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### RESEARCH ARTICLE

#### SMOKING PREVALENCE AND ATTITUDE AMONG HEALTH SECTOR STUDENTS IN UMM AL-QURA UNIVERSITY, SAUDI ARABIA.

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##### **Manuscript History**

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##### **Key words:-**

Smoking, Dental Health Attitude, Prevalence.

#### **Abstract**

**Background:** Smoking is one of the major causes of death in the world. There is variability in the prevalence of smokers around the world.

**Objectives:** The aim of this study was to compare the prevalence and attitude of smoking among dental, pharmacy, and nursing students in Umm Al-Qura University.

**Methods:** The present study was a cross-sectional study, 850 students who are in the 2<sup>nd</sup> to the 6<sup>th</sup> year were participated in this study. Hard copy questionnaire were distributed among the students during lecture times. The questionnaire was composed of two sections. Section one included three demographic questions including age, college, and gender. Section two included 17 questions asked about (the reasons behind smoking habit, the role of the college to prevent smoking, the awareness of those smokers with the damaging effect of smoking, the reasons for failing to stop smoking and whether there are any members of his/her family smoke).The questionnaire take around 5 minutes to be answered.

**Results:** A total of 700 students answered the study questionnaires (82.35% of the distributed questionnaires). Smoking prevalence was 8%, the high percent of smokers was male students(73.3%) while female students were(26.7%).The prevalence of smokers among dental students was higher than pharmacy students (11% vs 9%) and found to be zero among nursing students. Most smokers exercised in order to avoid the pressure (44.6%) and get a relaxed felling(60.8%) and the most smokers want to quit it(87.5%). A large percentage of students were dissatisfied with the role of their college awareness towards this habit (47.6%).

**Conclusions:** The prevalence of smoking was high among dental and pharmacy students, the health colleges should do more efforts to prevent smoking among their students.

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**Introduction:-**

According to the World Health Organization (WHO) Smoking is one of the major causes of death in the world. Each year more than a million people die due to smoking and each year this percentage is unfortunately increased. Smoking has been classified by the WHO as an epidemic because of its fast spread among peoples and also its dangerous effect on human (Tjandra, 2002 and WHO, 2003). More than 80% of those who practiced smoking are low-income peoples (WHO, 2013).

There is variability in the prevalence of smokers around the world. For instance, the prevalence of smoking in the Indonesia was 76.2% (the highest prevalence rate), 70.2 % in Jordan, 60% in Sierra Leone, 57.5% in Georgia, 48.8% in Bahrain, 32.4% in Germany, 20.4% in Sweden, 19.5% in United States of America and the lowest prevalence rate 13.1% in Ghana and Barbados (WHO, 2015).

In Saudi Arabia, for the general population many studies investigated the prevalence of smokers. These studies indicated that the prevalence of current smoking in Saudi Arabia ranged between (9-35%), and among school students the smoking prevalence was 16.5%, in university students 13.5%, among adults 22.6%, elderly peoples 25%, and males 26.5% while in females 9%. (WHO, 2015; Bassiony, 2009; Alnohair, 2011; and Hashim, 2000).

In fact, some studies investigated the prevalence of smokers among Saudi universities and colleges students in general, which found to be 14.5% (Mandil, 2011). Other studies focused on students who study in the health colleges (such as medicine and dentistry), and found the prevalence to be 16%, which considered to be higher than the previous percentage, and when it compared male students in different health colleges on a national scale in Saudi Arabia as (Central: Kind Saud University, King Fahad Medical City, Qassim university; North: Aljouf university, Hail university, Tabuk university; South: Najran university, Jazan university, King Khalid University; East: Dammam university; and West: King Abdulaziz University and Taibah university) and indicated that dental students smoke more than medicine students (Alrsheedi et al, 2012). As the prevalence among dental students was 18% compared to medical students with a prevalence of 14%. However, this study did not include females, and did not consider Universities of Makkah city, despite the fact Makkah is considered one of the major cities nationally. Furthermore, a recent study was conducted in Najran university among health college students and found that the prevalence of smoking in male and female students (30.1 %, 0.5%) respectively, the students at the college of applied medical sciences had the highest prevalence of smoking 34% followed by the students at colleges of pharmacy (15%) and dentistry (9%), and the lowest prevalence (4%) was at the college of medicine. (Alqahtani, 2017).

There is a study to measure the prevalence of smokers in the Umm al-Qura in college of medicine among male students and found that the prevalence of smoking was 30% (Alqarni et al, 2015). According to our knowledge there was no previous studies carried out to investigate smoking among undergraduate students of dental, pharmacy and nursing colleges in Umm Al-Qura University. Thus, the aim of the present study is to compare the prevalence and attitude of smoking among dental, pharmacy, and nursing students in Umm Al-Qura University.

**Aims:-**

The aim of the present study is to compare the prevalence and attitude of smoking among dental, pharmacy, and nursing students in Umm Al-Qura University.

**Methods:-**

This study is a cross-sectional survey, investigated students in colleges of dentistry, nursing, and pharmacy, Umm Al-Qura University, Saudi Arabia. Only students who are in the 2<sup>nd</sup> to the 6<sup>th</sup> year were included in this study. Students in the 1<sup>st</sup> (preparatory year) and interns were excluded from this study. A hard copy questionnaire was distributed among 850 (316 male and 534 female) students. The questionnaire was disseminated to the students during lecture times by the assistance of the academic office in each college, and after the permission of lecturers, to be filled after the lecture time. The data collector was available to answer any question raised by students. After students fill the questionnaires, they were taken back.

