



Smoking Cessation and Attitudes, Belief, Observation, and Education of Medical Students, in Turkey

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ABSTRACT

Introduction: Tobacco use is an important public health problem around the world. Aim of this study is to assess attitudes, belief and observation of the students on smoking cessation and medical education.

Methods: This study is part of a multi-country study called "Global Health Profession Student Survey". The study population consisted of third year medical students in Turkey. The sample consisted of a total of 1834 medical students from randomly selected 12 medical schools.

Results: Of the students, 1209 (92.1%) thought that health professionals should get specific training on cessation techniques, and that health professionals should serve as "role models" for their patients and the public. The percentage of the students who answered "Health professionals should routinely advise their patients who smoke to quit smoking" was 1211 (93.3%). Of the students, 1204 (60.8%) responded that health professionals who use other tobacco products were less likely to advise patients to stop smoking. The percentage of the students who had received a formal training on smoking cessation approaches was 48.2% (1196). Of the students, 91.5% (1203) had heard of nicotine replacement therapies in tobacco cessation programs. More than half of smokers tried to quit smoking last year, and majority of them did not take professional help or advice.

Conclusions: Majority of students are aware of health professionals' role on smoking cessation. Most of the students are willingness to take specific formal training on tobacco. Student's behaviours and attitudes were different by gender and smoking status. Improvement of tobacco cessation issues in medical curricula will be beneficial.

Keywords: attitudes; beliefs; medical education; medical students; smoking cessation.

INTRODUCTION

Tobacco use is an important public health problem around the world. It kills more than 5 million people per year, and killed 100 million people worldwide in the 20th century.¹ Regarding to tobacco consumption, Turkey is the third country among the European countries,² and

31.2% of adults aged 15 years and older were smoker in 2010.³

Smoking prevalence among medical students was

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between 23-42 %.⁴⁻⁶ Smoking prevalence was found to be 30.5% in general practitioners and 22.1% in specialists, in 2008.⁷ Physicians' attitudes and behaviours are clearly important for health education of public.⁸ Physicians' questioning about smoking status and advice to quit smoking has a significant positive effect on cessation. Health professionals have to play an active role in improving the health of the population.⁹

Aim of this study is to assess beliefs, attitudes, and observation of the students on counselling, smoking cessation, role of the health professional and medical education.

METHODS

Study Design: "Global Health Profession Student Survey" (GHPSS) has a standardized methodology for selecting participating schools and classes and uniform data processing procedures. GHPSS is a school-based survey of third-year students pursuing advanced degrees in dentistry, medicine, nursing and pharmacy.¹⁰

Place and duration of study: The study population consisted of third year medical students in Turkey in 2008. There were 66 medical faculties, and 51 schools of them had students in the academic year of 2006-2007.

Ethical approval and informed consent: The informed and verbal consent was received from the students, being informed about the topic and the objective of the study. In the data-collecting stage, the practices performed were in compliance with the rules contained within The Declaration of Helsinki. However, we did not request ethical committee approval.

Study Sample: The study population consisted of third year medical students in Turkey in 2008. There were 66 medical faculties, and 51 of them had students in the academic year of 2006-2007. The total enrolment was 4980. The sample size was calculated according to GHPSS Survey Administrator Handbook 2009.¹⁰ The study sample consisted of a total of 1834 medical students from randomly selected 12 medical schools. However 672 students were excluded after fulfilment of the questionnaire because they were not in the third year in their schools. Students; 86.4% of the 2,186 sampled students completed the questionnaires. After the exclusions, 1217 students were analysed.

Data Collection Procedures and Statistical Analysis: GHPSS is composed of a core questionnaire designed to gather data on five topics related to prevalence of tobacco use, exposure to second-hand smoke, training and knowledge about the health effects of tobacco use,

attitudes about tobacco and cessation of tobacco use. Among these topics the one entitled with role model and cessation training are evaluated in this paper. An invitation letter was sent to the deans of the selected schools and survey administrators from public health departments of each selected school were recruited for data collection. Survey procedures were designed to protect the students' privacy by allowing for anonymous and voluntary participation. The self-administered questionnaire was administered in classrooms.

All analysis used weighted data. Version 7 of Epi Info™ was used to analyze data. Statistical differences were determined by comparing 95% Confidence Intervals (CI). If the CI did not overlap then differences were significant at the $p < 0.5$ level.

"Ever user" was defined as 'having used tobacco even once in their lifetime'. "Current use" was defined as 'having used tobacco at least once in the last 30 days preceding the survey'. "Never use" was defined as 'having not used tobacco even once in their lifetime'.

RESULTS

Most of the students were in the age group of 19 to 24, and 632 (55.3%) were female. Lifetime prevalence was 828 (68.0%) accounting for 386 (76.5%) in the males and 442 (61.1%) in the females. The current prevalence was 351 (28.5%) accounting for 119 (40.2%) in the males and 232 (18.9%) in the females.

Smoking cessation behaviours were presented in (Table 1). Nearly half of current cigarette smokers reported to have desire for a cigarette within one hour of awakening in morning, indicating strong dependence on tobacco. Although 151 (56.2%) of the current cigarette smokers stated that they wanted to stop smoking, this percentage was 45 (30.8%) among other tobacco users. Of current cigarette smokers, 174 (60.4%) tried to stop smoking the past year. Among ever smokers, 1009 (83.6%) reported to have never received help/advice to stop smoking.

Opinions on specific training by gender and smoking status were presented in (Table 2); 1115 (92.1%) of the students thought that health professionals should get specific training on cessation techniques.

With regard to smoking status and specific training, the lowest percentage was in current smokers with 231 (81.3%), and the highest was in the never user of any tobacco product with 378 (95.4%).

