

Smoking habits among medical students in Central Saudi Arabia

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ABSTRACT

Objective: To estimate the prevalence of smoking habits among male medical students at the College of Medicine, King Saud University, Riyadh, Kingdom of Saudi Arabia (KSA).

Methods: We carried out this cross-sectional study using Arabic questionnaires distributed to the medical students in the College of Medicine, King Saud University, Riyadh, KSA at different educational levels from September 13 to September 25, 2005. A total of 322 medical students completed the questionnaires (response rate 80.5%).

Results: The study shows that 13% of male medical students were currently active smokers, 5.3% were ex-

smokers, and 38.2% were passive smokers. The types of smoking included sheesha 44.1%, cigarette 32.2%, and both 23.7%. The common reason given for the smoking behavior was the influence of friends (35.6%). The study shows that 57.1% of current smokers were motivated to stop smoking.

Conclusion: There is an urgent need to promote multi-disciplinary health education activities at different age groups in order to prevent young age students from smoking, and to help smokers to quit.

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Smoking-related diseases will kill one in 10 adults globally. By 2030, if current trends continue, smoking will kill one in 6 people.¹ Smoking represents the most readily preventable risk factor for morbidity and mortality. In Saudi Arabia's family health survey in 1996, an estimate of 9% of those aged 15 years or more was current cigarette smokers: 18% of men and less than one percent of women.² Smoking is on the rise in the developing world but falling in developed nations. Among Americans, smoking rate shrunk by nearly half in 3 decades (from the mid-1960 to mid-1990), falling to 23% of adults by 1997. In the developing world, tobacco consumption is rising by 3.4% per year.¹ Smoking is an important risk factor for coronary artery diseases in Saudi population.

In a community based study, during 5-years period between 1995 and 2000 in the Kingdom of Saudi Arabia (KSA), cigarette smoking was shown to be significantly associated with coronary artery diseases among Saudi patients.³ Cigarette smoking is prevalent among students of health care professionals, one study showed that 29% were current smokers among students of the College of Applied Medical Sciences in Riyadh, KSA.⁴ Another study showed that regular smoking has a prevalence rate of 13.6% among medical students at the University College of Medicine in Abha, KSA.⁵ Different studies showed that smoking prevalence is quite high among health care workers even though they know the harmful effects of active and passive smoking.⁶⁻⁸ Local study

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was carried out among health staffs in Al-Kharj Military Hospital, KSA, which showed that there were 19% smokers, 14% ex-smokers and 67% non-smokers.⁶ Another study showed that 17% of primary health care physicians in Riyadh city were current smokers, 20% ex-smokers.⁷ One study showed that the prevalence of smoking is high among male physicians in both Kuwait and Bahrain. In Kuwait, current smokers were 18.4% and ex-smokers were 15.8%. In Bahrain however, current smokers were 14.6% and ex-smokers were 14.3%.⁸

We conducted the present study to estimate the prevalence rate of smoking habit among male medical student of the College of Medicine, King Saud University, Riyadh, KSA.

Method. A cross-sectional study using Arabic questionnaires was distributed randomly to 400 medical students at different educational level in the College of Medicine, King Saud University, Riyadh, KSA during the period September 13 to September 25, 2005. A total of 322 medical students responded to the questionnaires with a response rate of 80.5%.

The data were analyzed using EPI Info software version 6.

Results. A total of 322 medical students completed the questionnaires with a response rate of 80.5%. The mean age of medical student involved in the study was 21.8 years (range 18-26 years) **Table 1**.

The estimated prevalence of current smokers among medical students involved in the study in the College of Medicine, King Saud University was 13%. Ex-smokers were 5.3%, and approximately 80% of the medical students had never smoked.

Type of smoking among current smokers and ex-smokers were as follows: 44.1% smoke sheesha, 32.2% smoke cigarette, 23.7% smoke both cigarette and sheesha. The common reason given for smoking behavior was the influence of friends (35.6%), and life stresses (16.9%) **Table 2**.

Passive smokers among the medical students were 38.2% **Table 3**. Most of the current smokers were motivated to stop smoking (57.1%) **Table 4**. Medical students opinion regarding the availability of health education activities in the medical college were as follows: always available (3.4%), not available (54.7%), sometimes available 29.8%.

Discussion. Some studies showed that smoking is prevalent among students of health care professionals.^{4,5} Others studies showed that smoking prevalence is quite high among health care workers

Table 1 - Age distribution of 322 medical student in the College of Medicine, King Saud University, Riyadh, Kingdom of Saudi Arabia.

Age (year)	Frequency	(%)
18-20	179	(55.6)
21-22	97	(30.1)
23-24	38	(11.8)
25-26	3	(0.9)
Undetermined	5	(1.6)
Total	322	(100)

Table 2 - Reasons given by smokers medical students for smoking behavior.

Reasons for smoking	Frequency	(%)
Smoker friends	21	(35.6)
Stress and life difficulty	10	(16.9)
No reason recognized	15	(25.4)
Others	4	(6.8)
Not answered	9	(15.3)
Total	59	(100)

Table 3 - Passive smoking among the medical students.

Smoking situation	Frequency	(%)
Passive smoking	123	(38.2)
No passive smoking	196	(60.9)
Undetermined	3	(0.9)
Total	322	(100)

Table 4 - Motivation to stop smoking among the current smokers.

