

## SMOKING HABBITTS OF PRECLINICAL SAUDI MEDICAL STUDENTS

M. Saeed Vohra<sup>1</sup>

### ABSTRACT

**Objective:** To assess trends of smoking and the relation between smoking behavior of undergraduate medical students and their attitudes towards smoking and treatment of tobacco dependence.

**Methodology:** Data was collected from the preclinical medical students of College of Medicine, King Saud University. A total of 422 male students completed the anonymous questionnaire. Response rate was 88.3%.

**Results:** Of the respondents 17.53% and 82.46% were regular smokers and non-smokers respectively. Only 29.72% of the regular smokers smoke less than ten cigarettes, 28.37% smoke ten to twenty cigarettes whereas, 41.89% smoke more than 20 cigarettes per day. 48.67% started smoking at nineteen years of age, 16.2% started before this age and 21.62% and 13.51% started at twenty and twenty one years of ages respectively. 78.37% started smoking just for pleasure. Only 29.72% smoke light cigarettes whereas 33.78% and 36.48% smoke medium and heavy cigarettes respectively. Almost 78.37% smokers agreed with the fact that smoking is harmful to health and 21.62% realized that their cigarette smoke bother others and again 78.37% of smokers have attempted to quit smoking but failed and 35.13% still wanted to quit smoking. About 83.78% of smokers complained that they suffer from chronic cough, 56.75% were lacking concentration in their studies and 41.89% felt that they were short of memory.

**Conclusions:** Attitudes of smokers were significantly different on most items of tobacco, but knowledge of tobacco problem in the undergraduate medical students was not sufficient. Teaching about tobacco and related issues remains essential in the undergraduate medical course.

**KEY WORDS:** Smoking, Hazardous, Cigarette, Students, Medical Education, Curriculum.

Pak J Med Sci October - December 2009 (Part-II) Vol. 25 No. 6 906-911

### How to cite this article:

Vohra MS. Smoking habbits of preclinical Saudi medical students. Pak J Med Sci 2009;25(6):906-911.

- 
1. Dr. M. Saeed Vohra  
Department of Anatomy,  
College of Medicine,  
King Saud University, Riyadh,  
Saudi Arabia.  
  
Correspondence:  
  
Dr. M. Saeed Vohra, MBBS, Ph.D.  
Assistant Professor,  
Department of Anatomy, (28),  
College of Medicine,  
King Khalid University Hospital, King Saud University,  
P.O. Box 2925. Riyadh 11461.  
Kingdom of Saudi Arabia.  
Email: vohra@ksu.edu.sa

\* Received for Publication: June 12, 2009

\* Accepted: October 8, 2009

### INTRODUCTION

Many surveys throughout the world have evaluated the smoking behaviors, beliefs, and attitudes of medical students towards smoking. It is a public health problem that does not spare the medical profession as well. Studies have shown that smokers rationalize smoking by self-exempting beliefs.<sup>1</sup> Tobacco represents the single most preventable cause of disease and death in the world today.<sup>2</sup> There were an estimated three million deaths annually at the end of the 20th century and it has been estimated that this will rise to more than 10 million by

2030.<sup>2</sup> Cancer is one of the major tobacco-related causes of disease and death, and has the high male incidence rates in the world for both oropharyngeal and lung cancer.<sup>2</sup> Medical schools in Saudi Arabia lack significant educational programs for teaching medical students about counseling on smoking prevention and cessation. Studies are needed to ascertain factors affecting the decision to smoke and to identify possible early adopters of a non-smoking culture in Medical Schools of Saudi Arabia and actions on a societal level are urgently needed to change social norms regarding smoking habits of the future doctors.

Knowledge about the harmful influence of cigarette smoking on health is common in the Arab society. However, it is the role of health care personnel to promote lifestyle without smoking. If healthcare professionals are to play a role in reducing death and disease from tobacco related cancers, it is necessary to assess the attitudes and behaviors among healthcare professional students.<sup>2</sup> Success of campaigns against smoking depend on the way the health care personnel are trained because tobacco companies are focusing their interests in less developed countries.<sup>3</sup> Menezes et al<sup>4</sup> wrote that a regular smoker was defined as someone who smokes one or more cigarettes a day at least for one month; former smokers were the ones who used to smoke in the past but not at the moment.

