

Knowledge and Attitudes About Smoking Among Students in a Medical Faculty

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Abstract

Tobacco use in Turkey remains a significant health concern especially among young population. The purpose of this study was to assess the smoking rates among medical students and also their knowledge of smoking-related diseases and their attitudes towards smoking.

The data was collected by self-administered questionnaires completed by 356 medical students. The study was conducted as a student special study module. The results showed that 39.04% of the students were current smokers. There were significantly more male

than female smokers in the whole group. Year 4, 5 and 6 students exhibited a greater knowledge of tobacco-related disease compared to students in years the first 3 years of medical school.

This study has provided a contribution to data on smoking among medical students as well as a tool to encourage students to participate in a study project with their teachers.

Turkish Respiratory Journal, 2004;5:(2):86-91

Keywords: medical education, smoking, questionnaire

Introduction

Cigarette smoking is one of the most common causes of death and is associated with many social and economic problems. Approximately 43.6% of the Turkish population aged 15 years and over are currently smoking (1). The National Committee for Smoking and Health reported that 35000 people died at younger ages because of smoking in Turkey annually (2). The number of deaths related with smoking exceed that of deaths due to traffic accidents in Turkey (3).

Primary care physicians have a vital role to play in advising patients to stop smoking. It is important that medical students, the future medical practitioners, have adequate knowledge of smoking-related diseases and skills in smoking cessation. They should encourage their patients to quit smoking (4).

This present study was designed to assess the smoking rates among medical students, their knowledge of smoking-related diseases, and their attitudes towards smoking.

Materials and Methods

Special Study Module (SSM) students were involved in the design,

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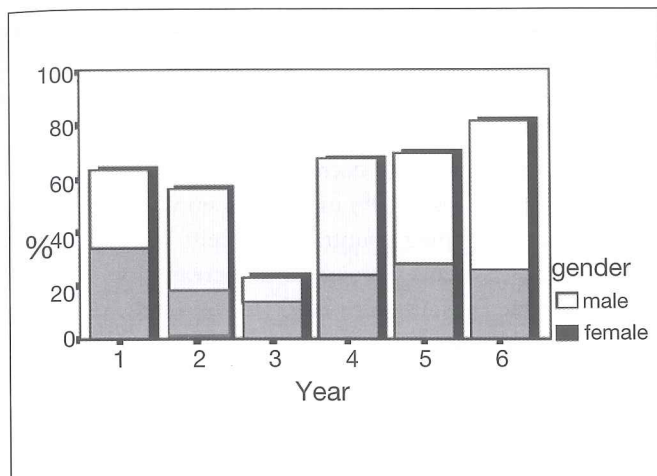


Figure 1. Gender distribution by year in medical school.

completion, and analysis of the questionnaire. These students prepared a 31 item questionnaire. Out of 1003 medical students attending Dokuz Eylül University Medical School, 359 were selected by stratified sampling method. Of these, 356 responded. The distribution of these students was: 62 (17.4%) first year; 56 (15.7%) second year; 23 (6.5%) 3rd year; 65 (18.3%) 4th year; 69 (19.4%) 5th year; and 81 (22.7%) 6th year. The questionnaires were distributed to all students during a class or clinical practice and collected at the end of the teaching session. Participants filled in the questionnaire in the presence of a student from the group, but no name or other form of identification was included in the form. Demographic characteristics, parental smoking status, knowledge on smoking, their self-reported smoking habits and attitudes to tobacco, age of onset of smoking, factors influencing the initiation of the habit, interest in quitting smoking, their views about passive smoking were all included in the questionnaire. The questionnaire data were entered and analysed using SPSS statistical package. The significance of differences in proportions between the students was tested by chi-square and students't tests.

	Current smokers		Non-smokers		Total	
	n	%	n	%	n	%
Number	139	(39.04)	217	(60.96)	356	100
Gender female	41	(29.07)	100	(70.93)	141	100
male	98	(45.58)	117	(54.42)	215	100
Age (mean)	22.2±1.9		21.8±1.9			
Year in medical school						
1 st year	22	(35.5)	40	(64.5)	62	
2 nd year	23	(37.1)	33	(62.9)	56	
3 rd year	2	(9.5)	21	(90.5)	23	
4 th year	31	(47.7)	34	(52.3)	65	
5 th year	27	(39.1)	42	(60.9)	69	
6 th year	34	(42.0)	47	(58.0)	81	