Motivation description	Frequency	(%)
Motivated to stop smoking	24	(57.1)
Not motivated	18	(42.9)
Total	42	(100)

even though they know the harmful effects of smoking.⁶⁻⁸ In our present study, 13% were current smoker, 5.3% were ex-smoker, and approximately 80% of medical student never smoked compared with other study,⁵ which showed that regular smoking has a prevalence rate of 13.6% among medical students at the College of Medicine in Abha, KSA. Another study showed that 29% were current smokers among students of the College of Applied Medical Science in Riyadh, KSA.⁴ One study showed that two-third of the smokers started the habit after the age of 10 years.⁹ Al-Damagheh et al¹⁰ reported that 83.7% of

smokers male secondary school students started smoking at the age of 15 years or less. Another study showed that 20% were current smoker and 16% were ex-smoker among high school students in Al-Kharj, KSA.¹¹ A smoking prevalence of 21.8% was obtained among secondary school male students in Riyadh, KSA⁹ compared with the smoking habit among male secondary school students in Al-Qassim, KSA, which showed that 29.8% were current smokers.¹⁰ One study showed that the prevalence of current smoking was 13.3% among Omani adult males aged 20 years and above, and 3.6% of them were farmer smokers, the rest were non-smokers, 82.1%.¹² In comparison with other countries, an estimate of 20.9% of all adults smoke cigarettes in the United States.¹³ But it is important to emphasize that among Americans, smoking rate shrunk by nearly half in the last 3 decades, while in the developing world, tobacco consumption is rising by 3.4% per year.¹ The present study showed that 32.2% of smokers were cigarette smokers 44.1% sheesha smokers and 23.7% smoke both cigarettes and sheesha. In comparison with other studies, the type of smoking among male medical students in Abha were cigarette 70.4%, sheesha 51.9% and cigar 3.7%.⁵ Behbehani et al⁸ reported a prevalence of sheesha smoking among male physician in Kuwait by 12% and in Bahrain by 6.4%.

Unfortunately, cigarettes smoking and hubble-bubble smoking are frequently co-occurring, and cigarette smokers may not benefit when they switch to hubble-bubble; on the contrary they might be at higher risk since they may have to inhale deeply after switching to hubble-bubble to maintain the same level of plasma nicotine, as plasma nicotine level resulting from smoking one head of hubble-bubble tobacco is higher by 20% than plasma nicotine concentration resulting from smoking 21 cigarettes, this refutes the misconception that hubble-bubble is harmless, as hubble-bubble has the potential to initiate and sustain tobacco dependence.¹⁴ The present study showed that the common reasons given for smoking behavior were the influence of friends (35.6%). This agrees with other studies, which showed that majority of the smokers started smoking due to friend influences.^{5,6,10} Friends were the main source of the first cigarette 55.6% as reported by Abol Fotouh et al.⁵

One study showed that the prevalence of smoking among parents of school boys in Al-Khobar City, KSA was 18%.¹⁵ Encouraging parents to quit may be an effective method for reducing adolescent smoking, through decreased uptake and increased cessation. The earlier parents quit, the less likely their children will become smokers.¹⁶

The present study showed that 38.2% of medical students are passive smokers. Passive smoking is

linked with cancer, heart disease, respiratory illness, and is the leading source of indoor air pollution.¹⁷ Both active smoking and environmental tobacco smoke exposure are associated with the progression of an index of atherosclerosis.¹⁸ The public health impact of environmental tobacco smoke is thought to be considerable, of the estimated 480,000 smoking-related deaths that occur every year in the United States, 53,000 have been attributed to environmental tobacco smoke, making passive smoke the third leading preventable cause of death, after active smoking and alcohol use.¹⁹ Smoke-free work places not only protect non-smokers from the dangers of passive smoking, they also encourage smokers to quit or to reduce consumption.¹⁷ The present study showed that 57.1% of the current smokers are motivated to stop smoking. Different studies showed that smokers were concerned on the smoking hazard, and most of them were knowledgeable about smoking and had favorable attitude against it.^{5,9,20} Although 70% of patients who smoke say they would like to quit, only 7.9% are able to do so without help.²⁰ One study showed that smoking physician have less favorable attitude towards tobacco control compared to non-smokers,⁸ while other study showed that the important psychosocial and behavioral factors affecting the success in quitting smoking. These factors can be modified in order to increase the likelihood of success in quitting smoking.²¹ The present study showed that 54.7% of medical student said that health education activities for smoking cessation were not available in their medical college, while 29.8% said that it is sometimes available.

In other countries the tobacco industry is actively present in community settings, particularly in communities with a low socio-economic profile.²² A study in the USA showed that attendance a tobacco industry sponsored an event party was associated with a higher smoking prevalence among college students. Promotional events may encourage the initiation or the progression of tobacco use among college students who are not smoking regularly when they enter college.²³

Despite increased research on smoking, heightened awareness of consequences of smoking, and considerable publicity about litigation against tobacco companies, statistics published more alarming increase in smoking among persons 18-24 years of age.²⁰ Tobacco control researchers and advocates need to continue to monitor the tobacco industry's behavior at the community level and develop strategies to counter this behavior.²²

In conclusion, there is an urgent need to promote multidisciplinary health education activities at different age groups to prevent young age students

from smoking behavior and to help smokers to quit smoking in the community.

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