There is an almost universally held view that doctors can have a significant impact on reducing smoking levels<sup>5</sup>. They further express the need of Knowledge on morbidity and mortality associated with smoking, intervention strategies, effectiveness, and cessation practices; anticipated clinical behavior related to smoking; and attitudes towards medical practitioner involvement in smoking cessation. Physicians can play a key role in promoting abstinence from tobacco, if they themselves are not smoking. Brenner and Scharrer<sup>6</sup> stress that efforts are needed to reduce smoking among future physicians. Fakhfakh et al<sup>7</sup> conducted a similar study to evaluate the knowledge and awareness of medical students about their

responsibility for health education and prevention.

There is little information concerning the smoking habits of medical students, even though they are the physicians of the future. Thus, the objectives of this study were to determine the prevalence of smoking in medical students at College of Medicine, King Saud University, Riyadh and to assess their attitudes and knowledge in the face of the smoking problem.

## METHODOLOGY

A survey using a self-reported questionnaire was conducted amongst preclinical medical students at the Department of Anatomy, College of Medicine, King Khalid University Hospital, King Saud University, Riyadh, Saudi Arabia during the period 2007-2008. A questionnaire was designed specifically for this study and contained 14 variables (Table-I & II & Fig: 1) on health condition and prevalence, knowledge and attitudes towards smoking. In this study 480 preclinical male students in the mean age of  $21 \pm 1$  were invited to participate. The data was collected using the above mentioned questionnaire.

The following factors were analyzed: age and causes of first attempt of smoking, frequency of tobacco smoking; students' behaviors connected with tobacco smoking and the knowledge of the consequences. Their health conditions regarding chronic cough, lack of memory and lack of concentration were also compared. However 87.91% responded to the questionnaire, whereas 12.08% did not show any interest. Therefore the present study was restricted to 422 students and eventually was subject to analysis and ex-smokers were included as non-smokers.

*Statistical Analysis:* SPSS statistical package version 12.0 program for windows was used to perform data analysis. Chi-square test was used to compare between the numbers of cigarettes smokers with the health complaints. It is assumed that the data was statistically significant when  $P < 0.05$ .

## RESULTS

This was a preliminary study to know the pre-clinical students' perception about prevalence, knowledge and attitude towards smoking. The overall response rate among students was 87.91%. The results were worked out using descriptive statistics. Of the respondents, 17.53% were regular smokers and 82.46% were non-smokers. Only 29.72% of the regular smokers smoke less than ten cigarettes, 28.37% smoke ten to twenty cigarettes whereas, 40.54% smoke more than 20 cigarettes per day. 48.64% smokers started smoking at nineteen years of age, 16.2% started before this age and 21.62% and 13.51% started at twenty and twenty one years of ages respectively. Majority, 78.37% started it just for pleasure. Only 29.72% smoke light cigarettes whereas 33.78% and 36.48% smoke medium and heavy cigarettes respectively (Table-I). 78.37% smokers agrees with the fact that smoking is harmful to health and 21.62% realized that their cigarette smoke bother others and 78.37% of smokers have attempted to quit smoking but failed and 35.13% still wanted to quit smoking. About 83.78% of smokers complained that they suffer from chronic cough, 56.75% were lacking concentration in their studies and 41.89% felt that they were short of memory (Fig-1).

Three different parameters of health complaints were compared with the number of cigarettes smoke per day and a significant difference was noticed in the health complaints

for lack of concentration and lack of memory of those who smoke more than 20 cigarettes per day with those who smoke less than 10 cigarettes per day (Table-II).

