

Smoking habits among Pharmacy students at a University in central Saudi Arabia

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The most important determinant of human health trends is the increase in smoking related morbidity and mortality. Tobacco related deaths are expected to increase to 10 million within the next 20-30 years, of which 70% will occur in the developing countries. This will project smoking as the largest single health problem now.¹ For instance, there are 80-90% of deaths from chronic obstructive pulmonary disease attributed to tobacco, and smokers have 6 times the risk to acquire this disease compared with non-smokers. Many university colleges conducted several studies among their student populations to determine the smoking rates of medical students and their knowledge of smoking related diseases and intervention strategies.² Overall, smoking was found to be less prevalent among Asian students than in Europeans. Although, the issue of tobacco related to smoking-attributed disease and smoking cessation technique was included in the curriculum of many medical schools worldwide,³ pharmacy schools are still dragging behind in this respect, where tobacco issues are unsystematically and sporadically integrated with other teaching. Therefore, this study was conducted to examine the prevalence, pattern of smoking, attitudes towards public measures against smoking and teaching the tobacco issues in Pharmacy College. The appraisal of the role of the pharmacist in smoking cessation was also investigated.

The study was conducted in 2004. A 7-page modified anonymous self-administered questionnaire was developed from World Health Organization (WHO) standard questionnaire in English with translation provided in Arabic and then administered to the sample of 400 students randomly selected from different educational levels. Before full implementation, the questionnaire was piloted in a 10% sample. Based on the preliminary results generated through the pilot study, the questionnaire was modified and finalized. In addition, the questionnaire was subjected to a manual validity check. The reliability was assessed using Cronbach's coefficient alpha index for randomly selected variables. The 4-part questionnaire consisted of 38 questions of varied format, including checklists, open- and closed-ended questions. Data were analyzed using the Statistical Package for Social Science (SPSS) version 10.0 for Windows (SPSS Inc., Chicago, Illinois). The analysis included frequency of discrete variables and codescriptives. The rate was 88% with 400 questionnaires distributed and 352 returned. The mean age of respondents was 21.8 years. When the

sociodemographic variables (age and educational level) of smokers were compared with non-smokers, it was observed that the significant numbers of the smokers were above the age of 22 years and they were in final education levels. Regarding prevalence of smoking and influencing factors and reasons for smoking and non-smoking the results of the study showed that 47 of the students (13.4%) were current smokers, while 15 students (4.3%) were ex-smokers. Two hundred and ninety students (82.4%) claimed that they never smoked. Among students who smoke, only 2 students smoked sheesha (the traditional Arabic smoking pipe) along with cigarettes. According to the distribution of current smokers, most students (91%) are daily smokers, and smoked their cigarettes at any time of the day and night. The minimum age of starting cigarette smoking was 10 years or less. The mean age for starting smoking was 17 years. On average, most of the smokers smoked 20 cigarettes per day. In addition, 38.3% of smokers smoked light cigarettes, and only 23% of the students smoked filter-tipped cigarettes, while 14.9% smoked plain, and 12.8% smoked mild cigarettes. Approximately 40% of the smokers smoked their first cigarette at any time of the day and night, while 38.3% smoked immediately when awaking up in the morning, and only 21.3% within half an hour after waking.

Regarding the favorite places of smoking, 37 students (78.7%) smoked anywhere, while 5 only (10.4%) generally smoked at home and the remainder smoked at the college. Thirty-five smokers (74.5%) indicated that smoking had adversely affected their health. Twenty-nine smokers (61.7%) had no difficulty in stopping smoking in places where it is forbidden. Among 47 smokers, 35 (74.5%) had unsuccessfully considered quitting smoking, whereas, 12 of the smokers (25.5%) had actually never tried to do so. Of those who failed to quit smoking, 33 (70.2%) were still determined to try quitting smoking again. Twenty-five smokers (71.4%) tried to quit by themselves, while 14.3% with the aid of the pharmacist's advice on the use of nicotine replacement therapy. Twenty-eight (80%) smokers reported that people around them influenced them to continue smoking, whereas 24 (68.6%) indicated that the reason was the lack of will power. Only 16 (45.7%) reported that feeling stress at study led them to continue smoking. Thirteen of the students (37.1%) cited withdrawal symptoms, 11 (31.4%) did not know how to quit smoking, and only 5 (14.3%) indicated family problems. Among those who attempted to quit smoking, 15 of the smokers (48.9%) tried to quit smoking one month before starting the survey, 10 (28.6%) before 6 months and the remainder equally before one year and more than 4 years.

