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### Factors Influencing Smoking Habits among the Students at College of Applied Medical Sciences, Al-Quwayiyah, Shaqra University, Saudi Arabia

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#### ABSTRACT

Smoking is one of the major health problems and its disease complications are increasing day by day. Smoking associated diseases claims life of one in 10 adults globally. By 2030, if this scenario will continue, smoking will kill one in six people. Tobacco smoking is a global epidemic. The World Health Organization has evaluated that tobacco and its concern products kill over 3.5 million people every year. The objective of this research study is to collect a base line data on the tobacco smoking habits of students at College of Applied Medical Sciences, Al-Quwayiyah, Shaqra University, Saudi Arabia. The age range of participating students was 18 to 28 years. An experimental design with common questionnaire, and simple random selection was carried out to 200 students. Out of 200 participants, 51(25.5%) were current smokers. The 18-28 years old age group showed the highest prevalence of smoking. Among the group of the participants most of were cigarette smokers having light smoking habits less than 10 cigarettes per day. They also smoke *Moassel* and *Shisha* casually per day. Survey shows that 71% of the current smokers are well aware and had knowledge about disease & hazards of smoking and 74% of them are willing to cease smoking due to its hazards.

The conclusion of the research study was that the prevalence of smoking is one quarter among the students of Applied Medical College Sciences, Al-Quwayiyah, Shaqra University. Smoking habits were significantly higher among males ( $P<0.05$ ) especially those over 19 years of age and whose fathers are smokers.

**Keywords:** Smoking Habits, Moasal, Shisha, Shaqra University

#### INTRODUCTION

Smoking is most common & one of the fatal health hazard etiologies. Smoking associated diseases will kill one in 10 adults globally. By 2030, if this scenario will continue, smoking will kill one in six people [1-11]. Tobacco smoking is a global epidemic. The World Health Organization has evaluated that tobacco and its concern products

kill over 3.5 million people every year worldwide. Smoking habits can be preventable which affect the morbidity and mortality rate [12-24].

Current research & survey mentioned that Cigarette smoking and its grave consequences on health such as carcinoma of the oral cavity (larynx, esophagus, and tongue) lung cancer, chronic bronchitis, and urinary bladder, are all well

documented. Smoking is one of the major public health problems in Saudi Arabia and it is increasing at an alarming rate. [15-19].

In Saudi Arabia as per records smoking is one of the major public health hazards [1-10] and the rate of smoking habits is increasing day by day [6, 9, 11]. Saudi customs office reported the statistics in 1972 that Saudi Arabia imported 4.5 million kg of tobacco, in 1975 there was 5.5 million kg of tobacco import, in 1977 was 27 million kg of tobacco and in the year 1981 tobacco import was 36.5 million kg [20]. While in 1982 after there were no official figures available for tobacco import indicates that tobacco intake and its cigarettes cost increased swiftly.

In Europe & western countries, anti-smoking campaigns and prevention for smoking habits & various programs with the help of media sources are carried out extensively. Advertising along with pictures of cancer disease like throat & lung stick on cigarettes packets, prevalence of anti-smoking zones in public places and high cigarette cost acted as a best prevention method for smoking habits. There is also a major step towards the smoking hazards that introduced public health awareness into all levels of educational institutions.

This current research study was done to provide a baseline data on the smoking habits of students of the College of Applied Medical Sciences and to certain social, economic, health hazards awareness related to students.

## **MATERIAL & METHODS**

### **Study Design and Setting**

The research study was started with 200 male students; they were randomly selected from the College of Applied Medical Sciences, Al-Quwayiyah in department of Nursing and Medical Laboratory Science. 50% of samples from each department were taken. All students were interviewed by using a structured questionnaire from identified colleges for data collection. This study was conducted between the period of six months.

### **Inclusion and Exclusion Criteria**

Students were selected randomly from the common rooms, cafeterias and classes. Undergraduate students of age group (18-28) were

included, whereas postgraduate students, house officers were not included. Undergraduate, and postgraduate students of any age, familiar with the English language and Arabic language enrolled in medical Laboratory and Nursing departments inside the college campus, were included in the study. Students those who refused to participate in the study were not included.