## DISCUSSION

Cigarette smoking has reached the proportion of a global epidemic with particularly devastating consequences in the Arab countries. Learning of epidemiological aspects of smoking in youngsters, especially medical students, is of great importance for the whole community. It is a cause for concern that a large number of students start smoking after they enter the medical school. One of the reasons for this is the lack of concern about smoking as a health problem within medical schools. The smoking habits of medical students are affected by the same phenomena that affect those of the general public, such as the influence of socio-cultural factors, and the increasingly broader age range of initiation.<sup>8</sup> The prevalence of smoking among medical students with respect to other populations is probably low due to the fact that, in general, these students have better health habits than the general public, and/or the reasons that led them to study medicine also make them disinclined to smoke.

In the West, the effectiveness of smoking cessation programs is well established but the smoking cessation programs in the East are rare.<sup>9</sup> Smokers tend to ignore the unpleasant smell of cigarettes as compared with ex-smokers and non-smokers.<sup>10</sup> Everyone is generally

Table-I: General considerations regarding smoking in the medical students. (n = 422)

<i>Smoke</i>	<i>Yes</i>		<i>No</i>	
	17.53		82.46	
If Yes:				
No: of cigarettes per day	>10 29.72	10 - 20 29.72	<20 40.54	
Age you start smoking	17yrs 8.1	18yrs 8.1	19yrs 48.67	20yrs 21.62
				21yrs 13.51
Type of cigarette	Light 29.72	Medium 33.78	Heavy 36.48	
Initiating factor	For pleasure 78.37		For fun 21.62	

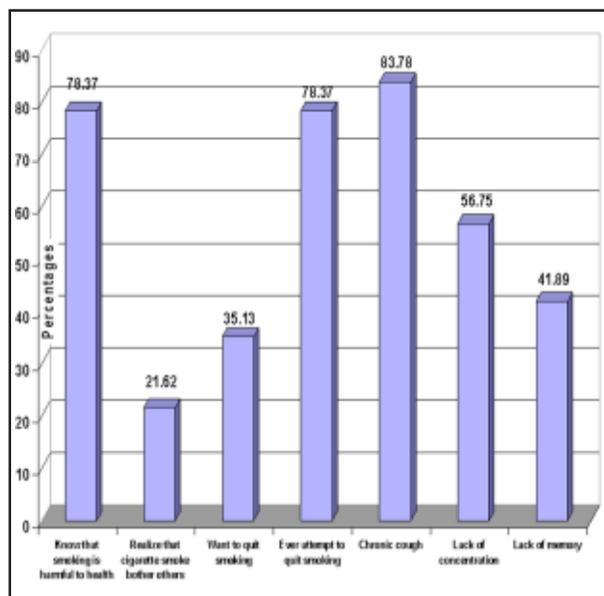


Fig-1: Medical students response regarding who filled up different parameters about smoking (n = 422)

concerned with the smell of cigarettes but tended to accept it in the school of medicine. Medical faculty students believe that the anti-tobacco policy is ineffective, mainly because the instructions are not obeyed, and there are too few actions promoting lifestyle without a cigarette.<sup>11</sup> Medical education is the factor which affects the decision about non smoking. It is necessary to develop specific prevention programs for medical students because they will play an important public health role in the future in reducing the prevalence of tobacco consumption.<sup>12</sup> Spangler et al<sup>13</sup> has documented that most medical schools inadequately teach tobacco intervention skills. Recruited students claimed that it is essential to teach them how to prevent smoking. Therefore increased efforts to promote tobacco education and intervention among medical students seem necessary and it

is advisable to update curriculum in Medical Schools with suitable subjects.

