Smoking habits of medical school students in Turkey: Has anything changed?

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ABSTRACT

There is an increased awareness of the risks of smoking within the medical and general population. The purpose of this study was to determine whether there had been any decrease in the overall smoking rates in one Turkish University compared to previous studies. Medical students from the first and third year attending class on the day of the survey were asked to complete a questionnaire to assess their smoking habits including their awareness of smoking related diseases. Of the 151 students who completed the survey 17% were current smokers and 42% ex-smokers. Smoking rates were non-significantly higher in males compared to females (20 versus 13%, p=0.317). Sixteen percent of first year and 17% of third year students were smokers (p=0.968). Sixty-five percent of smokers had either tried or wished to quit. Awareness of smoking related diseases was similar for both the first and third year students and 80% of first year and 77% of third year students had a relative with a smoking related disease. In conclusion we observed a lower rate of smoking in Turkish medical students from one university compared to previous studies. A trend towards increased rates during the later stages of medical school training was not observed. This latter finding might relate to the early introduction into the curriculum of smoking related disease topics. [Turk J Cancer 2004;34(4):146-149]

KEY WORDS:

Smoking, medical school students, education

INTRODUCTION

There is around 1.1 thousand million smoker’s worldwide, approximately one third of the global population aged 15 years and over (1). Most smokers live in developing countries (1). While the rates of smoking have decreased in developed countries there has been a corresponding increase in developing countries (2). This has also been observed in Turkey where the smoking rates of the general population have increased over the past three decades with rates as high as 63% for males and 24% for females (3). Smoking is a preventable cause of death. However, smoking related deaths are projected to increase to 8.4 million by 2020 (4).

Studies have shown that even a very brief advice from a doctor yields quit rates of 5-10%. Therefore physicians have a pivotal role to play in advising patients to stop smoking (5). However, if the smoking rates remain high amongst doctors implementation of public health programmes might prove difficult. Previous studies in Turkish medical students have found rates as high as 45%, with roughly twice as many smokers amongst male medical students compared with female students (6-8). For male students these rates tended to be higher than other European or Asian countries but for female students similar (5). However, with increasing levels of general education and urbanisation, smoking rates in women have risen although male smoking levels remain stable (6). It might be postulated...
that as students progress through their medical course and learn more about the harmful effects of smoking that the level of smoking would fall. However, this has not been shown to be the case with a number of studies reporting higher rates in the final year compared to the first year (6,8). This suggests that medical education either has no impact on smoking habits or that the timing may be too late in the curriculum.

The purpose of this study was to determine the smoking rates and factors influencing smoking habits in a group of medical students, representing young adults and health care professionals. Furthermore with increased awareness of the risks of smoking, and the introduction of smoking related diseases early into the curriculum, we compared our results with previous studies of Turkish medical students in one university to determine whether rates were changing.

**METHODS**

Medical school students from the first and third year attending lectures on a single chosen day were asked to complete a questionnaire. Our aim was to survey all students from the first and third year but some students were absent on the day of the questionnaire. A total of 151 students completed the questionnaire which was a 100% response rate from the students present. This represented 59% and 64% of the total first and third year students attending Dokuz Eylül University Medical School at that time. The survey asked for information about age, sex, smoking habits and living environment. They were asked about age of onset of smoking and whether they had tried to quit. Non-smokers were asked about their previous smoking history and for previous smokers reasons why they had quit. In addition students were asked whether they knew anyone with a smoking related disease. The questionnaire was finalised after a pilot study on a separate group of medical students. The final analysis did not include the results of the pilot survey.

Smokers were defined as students who smoked any amount of tobacco either regularly or occasionally whilst non-smokers were defined as those who never smoked and ex-smokers as those who had ever smoked a cigarette but who had stopped and not smoked within the last month.

Chi square test was used to analyse statistical differences between groups and a p value of less than 0.05 was taken as statistically significant.

**RESULTS**

A total of 151 students completed the questionnaire, 67 from the first year and 84 from the third year. Fifty-four percent of respondents were male, 49.3% and 58.3% of the first and third year classes respectively. The median age of the first year class was 19 (range 18-21) and of the third year class 21 (range 20-24). Prior to attending university the majority of students had lived in a city (70.8%), and this was not significantly different for first and third year students (71.4 versus 72.5%, p=0.98). Forty percent of the first year and 32% of the third year students lived in a hostel whereas 28 and 19% respectively lived at home or with a relative.

Amongst all the students 17.2% were current smokers, 16.4% of the first year and 17.9% of the third year students (p=0.967). There was a non-significant higher rate of smoking in male students (20.7% versus 13.0%, p=0.32), and this was consistent for both first and third year students (Table 1). A higher number of first year female students described themselves as ex-smokers (41.2% versus 11.4%) and this was reflected in a corresponding higher number of non-smoking third year female students (74.3% versus 47.1%). Sixty-five percent of current smokers had either tried or wished to give up smoking at some point.

Interestingly, the median age of onset for girls in the first year was 14 (range 13-16) compared to 21 (range 21-23) for those in the third year. The corresponding figures

| Smoking status of students by sex and year of medical education |
|-----------------|-----------------|-----------------|-----------------|------------------|
|                 | Smokers %       | Ex-smokers %    | Non-smokers %   |
|                 | Male | Female | Male | Female | Male | Female |
| First year      | 7 (21.2) | 4 (11.8) | 18 (54.5) | 14 (41.2) | 8 (24.2) | 16 (47.1) |
| Third year      | 10 (20.4) | 5 (14.3) | 22 (44.9) | 4 (11.4) | 17 (34.7) | 26 (74.3) |
for boys were 16.5 (range 7-19) and 18.5 (range 11-20), respectively.