### **Data Collection Method**

To achieve the appropriate sample size, the convenient sampling method was approved. The study objectives were explained to authorities and prior consent from departments concerned was taken. The data collectors were approached to the students in the target area for interviews. Students taking part in the study gave both written and verbal consent. A self-administered questionnaire was circulated among the study participants, and they were asked to complete it followed by the appropriate options. The filled in questionnaire was then returned to the researchers.

### **Study Questionnaire**

A 24-item framed questionnaire was developed including questions such as age of student, sex, marital status, grade level, religious beliefs, economic status, educational levels of their parents, exercise behavior, use of tobacco, frequency of smoking per day, smoking types, the idea of giving up, reasons to initiate smoking habits, the idea of smoking learnt from parents and siblings, smoking habits, the smoking health hazards, and various carcinoma caused by smoking, (**Appendix**).

The primary questionnaire was managed among 20 students in a pilot study and reviewed by removing confusing items. The questionnaires were conducted by a panel of experienced personnel for collecting and administrating data from 200 respondent, 180 (90%) completed questionnaires were included and the rest 20 (10%) questionnaires were removed due to incomplete reasons. The participants' smoking habits were stated as current smokers and non-smoker. Smokers were noted as those people who are having regular smoking at least one cigarette, *Shisha* and *Moassel* per day.

### **Ethical Approval**

Permission was taken from the dean of Applied Medical College of Science, Al-Quwayiyah, Shaqra University, Riyadh, Saudi Arabia. Prior to the

commencement of the study, written and verbal consent was sought from each and every individual. Request for the name or any other private info was not made purposefully.

### Data analysis

All analyses were performed using SPSS version 20. Identification numbers were given for the collected questionnaire for counting and

organizing purposes. All questions were coded and then imported to SPSS version 20 for analysis. All variables categories were coded with numbers (for example, Category: medical laboratory as 1 and Nursing as 2). Descriptive statistics were used to compute the demographic data and it included: mean standard deviation and frequency. **ANOVA methods** were used to check hypotheses of significant difference where appropriate.

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### APPENDIX QUESTIONNAIRE

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- 1 Sex: Male Female
- 2 Age: in years
- 3 Marital status: Single Married Divorced
- 4 Level in faculty: 1 2 3 4 5 6 7 8
- 5 Religious beliefs: strongly religious moderate religious not at all
- 6 Family income: < 7,000 7,000 - 10,000 > 10,000
- 7 Highest educational certificate/degree/qualification of father:  
illiterate primary intermediate secondary college post-graduate
- 8 Highest educational certificate/degree/qualification of mother:  
illiterate primary intermediate secondary college post-graduate
- 9 Do you exercise regularly?  
Yes No
- 10 Do you use tobacco? Yes No (go to question 21)
- 11 How do you use tobacco? Chewing Smoking
- 12 How many times do you smoke?  
daily 3-5 times/week once a week twice a month
- 13 If you smoke cigarettes, how many do you smoke per day?  
1-10 11-20 21-30 31-40 more than 40
- 14 If you smoke Moassel, how many times per Day?  
1-7 8-14 15 or more
- 15 If you smoke shisha, how many times per Day?  
1-7 8-14 15 or more
- 16 Have you chewed tobacco?  
Yes No
- 17 What was your age when you started smoking?  
In years
- 18 Have you thought about quitting?  
Yes No
- 19 What is the most appropriate reason you started smoking? (Choose one only)  
a. to try it and then it became a habit  
b. to cope with friends  
c. to do like father or mother  
e. other (specify) \_\_\_\_\_
- 20 Where have you learned about smoking for the first time?  
a. school  
b. home  
c. media  
d. other \_\_\_\_\_
- 21 Does your father smoke?

- Yes No
- 22 Does your mother smoke?  
Yes No
- 23 Does your brother/sister smoke?  
Yes No
- 24 Do you think that smoking is bad for your health?  
a. Strongly agree  
b. Agree  
c. Disagree  
d. No comment

## RESULTS

**Table 1** described the distribution of total population as well as socioeconomic parameters of the 200 participants out of them 51 (25.5%) were current smokers. The participants were divided into four different groups:

**Group I;** less than 18 years of age (6.8%), **Group II;** between 18-20 years of age (55%), **Group III;** between 21-24 years of age (36.7%), and **Group IV;** 25 years or older (1.8%). Of the current smokers, the 19-21 and 22-24 age groups constitute the largest number of cigarettes smoked per day ( $P < 0.05$ ). Smoking habits were significantly higher in males ( $P < 0.01$ ) Smoking habits were not associated with mothers nor with siblings' smoking behaviors. Also smoking habits were not concerned with regular exercise. Most of the participants appeared to be mild smokers.