This study revealed that every fifth student of medicine at King Saud University smoke cigarettes. This coincides with the facts by Kuznar et al,<sup>14</sup> who believe that anti-tobacco prevention should be started very early – before the age of 10 and continued up to the age of 21. Special attention should be taken at the age of 18 years as this time was found to be especially dangerous for development of addiction. However, effective training methods for tobacco intervention in undergraduate medical education are needed. Piko<sup>15</sup> quotes that the high frequency of smoking among medical students suggests that they themselves are unable to cope with avoiding the dangers of smoking. Similarly, Melani et al,<sup>16</sup> documented that targeted and continuous training about smoking prevention should be mandatory in medical schools. Moreover, responses reflect a generally poor appreciation of responsibility that health care professionals have in prevention. Kawakami<sup>17</sup> supports our results, by stating that the awareness of the harmful effects of smoking and intention to perform smoking intervention in the future doctors seemed unsatisfactory among medical students. There is a need for an increasing emphasis on smoking-related attitude formation amongst medical students.

In this study most medical students reported knowing the health hazards of tobacco and believed that smoking should be restricted in hospitals. The best way to discourage smoking is by approaching children and adolescents, since most people start smoking in their teenage years. This age group must recognize the harmful effects of smoking. Igi<sup>18</sup> stresses the need for banning advertising and other promotional activities of tobacco producers, as

Table-II: Percentages of health complaints reported by the medical students compared with no. of cigarettes smoke per day (n = 422)

Health Complaints	<10 cigs	10-20 cigs	>20 cigs	P-values
Chronic Cough	86.36	81.81	76.66	<0.674
Lack of Concentration	18.18	50	53.33	<0.026
Lack of Memory	18.18	63.63	80	<0.0001

well as smoking in hospitals, workplaces, restaurants, and public transportation is a very strong weapon against smoking. Because smoking as a risk factor is preventable, it is necessary to conduct rigorous preventive measures, including educational programs and various legal actions, such as restrictions on the purchase of tobacco products by teenagers and creation of smoke-free areas.<sup>18</sup> According to Soltani and Bchir,<sup>19</sup> most of the students feel that they were not sufficiently prepared for caring for smokers and desired specific training. These findings suggest that medical school authorities should design and implement appropriate basic training aimed at better preparing medical students for their role in prevention of smoking. There is a need to provide comprehensive tobacco use prevention programs amongst medical students<sup>20</sup>.

In this study most students recognize the adverse health effects of smoking and the importance of their professional role in promoting smoking cessation. This discrepancy supports the idea that training in nicotine addiction and smoking cessation techniques will help medical students to develop the skills and confidence needed to successfully intervene with their future patients.<sup>21</sup> Therefore it is believed that by positive smoking cessation knowledge and skills, changes can readily be achieved. However, specific smoking cessation training is needed in the medical schools of Saudi Arabia to develop appropriate skills and strategies in the future clinicians. Attention to particular weaknesses related to specific intervention strategies and cessation practices is required to develop competence in this area and to maximize the chances of new medical graduates fully using the opportunities available to them.

Interestingly in this study, when the numbers of cigarettes smoke per day were related to the health complaints by these students, it was observed that those, who smoke more than twenty cigarettes per day, had complaints of lack of concentration and memory, 'P' values 0.026 and 0.0001 respectively. Therefore, further investigations are needed to ascertain the causes of

these health problems, and to investigate that either nicotine causes these problems or the frequent lighting of cigarettes divert their attention.

## ACKNOWLEDGEMENT

The author would like to thank Dr. Mujahid Khan, for critical review of the manuscript and to Mr. Amir S. Marzouk for statistical analysis of the data. He is also indebted to the medical students: Tareq Al-Salamah, Abdulsalam Madkheli, and Yousef Khoja of College of Medicine, King Saud University for their assistance. The author extends deep appreciation to Dr. Abdullah Al-Dahmash, Chairman Anatomy Department, King Saud University for his immense support in the completion of this work.