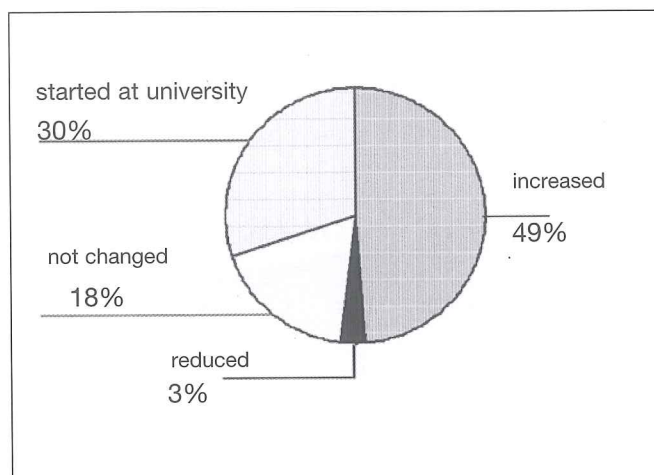


Figure 2. Smoking habits during university years.

Results

Three hundred fifty-six students completed the questionnaire. Overall response rate was 99.2%. Ninety eight (60.4%) of the students were male and 41 (39.6%) were female. Mean age was 21.9±1.9 years (range: 18-24). Gender distribution by year of medical school is shown in Figure 1.

One hundred and thirty-nine (39.04%) of the students were current smokers. 70.5% of current smokers were males and this was significantly higher than females. Current smoking rate was 29.1% in women and 45.6% in men and the difference was statistically significant (p=0.0018).

Demographic characteristics of smokers and non-smokers in the study population are shown in Table 1.

Women first started smoking at age 17.35±3.1 years (range, 15-24) while mean age of onset of smoking in men was 16.53±3.0 years (range, 6-24) (p=0.18) (Table 2).

The most common causes of cigarette smoking were peer pressure and stress level (Table 3).

No significant difference was found between the educational state of the parents of the smokers and non-smokers (p=0.15, 0.45). Place of residence (urban or rural) also had no relation with the smoking habit (p=0.77).

Onset of smoking was before entering university in 70.1% of the smokers. However, most of the students reported an increase in rate of smoking following the first year of the medical school. Smoking habits during university years are shown in Figure 2.

Fifty-seven (44.5%) of the students felt the need for smoking within the first half hour after waking up in the morning. States at which students mostly felt the desire to smoke are shown in Table 4.

One hundred twenty-five (89.9%) out of 139 smokers responded the question "Do you think of quitting smoking?" and 22.4% reported that they never considered giving up the habit (Table 5).

One hundred forty-nine (68.7%) of 217 non-smokers were

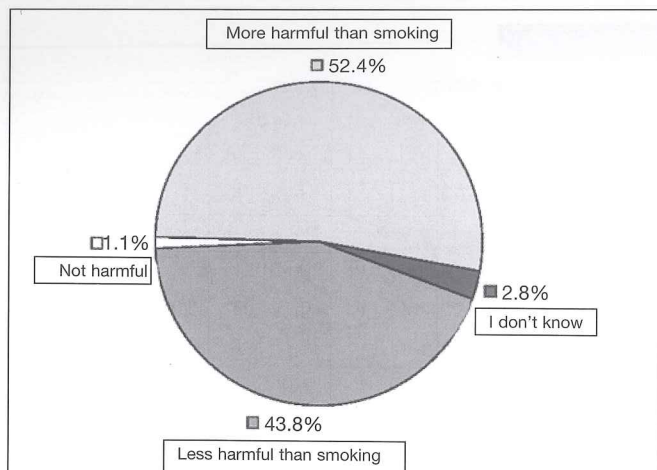


Figure 3. Opinions of the students on passive smoking.

not encouraged to smoke by others while 68 (31.3%) reported that they were encouraged to start smoking. The majority of non-smokers expressed that they felt discomfort in the presence of smokers, but only (34.6%) warned them. The reactions of non-smokers against smokers are shown in Table 6. Fifteen (53.6%) of 28 students who had stopped smoking were currently not smoking while 13 (46.4%) had started

Age (years)	Female		Male		Total	
	n	%	n	%	n	%
5-10	1	2.9	4	4.4	5	4.0
11-15	6	17.6	24	26.4	30	24.0
16-20	24	70.6	59	64.8	83	66.4
21 and over	3	8.8	4	4.4	7	5.6
Total	34	100.0	91	100.0	125	100.0

$\chi^2=1.90$ $p=0.592$
* 11 students did not respond to this question.

smoking again. Cessation of smoking was by their own wish and decision in 15 (53.6%) of these cases. Seven (25%) had stopped smoking for health reasons, 1 (3.5%) had started to hate smoking, and the remaining 1 student (3.5%) had quit smoking with the influence of his family.

Student's knowledge of the relationship of smoking and the occurrence of specific diseases was assessed by asking them to indicate whether smoking had any association with particular diseases and conditions. Knowledge on smoking-related diseases showed significant differences between students in their preclinical years (years 1, 2, and 3) and those in their clinical years (years 4, 5 and 6) (Table 7).