**Table 2** described the results of the affects to cigarette, *Moassel*, and *Shisha* addiction those current smokers come out: 40% smokers consume cigarettes less than 10 cigarettes per day 23%

smoke 11-15 cigarettes every day, 10% smoker consume 16-20 cigarettes per day, 12% smoker 21-25 cigarettes per day, and 15% smoker consume cigarettes more than 25 cigarettes per day. The students of those who consume *Moassel*, 35% smoked less than 10 *Moassel* per day, 27% smoked 11-15 *Moassel* per day, and 14% smoked more than 25 *Moassel* per day. People those who smoked *shisha*: 33% smoked less than 10 *shisha* per day, and 26% smoked 11-15 *Shisha* per day.

When enquired about their awareness of health hazards of smoking & its complications, 71% of the current smokers said that they were aware of the diseases, hazards & complications and 74% of them expressed desire to quit smoking permanently (**Table 3**). The ratio of smokers was indirectly proportionate to the religious beliefs, when smokers know about the various fatwa's & references from the religious scholar and knowledge of the relevant diseases acquired due to smoking ( $P < 0.05$ ).

**Table 1.** Demographic breakdown by smoking status.

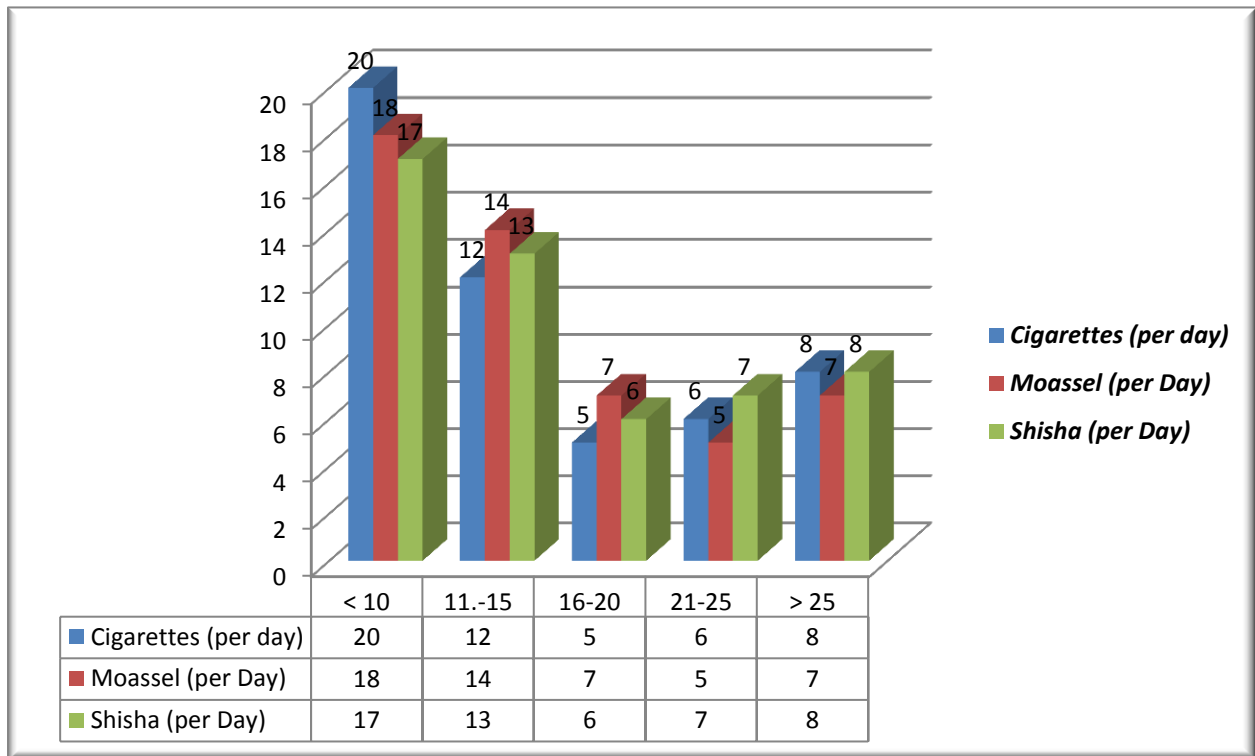
Breakdown	Current Smokers		Non Smokers	
	Number	Percentage	Number	Percentage
<b>Gender</b>				
Male	51	25.5%	149	74.5%
<b>Significance</b>	$P < 0.05$			
<b>Age</b>				
18 or less	4	6.8%	13	8.7%
18-20	28	55%	87	58.3%
21-24	18	36.7%	46	30.8%
25 or more	2	1.5%	3	2%
<b>Significance</b>	$P < 0.05$			
<b>Socioeconomic status</b>				
Upper Class	30	58.8%	76	51%
Middle Class	18	35.2%	60	40.26%