As shown in **Table 1** many students believed that cigarette smoking has health risks, 91.5% (n=322).

Three hundred (85.2%) knew that cigarette smoking is a risk factor for lung cancer, followed by 269 (76.4%) and 240 (68.2) for heart disease and chronic obstructive pulmonary diseases. However, 66.5% were equally unaware of the association between smoking and development of gastrointestinal tract problems and addiction, only 36.9%, 20.2% and 12.5% knew of the association between neonatal mortality and cancer of the bladder and Parkinson's disease. Most students showed positive or strongly positive attitudes towards public measures against smoking, and they agreed that an action should be taken to fine those who violate smoking in public places. However, smokers showed less positive attitude than non-smokers did.

Many students (46%) thought that they are not adequately prepared with skills and knowledge to participate in smoking cessation activities, whereas, 29.6% thought that they are prepared to do so and only 24.3% uncertain about their adequacy. Most of the students (55.1%) claimed that they would advise the smoker to quit only if the smoker raised the subject, while 21.1% believed that they had sufficient knowledge to counsel the smokers about the risks facing them. However, 16.4% of the students thought that they will advise the smokers only if smoking is contraindicated with their diseases, whereas, only 14.5% were willing to assist, but knew less about smoking cessation technique. The minority of students indicated that, they would take no action because they thought that

Table 1 - Responses of students on risk of smoking, source of information about smoking hazards, their attitudes towards public measures against smoking for smokers, ex-smokers and non-smokers.

Variables	Total		Smoker's		Ex-smoker		Non-smokers	
	n	(%)	n	(%)	n	(%)	n	(%)
Do you think smoking could cause life threatening diseases								
Yes	322	(91.5)	40	(12.4)	11	(3.4)	271	(84.2)
No	14	(4.0)	5	(35.7)	3	(21.4)	6	(42.6)
Uncertain	16	(4.5)	1	(0.6)	-----	-----	15	(93.8)
Health risks facing smokers*								
Lung disease	300	(85.2)	30	(10)	8	(2.7)	262	(87.3)
Heart disease	269	(76.4)	27	(10)	9	(3)	243	(90.3)
Chronic obstructive pulmonary disease	240	(68.2)	31	(12.9)	5	(1.7)	204	(85)
Teeth staining	167	(47.4)	19	(11.4)	6	(2)	152	(91)
Other types of cancer	143	(40.6)	13	(9.1)	1	(0.3)	129	(90.2)
Affect fetus	130	(36.9)	10	(7.7)	4	(3.1)	116	(89.2)
Weak physical fitness	125	(35.5)	14	(11.2)	3	(0.2)	108	(86.4)
Gastrointestinal tract problems	118	(33.5)	16	(13.6)	3	(2.5)	99	(83.9)
Addiction	118	(33.5)	12	(10.2)	4	(3.4)	102	(86.4)
Bladder cancer	71	(20.2)	9	(12.7)	-----	-----	61	(85.9)
Parkinson's disease	44	(12.5)	6	(13.6)	1	(1.4)	38	(86.4)
Source of information about smoking hazards*								
Media	219	(62.2)	29	(13.2)	8	(3.7)	182	(83.1)
College	199	(56.5)	18	(9.1)	2	(1)	179	(90)
School	174	(49.4)	18	(10.4)	3	(1.7)	153	(87.9)
Physician	90	(25.6)	31	(34.4)	5	(5.6)	54	(60)
Others	70	(19.9)	6	(8.6)	2	(2.9)	62	(88.6)
Ban on Smoking in public places								
Strongly agree	260	(73.9)	16	(6.2)	10	(3.9)	234	(90)
Agree	59	(16.8)	12	(20.3)	4	(6.8)	43	(72.9)
Uncertain	15	(4.3)	5	(33.3)	-----	-----	10	(66.7)
Disagree	7	(2)	6	(85.7)	-----	-----	1	(14.3)
Strongly disagree	11	(0.3)	8	(72.7)	1	(9.1)	2	(18.2)
Action to be taken against those violating smoke banning								
Strongly agree	169	(48)	5	(3)	7	(4.1)	157	(92.9)
Agree	85	(24.2)	8	(0.9)	3	(3.5)	74	(87.1)
Uncertain	45	(12.8)	6	(13.3)	1	(2.2)	38	(84.4)
Disagree	33	(9.4)	18	(54.6)	1	(3)	14	(42.4)
Strongly disagree	20	(5.7)	10	(50)	3	(15)	7	(35)
Do you think smoking are more socially acceptable								
Yes	73	(20.7)	13	(17.8)	01	(1.4)	59	(80.8)
No	182	(52.3)	24	(13.2)	09	(5)	149	(81.9)
Uncertain	97	(27.6)	10	(10.3)	05	(5.2)	82	(84.5)