The majority of smokers smoked both at home and at the university. There was no significant difference between the place of origin of smokers (city versus village or town) and non-smokers (72.2% versus 71.4% p=0.891). Similarly there was no difference in the current place of abode (hostel versus family/relatives versus alone) between the smokers and non-smokers (35% versus 36.6% p=0.143).

A similar number of first and third year students were aware of smoking related diseases and this did not differ between smokers and non-smokers. Furthermore there was a non-significant difference in the percentage of smokers versus non-smokers who had a relative or close friend with a smoking related disease (80.3% versus 77.6%, respectively, p=0.88).

**DISCUSSION**

Medical students constitute an important group of health care professionals who can potentially influence patients and their smoking habits. However, if a significant proportion continue to smoke this could affect development and implementation of anti-smoking policies.

Previous studies of medical students show that smoking rates vary widely from 0-56.9% for men and 0-44.7% for women (5). Studies of European medical students have reported smoking rates of 22%, slightly higher than those found in our study (9). As with most studies we found a higher rate of smoking in males compared to females for both first and third year students. This reflects the situation for the general population (3,10). However, of interest in our study is the lower overall rate of smoking both in males and females and first and third year students compared to previous studies in Turkish medical schools (Table 2). There are a number of possible explanations for this. First, it could simply reflect a selection bias. Although all students completed the questionnaire that were attending class that day this represented around 60% of all students from the first and third year. It could be that more smokers than non-smokers were non-attendees, however there is no way to verify this. Secondly, it is possible that students lied about their smoking status. However the survey was anonymous and furthermore it is as likely that students lied in previous studies as it is in our study. Finally, this lower figure could actually reflect a lower rate of smoking. To support this theory a recent study including nearly 6000 school children showed that there had been a decrease in the percentage of smokers in this age group. For 15-16 year olds 14.8% were smokers in 1999 compared to 28.3% in 1996 (10). In addition, a study of mixed university students from Hacettepe University in 1999 reported an overall rate of 19.9% which is similar to our rate of 17% (N. Bilir, Personal communication). Taken together, these encouraging findings suggest that there might actually be a fall in the rate of smoking amongst medical school students in Dokuz Eylül University.

As medical students progress through their training it might be expected that their knowledge of the harmful effects of smoking would increase and consequently lead to a lower rate of smoking. However, this has not always been shown to be true with several studies reporting an increase in the rate in final year students compared to students in earlier years (6,11). In our study the rate of smoking for first year medical students in Turkey was similar to those previously reported (8.6-23.9%) but it was lower in third year students (17% versus 34.7-45.9%) (6-8). This latter finding is encouraging and might relate to

<table>
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<th>University and year of study (reference)</th>
<th>Smokers</th>
<th>Ex-smokers</th>
<th>Non-smokers</th>
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<tr>
<td></td>
<td>Male</td>
<td>Female</td>
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<tr>
<td>7 medical schools 1990 (6)</td>
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<td>23</td>
<td>4</td>
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<tr>
<td>Dokuz Eylül 1990 (6)</td>
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<td>18</td>
<td>4</td>
</tr>
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<tr>
<td>Dokuz Eylül 2003 (present)</td>
<td>21</td>
<td>13</td>
<td>49</td>
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the introduction of a module into the curriculum which relates smoking to diseases early in the medical students education.

We found a non-significant higher rate of smoking in male students compared to female students which is a fairly consistent finding from previous studies (6-8). However, of concern is the lower age of onset of smoking in first year students, especially amongst women. This suggests that smoking education should be introduced as early as possible even at the primary and high school level and reinforced throughout the students education.

Of those students who smoked two thirds either wished or had tried to quit. Introduction of support for these students might reduce the smoking rate even further. In addition, it has been shown that doctors can be pivotal in helping patients to quit smoking, students who themselves have gone through such a programme or have specific training might be even more effective in advising patients (5,12).

Finally, how do our findings compare with the rate of smoking in qualified doctors? Although the rate of smoking amongst doctors compares favourably with some other professions such as police officers, drivers and teachers, it is still high at around 40% with an approximately 2:1 male to female ratio (10). It will be interesting to see whether our findings are reflected in a lower rate of smoking in future surveys of doctors.

In conclusion we observed a lower rate of smoking in Turkish medical students attending Dokuz Eylül University compared to previous studies. Furthermore, a trend towards increased rates during the later stages of medical school training was not observed. This latter finding might relate to the early introduction into the curriculum of smoking related disease modules or simply reflect a fall in the rate of smoking amongst students as previously reported (10). Finally, consideration should be given to ways to try and help the majority of current students who smoke and wish to quit. Whilst at the same time emphasis should be placed on enforcing the Anti-Smoking law (No 427), which, when enforced has been shown to decrease the intensity, if not propensity, of smoking significantly (10).

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References
3. Turkish Health Ministry. Smoking habits and attitudes of Turkish population towards smoking and anti-smoking campaigns. Turkish Health Ministry (PIAR) January 1988.