The questionnaire was composed of two sections. Section one included three demographic questions including age, college, and gender. Section two included 17 questions asked about (number of smoking times per day, the reasons

behind smoking habit, the role of the college to prevent smoking, the awareness of those smokers with the damaging effect of smoking, the reasons for failing to stop smoking and are there any members of his/her family smoke).

The questionnaire was tested on a pilot group, and was adjusted before achieving the final version. This pilot study was conducted on 12 students from dentistry, nursing and pharmacy colleges. The participants included in the pilot study were excluded from the study. The questionnaire takes around 5 minutes to be answered. This study was approved by the institutional review board at the college of dentistry, Umm Al-Qura University.

### Statistical analysis:-

Data was statistically analyzed using SPSS v.17. Descriptive statistics were generated using frequency tables. Chi-square test was used to compare the prevalence of smokers among different colleges and between male and female smokers. A p-value  $\leq 0.05$  was considered statistically significant.

### Results:-

700 students out of 850 answered the study questionnaire, with a response rate of 82.35%. The mean age of the participants was  $21.30 \pm 1.40$  years old. There were 268 male (38.3%) and 432 (61.7%) female students. There was a significant difference in the number of male smokers (41 smokers and 227 non-smokers) compared to female smokers (15 smokers and 417 non-smokers), with a  $p < 0.001$  (Chi-square test). The prevalence of smokers among different health colleges is presented in table 1, the overall students experience to smoking is illustrated in table 2, the attitude and behavior among smokers only are presented in table 3 and the attitude of the health colleges in dealing with smokers is illustrated in table 4.

**Table 1. The prevalence of smokers among different health colleges.**

College	Smokers No (%)	Non smokers No (%)	Total No (%)	Significance
Dentistry	20 (3)	164 (23.3)	184 (26.3)	< 0.001
Pharmacy	36 (5)	348 (49.8)	384 (54.8)	
Nursing	0 (0)	132 (18.9)	132 (18.9)	
<b>Total</b>	56 (8)	644 (92)	700 (100)	

No= Number, comparison done using Chi square test

**Table 2. Overall students' smoking experience.**

	Number	%
<b>Smoking</b>		
Yes	56	8
No	644	92
<b>Smoker in family</b>		
Yes	420	60
No	280	40
<b>I think smoking affect gum</b>		
Yes	638	91.1
No	62	8.9
<b>Efforts of my college against smoking</b>		
Enough	248	35.4
Not enough	333	47.6
Never	119	17
<b>My college give warning for smokers</b>		
Yes	333	47.6
No	367	52.4

**Table 3. The smoker students' attitude and behavior toward smoking.**

	Number	%
<b>Smoking type</b>		
Cigarettes	33	58.9
Water pipes	23	41.1
<b>Reasons for smoking</b>		
Action against authority	3	3.7
Due to pressure	25	44.6
Draw attention	7	12.5
Due to friends	22	39.2
<b>Smoking benefits from the smoker perspective</b>		
Feel relaxed	34	60.8
Help to concentrate	12	21.4
Excuse for a break at work	10	17.8
<b>Wish to stop smoking</b>		
Yes	49	87.5
No	7	12.5
<b>Stopped and returned to smoke before</b>		
Yes	9	16.1
No	47	83.9
<b>Visited specialty clinic for stopped smoking</b>		
Yes	7	12.5
No	49	87.5

**Table 4. The students' perception about health colleges attitude toward smoking.**

	Dentistry	Pharmacy	Nursing	p-value
<b>Faculty advise to quit smoking</b>				
Enough	54	101	93	<0.001
Not sufficient	102	224	7	<0.001
Never	28	59	32	<0.001
<b>Warning procedure for smokers</b>				
Yes	92	130	111	<0.001
No	92	254	21	<0.001

### Discussions:-

A series of studies set up to determine the prevalence of smokers among the population of the Kingdom of Saudi Arabia but there is no studies carried out on health colleges of Makkah city. The findings of the present study indicated that, the percentage of smokers among students of health colleges is only 8% (table 1). The low percentage of health care students who smoke may be due to the greater awareness of them with respect to tobacco, to being health care professionals and being able to see its pernicious effects directly in their daily clinical practice. These results were agreed with previous study which shown that the prevalence of smokers among dentists is considered a small percentage compared with the general public (Peidro et al 2006).

The proportion of smokers among male students is higher than female students. There were no smokers in the college of nursing (Table 1) and the main reason is the advices provided by the college for female students where there are a large percentage of them satisfied about their college advices compared to other colleges (Table 4).

The results of the present study showed that, the main reason for smoking is the pressure and simulation of their friends practiced smoking. Some practiced it for their sense of comfort and escape from the pressure, and a large percentage of them wish to quit smoking (Table 3).

Given the evidence of the action of health care students in tobacco use prevention and cessation, specific strategies should be developed to motivate and support oral health professionals in training for topics relative to tobacco use prevention and cessation in the health colleges as part of their routine clinical practice.

It is necessary to assess attitudes of health care students with regard to the regular establishment of advices on smoking prevention in their colleges in order to, if appropriate, prepare campaigns suited to these professionals ,both educational and with regard to the distribution of support materials for this activity.

**Conclusions:-**

The prevalence of smokers among dental students is higher than pharmacy students and found to be zero among nursing students. The smoking was more prevalent for male students than female. However, the prevalence of smoking among the health faculties in Saudi Arabia considered lower than the general population. Health colleges are recommended to do more efforts to coup with smoking among the students.

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