* - The percentage do not add up to 100% because one respondent can mention more than one reason.

it is not their responsibility to take part in smoking cessation activities.

Most of the students (n=254, 72.2%) had a positive attitude to the role of the pharmacists in smoking cessation programs. Moreover, they thought that smoking cessation is an important service for the pharmacist to provide. However, they had low level of confidence in the ability of the pharmacist to provide smoking cessation advice or counseling because of the lack of academic education plans to help the pharmacist to provide such services. In addition, they thought that the pharmacist and teachers should set a good example by not smoking. In this respect, 80% of the students thought that pharmacist as a part of a health-care team should be responsible to set a good example by not smoking. Whereas, 47.7% thought that the benefit of smokers from counseling would be minimal if the smokers realized that the pharmacist himself is a smoker and 21.3% of the students thought that no action should be taken against pharmacists who smoke. In contrast, 12.8% of the students thought it was entirely their own business whether they smoked or not. An overwhelming number of students agreed or strongly agreed on the addition of tobacco issues to the pharmacy curriculum.

In our study, the prevalence rate of the current smokers among male students is 13.4%. Moreover, this low prevalence rate of smoking among the students compared with that of the community pharmacists (19.9%) shown in another study conducted in Riyadh⁴ suggests that the next generation of pharmacists may be able to fulfill the exemplary role of non-smoking behavior.

The results of the study also revealed that relaxation with friends was the main reason for starting smoking. These findings being similar to those reported in other studies.⁵ Similarly, the presence of family members who smoke may be considered as an important factor as adolescents start to exercise what the elderly are doing.

Although, the majority of the students praised the role of the pharmacist in advising and helping smokers to quit, the picture seemed gloomy in this

respect, in the light of inadequacy in the preparation of the student to face such situations later. Therefore, for the health professionals to take an active role in advising and helping smokers to quit, they must be better educated and trained in both the hazards of active and passive smoking and in smoking cessation techniques. Also, antismoking programs need to be tailored for university students to teach and counsel students on ways of coping with their problems. Likewise, greater emphasis on antismoking programs for schoolchildren including the primary education level is highly demanded. There is an urgent need for public health efforts to decrease the rate of cigarette smoking by promoting legislation to restrict selling cigarettes to the youngsters, as well as fining those who violate banning smoking. Furthermore, the pharmacy schools should be encouraged to include teaching tobacco issues in their curricula, and teachers and pharmacists should present non-smoking models by not smoking.

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References

1. Murry CJL, Lopez AD. Alternative projection of mortality and disability by cause 1990-2020: Global Burden of disease study. *Lancet* 1997; 349: 1498-1504.
2. 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: 37-42.
3. Richmond R. Teaching medical students about tobacco. *Thorax* 1999; 54: 70-78.
4. Al-Arifi MN. Prevalence of smoking and attitude towards smoking cessation among community pharmacists, Saudi Arabia. *J Pharmacy Technology* 2004; 20: 329-333.
5. Siddiqui S, Ogbeside DO, Al Khalifa I. Smoking in Saudi Community: Prevalence, Influencing factors and risk perception. *Fam Med* 2001; 33: 367-370.