## REFERENCES

1. Jackson AA, Manan WA, Gani AS, Carter YH. Lay beliefs about smoking in Kelantan, Malaysia. *Southeast Asian J Trop Med Public Health* 2004;35(3):756-63.
2. Nagy K, Barabas K, Nyari T. Attitudes of Hungarian healthcare professional students to tobacco and alcohol. *Eur J Dent Educ* 2004;8 Suppl 4:32-5.
3. Rosselli D, Rey O, Calderon C, Rodriguez MN. Smoking in Colombian medical schools: the hidden curriculum. *Prev Med* 2001;33(3):170-4.
4. Menezes A, Palma E, Holthausen R, Oliveira R, Oliveira PS, Devens E, et al. Smoking time evolution among medical students, 1986, 1991, 1996. *Rev Saude Publica* 2001;35(2):165-9.
5. Roche AM, Eccleston P, Jordan D. Smoking-related knowledge and attitudes of senior Australian medical students. *Tob Control* 1996 Winter;5(4):271-9.
6. Brenner H, Scharrer S. Smoking habits of future physicians: a survey among medical students of a south German university. *Soz Praventivmed* 1996;41(3):150-7.
7. Fakhfakh R, Hsairi M, Ben Romdhane H, Achour N, Ben Ammar R, Zouari B, et al. Smoking among medical students in Tunisia: trends in behavior and attitudes. *Sante* 1996;6(1):37-42.
8. Mas A, Nerin I, Barrueco M, Cordero J, Guillen D, Jimenez-Ruiz C, et al. Smoking habits among sixth-year medical students in Spain. *Arch Bronconeumol* 2004;40(9):403-8.
9. Abdullah AS, Hedley AJ, Chan SS, Ho WW, Lam TH; Hong Kong Council on Smoking and Health Smoking Cessation Health Centre (SCHC) Steering Group. Establishment and evaluation of a smoking cessation clinic in Hong Kong: a model for the future service provider. *J Public Health (Oxf)* 2004;26(3):239-44.

10. Imai H, Konno K, Musashi M, Tamashiro H. Survey on smoking behavior in Hokkaido University School of Medicine, 2003. *Nippon Koshu Eisei Zasshi* 2004;51(7):540-51.
11. Kalinowski P, Jedrzejewska B. Prospective health care workers' opinions of effectiveness of anti-tobacco policy in Poland. *Wiad Lek* 2002;55 Suppl 1:201-6.
12. Jossieran L, Raffin J, Dautzenberg B, Brucker G. Knowledge, opinions and tobacco consumption in a French faculty of medicine. *Presse Med* 2003;32(40):1883-6.
13. Spangler JG, George G, Foley KL, Crandall SJ. Tobacco intervention training: current efforts and gaps in US medical schools. *JAMA* 2002;288(9):1102-9.
14. Kuznar B, Batura-Gabryel H, Mlynarczyk W. Social aspects of tobacco smoking among Polish students. *Pneumonol Alergol Pol* 2002;70(9-10):483-9.
15. Piko BF. Does knowledge count? Attitudes toward smoking among medical, nursing, and pharmacy students in Hungary. *J Community Health* 2002;27(4):269-76.
16. Melani AS, Verponziani W, Boccoli E, Trianni GL, Federici A, Amerini R, et al. Tobacco smoking habits, attitudes and beliefs among nurse and medical students in Tuscany. *Eur J Epidemiol* 2000;16(7):607-11.
17. Kawakami M. Awareness of the harmful effects of smoking and views on smoking cessation intervention among Japanese medical students. *Intern Med* 2000;39(9):720-6.
18. Iqbal R. Doctors and smoking. *Med Pregl* 2000;53(3-4):117-27.
19. Soltani MS, Bchir A. Smoking behavior and attitude to smoking of medical students (Tunisian Sahel). *Rev Mal Respir* 2000;17(1):77-82.
20. Xiang H, Wang Z, Stallones L, Yu S, Gimbel HW, Yang P. Cigarette smoking among medical college students in Wuhan, People's Republic of China. *Prev Med* 1999;29(3):210-5.
21. Daudt AW, Alberg AJ, Prola JC, Fialho L, Petracco A, Wilhelms A, et al. A first step incorporating smoking education into a Brazilian medical school curriculum: results of a survey to assess the cigarette smoking knowledge, attitudes, behavior, and clinical practices of medical students. *J Addict Dis* 1999;18(1):19-29.