<b>Lower Class</b>	3	5.8%	23	15.43%
<b>Significance</b>	None			
<b>Father's Education</b>				
<b>Illiterate</b>	1	1.9%	8	5.3%
<b>Elementary</b>	7	13.7%	13	8.7%
<b>Intermediate</b>	8	15.6%	11	7.3%
<b>High School</b>	10	19.6%	31	20.8%
<b>College</b>	17	33.3%	52	34.8%
<b>Post Graduate</b>	8	15.6%	34	22.8%
<b>Significance</b>	None			
<b>Mother's Education</b>				
<b>Illiterate</b>	8	13.8%	20	11.9%
<b>Elementary</b>	11	19.0%	23	13.7%
<b>Intermediate</b>	7	12.1%	26	15.5%
<b>High School</b>	12	20.7%	38	22.6%
<b>College</b>	17	29.3%	45	26.8%
<b>Post Graduate</b>	3	5.1%	16	9.5%
<b>Significance</b>	None			

<b>Parents/siblings behavior</b>	<b>smoking</b>	<u>Table Continue</u>		
<b>Father smokes</b>	25	49%	82	55%
<b>Mother smokes</b>	6	11.7%	24	16.1%
<b>Brother or sister smokes</b>	20	39.3%	43	28.8%
<b>Significance</b>	<i>P &lt; 0.01</i>			
<b>Religious Beliefs</b>				
<b>Low</b>	11	21.5%	22	14.7%
<b>Average</b>	31	60.7%	79	53%
<b>High</b>	9	17.6%	48	32.2%
<b>Significance</b>	<i>P &lt; 0.05</i>			
<b>Regular Exercise</b>				
<b>Yes</b>	15	29.4%	51	34.2%
<b>No</b>	36	70.5%	98	65.7%

**Table 2.**Smoking Distribution behavior by Smoking Types per Day.

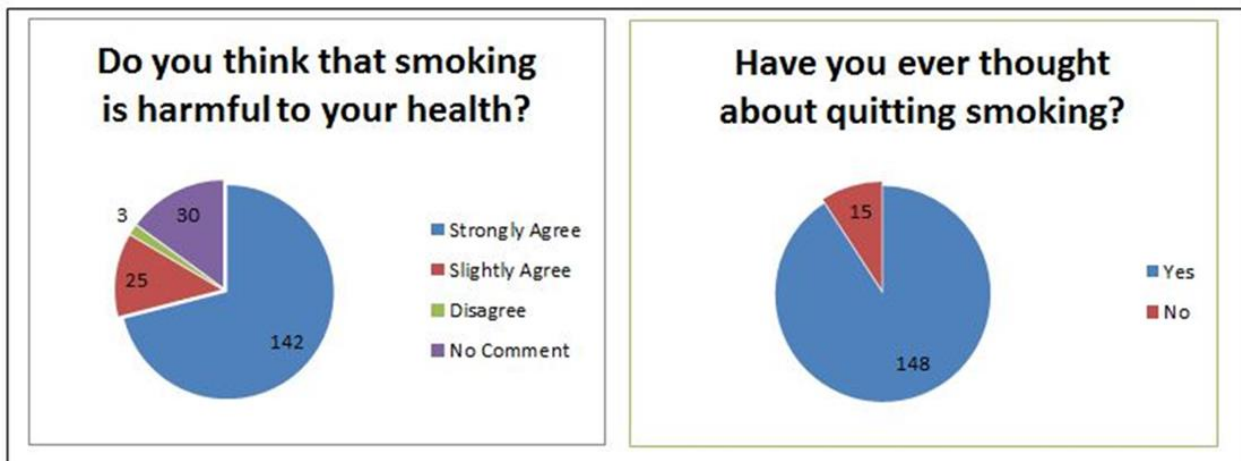
<i>Number of Times</i>	<i>Cigarettes</i>	<i>Percentage %</i>	<i>Moassel</i>	<i>Percentage %</i>	<i>Shisha</i>	<i>Percentage %</i>
<b>&lt; 10</b>	20	40%	18	35%	17	33%
<b>11-15</b>	12	23%	14	27%	13	26%
<b>16-20</b>	5	10%	7	14%	6	12%
<b>21-25</b>	6	12%	5	10%	7	14%
<b>&gt; 25</b>	8	15%	7	14%	8	15%