Three hundred fifty three students responded to the question about the influence of passive smoking on health; 39 (1.1%) reported that it was not harmful to health, 154 (52.4%) felt that it was more injurious to health than cigarette smoking,

185 considered that its risk was slightly higher than active smoking and 10 did not know (Figure 3).

Discussion

While smoking rates have decreased in developed countries over the last decades, a 50% increase in smoking rates have occurred in developing countries in recent years. Tobacco related deaths have been projected to increase from 3.0 million in 1990 to 8.4 million in 2020 (4). In a study representing the whole population in Turkey, smoking rate in men aged 15 years and over was found to be 62.8%. This figure was 24.3% in women (1). Although men smoke more than women, the percentage of women smokers has also reached a serious level (5). In Turkey, prevalence of smoking is 43% among teachers, 45.9-54% among doctors, 40.3% among nurses and 39% among medical students (6,7). In a study conducted in seven medical schools in Turkey, daily smoking rates among males and females were found to range from 35.0 to 56.9% and from 12.8 to 34.9% respectively (4,8). Medical students were made the focus also in this survey because they are potential health professionals and their attitudes and views could affect future policies. In previous studies of medical students around the world, daily smoking rates among males was reported 2% in Australia, 22% in North Africa/Middle East, and 35% in Japan. In females, smoking rates varied from nil to 2% in the USA and in most medical schools in Asia and from nil to 22% in Europe (9,10,11). In our study, the rate of smoking in the total student group was 39.04% and this was higher in male (45.6%) as compared to the female students (29.1%).

Our results in medical students indicate that smoking rates are similar to those reported for the general population in Turkey and also similar to rates reported for doctors. Smoking rates in women students were reported to be low in Africa, in the Middle East and in Asia, probably due to cultural pressures against smoking in women (10).

No statistically significant increase in smoking rates through the years in medical school was observed. However,

Reasons	Females (n)	Males (n)	Total (n)	%
Peer pressure	18	48	66	31.6
Stress	19	43	62	29.7
Imitation	8	32	40	19.1
Curiosity	6	23	29	13.9
Loneliness	2	7	9	4.3
Parental smoking	0	3	3	1.4
Total	53	156	209	
	25.4 %	74.6 %	100.0 %	

* Students could respond "yes" to more than one state.

Table 4. States at which students mostly needed to smoke*

	Females		Males		Total**		p
	n	%	n	%	n	%	
After meals	20	27	54	73	74	15	0.90
Unhappiness	21	34	40	66	61	13	0.14
Stress	26	32	56	68	82	16	0.25
While studying	16	30	38	70	54	11	0.47
With tea or coffee	23	30	53	70	76	15	0.44
With alcohol	22	29	55	71	77	15	0.82
With friends	18	27	48	73	76	15	0.98
Total	146	31	344	69	490	100	

* Students could respond "yes" to more than one state.
**column percent.

students seem more likely to begin smoking in medical school (30%). The lower smoking rates in the 3rd year are probably erroneous and due to the low number of students in this group.

The age of smoking onset in our study ranged from 16 to 20 years. This was in accordance with the findings of a study from Asia, but studies from Europe have shown that a higher percentage of smokers today start smoking at an earlier age, and that this tendency is more marked among women (12). Smoking behaviour of medical students may reflect the attitudes of the family towards smoking. In some studies conducted in Turkey it was reported that parents and/or close friends being smokers increased the risk of one becoming a smoker. Our findings showed that peer pressure and stress were the most common factors in initiating smoking. Similar results were reported in other studies in Turkey. Non-smokers feel uncomfortable in a smoking environment. In a study, 90% of smokers felt uncomfortable near smokers (5). In our study also the majority of non-smokers felt discomfort, but only (34.6%) warned the smokers.

Protection of their own health was given by the highest pro-

Table 5. The answers of the students on quitting smoking*

	Females		Males		Total	
	n	%	n	%	n	%
Not considering quitting	7	19.4	21	23.6	28	22.4
Wishes to quit to save money	5	13.9	7	7.9	12	9.6
Wishes to quit for personal health reasons	19	52.8	47	52.8	66	52.8
Wishes to quit to prevent passive smoking	2	5.6	1	1.1	3	2.4
Wishes to quit for multiple reasons	3	8.3	13	14.6	16	12.8
Total	36	100.0	89	100.0	125	100.0

$\chi^2= 4.05$ $p=0.39$.
* Students could respond "yes" to more than one state.

portion of students as the most important reason to give up smoking. To save money was the second most common reason given. In a study from Turkey conducted among members of a university, health reasons and feeling discomfort were the most common causes of quitting smoking (5). In Crofton's study, protection of their own health was given by the highest proportion of students as the most important reason for not smoking. Being a good example to children was often the second most common reason given (10).

