with a range of 4-56%), considered discussing smoking outside of their professional duty (with a range of 2-11%), that this intruded upon patients’ privacy (with a range of 2-9%), or that such discussion were inappropriate (with a range of 0-14%) [11].

Three (3%) patients experienced a procedure delay because of smoking. This may be because smoking has been perceived to be a risk factor for delayed wound healing and infection [12, 13, 14].

In our hospital, ten (11.2%) of inpatient smokers were smoking during their hospital stay. Compared to a research conducted in USA, 4% of smokers admitted violating policy by smoking indoors [15].

Nonetheless, our study has several limitations. The sample size was small, and as it was collected in a medical setting, it may be unrepresentative of the entire Saudi population. Also, some wards in King Abdulaziz University Hospital were not covered and not all outpatients were interviewed. Some patients show language barrier.

We recommend a prospective multi-center study be carried out on a larger sample to investigate the effect of physician counseling on smoking cessation. Increased Physician training in cessation counseling is proposed. Also we advocate the need for an effective community awareness program in all Saudi Provinces to educate the public about the harmful effects of smoking as well as second hand-smoking.

CONCLUSION:

As smoking is detrimental to health, smoking cessation should be encouraged. This study provides evidence that physicians practicing in Saudi Arabia need additional training related to counseling patients to cease smoking. Clinical Implications: Competent, well-trained physicians may help smokers quit with benefits to individual patient health and may lessen the burden on the national economy. We recommend a multi-center prospective study be carried out on a larger sample to investigate the effect of counseling on smoking cessation.

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REFERENCES