**Graph 1.**Smoking Distribution behavior by Smoking Types per Day.

**Table 3.**Smokers’ responses to specific Questions.

Questions	Number	Percentage
<b>Do you think that smoking is harmful to your health?</b>		
Strongly Agree	142	71%
Slightly Agree	25	12.5%
Disagree	3	1.5%
No Comment	30	15%
<b>Have you ever thought about quitting smoking?</b>		
Yes	148	74%
No	15	26%



**Graph 2.**Smokers’ responses to specific Questions.

## DISCUSSION

The prevalence of smoking habits was discussed in many international research journals & studies. [22-25]. Our research results show a smoking rate of 25% among students of the Applied Medical Science College, Al-Quwayiyah, Shaqra University, Saudi Arabia. In study of Hisham[26] reported a smoking rate of 28% among students of Applied Medical Sciences in Riyadh. In another study, Saed and his colleagues[8] reported the smoking rate of 38% health care workers of the 29% who are currently smoking, 81% stated that they were well aware of the health complications & hazards of smoking and 85% indicated that they have thoughts of quitting smoking. Social bad company, financial and psychological problems were the reason to start smoking habits in 45% of current smokers while 28% people started smoking to try it and then it became a habit.

This given study and other related similar studies insist the importance of antismoking campaign in every health care providing institutions. It also shows the importance of establishing an applicable antismoking program especially among health care students who are going to become a role model for many people in society. Ideally, health professional people always play a pivotal role in promoting healthy lifestyles and that's why it's necessary that they themselves are free of these habits. In conclusion, smoking is prevalent among students of the Applied Medical College, less than 18 years of age (6.8%) between 18-20 years of age (54.9%) between 21-24 years of age (36.7%), and 25 years or older (1.8%). Of the current smokers, the 19-21 and 22-24 age groups

constitute the largest number of cigarettes smoked per day ( $P < 0.05$ ).

## CONCLUSION

This study shows the prevalence of smoking habits in students of medical laboratory as well as Nursing departments of all age groups. Imitating others are found to be one of the most common factors contributing to the smoking habits among the students. There is a need for a review of educational programs especially the teaching of the life threatening diseases like as carcinoma of the oral cavity (larynx, esophagus, and tongue) lung cancer, chronic bronchitis which are most common in community and increasing day by day due to habits of smoking.

In most of cases it has been observed that they choose smoking habits due to opinion of friends, or their own experience, and they are also influenced by the commercial adds on TV, social media platform which is found quite strange so further educational interventions are necessary to improve students' knowledge, understanding on smoking habits, and to correct some wrong behaviors related to tobacco, *Mossal* and *Shisha* houses. A traditional habit of *Moassel* and *Shisha* smoking was found to be the most common during the counseling of a student's which needs to be given up.

Further research and investigation may be required in the future to follow up the habit of smoking habits among students and to assess the smoking control program that will be taken at College of Applied Medical Sciences, Al-Quwayiyah in the near future. The mosque can play a role in a religious oriented program to prevent smoking habits in Saudi Arabia.

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