Reports indicate that Turkish medical students lack the relevant knowledge about cigarette smoking, especially the harmful effects to health. Among the 831 students in the first and last-but-one year of medical school, there were no statistically significant difference in smoking habits between the first and fifth years of students, but there were significant differences with respect to their evaluation of smoking as a health hazard (13).

The Tobacco and Health Committee of the International Union against Tuberculosis and Lung Disease (IUATLD)

Table 6. Reactions of non-smokers when others smoke *

	Females		Males		Total	
	n	%	n	%	n	%
Does not feel discomfort	10	10.4	12	12.6	22	11.5
Feels discomfort and leaves the place	28	29.2	23	24.2	51	26.7
Feels discomfort, but does not show reaction	23	24.0	29	30.5	52	27.2
Feels discomfort and warns the smokers	35	36.5	31	32.6	66	34.6
Total	96	100.0	95	100.0	191	100.0

$\chi^2=1.60$ $p=0.65$.
*26 students did not respond to this question.

has conducted a global survey of the habits, attitudes and knowledge of medical students concerning tobacco. The results from 19 European countries demonstrated that many countries have important deficiencies in medical education in this field. There was widespread ignorance of the causal role of smoking in specific diseases (10). In Europe nearly one in five male medical students smoke. In Japan, the rate is one in 3, with only just over half of students agreeing that cigarette smoking causes lung cancer (10,14,15,16).

In Crofton's world-wide survey on medical students, a lack of knowledge of smoking as a major cause of important conditions, notably coronary artery disease, peripheral vascular disease, pulmonary emphysema, bladder cancer and neonatal mortality was found. In some countries, this lack of knowledge extended even to lung cancer and chronic bronchitis. In a study from Japan, 97% of the respondents knew lung cancer was related to smoking. Apart from this, knowledge of smoking related diseases increased by the fifth year but the rates of recognition were generally less than 50% (17). This

Table 7. Answers to questions on smoking-related diseases**

	Preclinic*		Clinic*		p
	n	%	n	%	
COPD***	116	81.7	209	97.2	0.0001
Lung cancer	139	97.9	215	100	0.1560
Larynx cancer	127	89.4	210	97.7	0.0020
Bladder cancer	61	42.9	193	89.8	0.0001
Oral cavity cancers	121	85.2	205	95.3	0.0015
Oesophagus cancer	75	52.8	175	81.8	0.0001
Coronary artery disease	128	90.1	211	98.1	0.0014
Peripheral vascular disease	114	80.3	205	95.3	0.00001

* Years 1, 2 and 3 are the preclinical and years 4, 5 and 6 are the clinical years.

**Students could respond "yes" to more than one item.

*** Chronic obstructive pulmonary disease.

evidence highlights the need for the topic of tobacco to be introduced early in the medical course. Several authors have stressed that teaching about tobacco and related diseases is essential in the undergraduate medical course in order for students to gain knowledge about smoking and how to intervene with patients who smoke (13,18).

We believe that the medical curriculum should include specific modules and lectures on smoking. In the curriculum of our medical school there are lectures about smoking in the clinical years. Thus, knowledge on smoking-related diseases showed a significant difference between the students in their pre-clinical and clinical years in our study. The problem based curriculum that is now in place will help students to develop the skills and confidence needed to overcome these reservations (19).

Most students in our study well aware that smoking causes lung cancer, coronary artery diseases, but the students in their preclinical years lacked knowledge on the importance of smoking in causing peripheral vascular diseases, bladder cancer and oesophagus cancer. Knowledge about the causal role of tobacco in the development of specific diseases improved significantly from year 1 to year 6. Although knowledge about diseases was found to be increased through the years, this change did not appear to affect the smoking behaviour. Also the years in medical schools did not much affect acquisition of knowledge about the effects of passive smoking. This was in contrast to the finding in an Asian study where almost all (98%) students, irrespective of gender and smoking habit, felt that even passive smoking was injurious to health (12).

The high percentage of smokers among doctors and nurses is troubling. These professionals are looked up to by the general public and their fellow workers and are perceived as role models. The finding that 22.4% of medical students who smoke were not interested in quitting is unfortunate.

Many studies have tracked the use of tobacco among medical students and results from this study provide key informa-

tion on a large sample of medical students whose demographics are similar to all Turkish medical students with regard to gender, age, race, and enrollment patterns.

We carried out this study as a SSM with six students in their third year and we believe that students can gain important research skills, as well as practical medical experience, by participating in the design and execution of studies on issues important for public health.

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