Opinions of the students on role models were presented in (Table 3); 1209 (92.1%) said that health professionals should serve as "role models" for their patients and

public. The lowest percentage was in the current cigarette smokers while the highest was in the never any tobacco users. Of the students, 1211 (93.3%) thought that health professionals should routinely advise their patients who smoke to quit smoking.

To the question "Should health professionals routinely advise their patients who use other tobacco products to quit using these products?" 1207 (92.6%) said 'Yes'. There was a significant difference between all type of tobacco users and never users.

Of the students, 1209 (94.4%) agreed that health professionals have a role in giving advice or information about smoking cessation to their patients. The highest percentage of "Yes" answers was in the never cigarette smokers while the lowest was in the current cigarette smokers.

"Are a patient's chances of quitting smoking increased if a health professional advises him or her to quit?", 1203 (89.9%) of the responses were "Yes", and the differences by smoking status were not significant.

"Are health professionals who smoke less likely to advise patients to stop smoking?" 1204 (60.8%) of responses were "Yes" answers. The current smokers had the lowest percentage of "Yes" while never any tobacco users had the highest.

Of the students, 1203 (60.8%) responded that health professionals who use other tobacco products were less likely to advise patients to stop smoking. The differences between current other tobacco users and never users were significant. Questions and responses about medical curriculum/trainings and smoking were presented in (Table 4); 87.2% (1195) of the students said that they were taught in any of their classes about the harmful effects of tobacco.

Of the 1205 students, 50.4% (607) responded that they discussed the reasons why people smoke, in any of their classes. Among the 1200 students, 90.8% (1090) said that they learned to record tobacco use history as part of a patient's general medical history taking. Of the students, 48.2% (1196) had received a formal training on smoking cessation approaches to use with patients. Of the 1202 students, 61.2% (736) had learned that it was important to provide educational materials support to patients who want to quit smoking.

Of the students, 91.5% (1203) had heard of nicotine replacement product therapies in tobacco cessation programs, and the differences were not significant. With regard to other drug therapies, 45.7% (1204) had heard of using antidepressants in tobacco cessation programs, and 30.8% (1202) had heard of using

varenicline in tobacco cessation programs.

DISCUSSION

Health professionals are considered role models by people at large. In this context, reducing tobacco use among physicians may be one of the best effective strategies. Therefore, in addition to medical school facilities, education and tobacco policies, students' attitudes and behaviours are the key elements. We think that we should focus on these issues in order to reduce tobacco use among the physicians.

More than half of the current smokers stated that they had tried to quit smoking last year. Similarly, 44.8% of smokers made an attempt to quit in the past year, in 2010.³ Although more than half of the current smokers had tried to stop smoking, most of them did not receive any help or advice. One of the reasons may be unmet need, there are very limited health care service related to tobacco quit in Turkey. For examples, drugs used in quitting tobacco are not covered by the social insurance, counselling is not nationwide.

More than half of the current smokers stated that they want to stop. Similarly, in 2010, 53.0% of current cigarette smokers stated they were interested in quitting.³ In India, over 76.0% of current cigarette smokers tried to stop smoking cigarettes in past year.¹¹ In Shanghai Medical University, 36.7% of smokers had made at least one serious attempt to quit smoking in 1995.¹²

These studies show that most of students were trying to stop tobacco. If it is provided appropriate services, success rate is going to increase.

Motivation is very important in terms of success of clinical interventions in smoking cessation. It is clear that therapies can only work for smokers who are motivated to stop. A study carried out in a medical faculty reported that 64.4% of the current smokers declared that they wanted to quit.¹³ Mayda et al. found out that 65.6% of the current smokers had wanted to quit smoking.¹⁴ In the India GHPSS over 71% of current cigarette smokers and 73% of current users of other tobacco products wanted to quit tobacco.¹¹ In this study nearly half of the smokers wanted to stop smoking. The desire to quit is lower among the current other tobacco user than the cigarette smokers. Although more than half of the current smokers had a desire to stop smoking, one in three of the other tobacco users did. The difference may be as a result of misconception that other tobacco forms are less harmful than cigarette.

Professional support increases success rate in smoking

cessation. Jepson¹⁵ reported that physician advice or individual counselling, and workplace- and school-based activities were effective regarding to health behaviours.

However, professional support is not widespread. Nearly 1 in 6 quit attempts had received help or advice to stop smoking. More than half of the current cigarette smokers tried to stop smoking, but they failed. Despite to this failure, half of them want to stop still. Professional support such as counselling and drug therapies can help these groups.

The time-to-first-cigarette is a good single-item measure of nicotine dependence. Nearly half of the current users smoked their first cigarette within the first hour in the morning. In the GATS report, overall, 41.1% of daily smokers smoked tobacco within 30 minutes of awakening – 12.8% within 5 minutes after awakening. Men were more likely than women to have their first cigarette within 30 minutes after awakening.³ In a study carried out in physician and medical students, 20.6% smoked their first cigarette within the first hour after awakening.¹⁶ These studies indicate a significant amount of the current smokers have a nicotine dependency.

Over 90% of the students thought that health professionals served as a role model for their patients and public in general. In another study, 43.0% of medical students thought that physicians had a role regarding to stop smoking in population.¹⁴ The results are similar to other studies from different countries. GHPSS, 2005-7 showed that majority of health professional students recognised that they are role models in society.¹⁷ In India, 96.9% of the students believed that health professionals had a role in giving advice or information on smoking cessation to patients.¹¹ It can be seen that most of the students were aware of their role.

Over 90.0% of the students supported specific training on cessation techniques. Studies from many countries indicated that majority of medical students believed that they should receive training on counselling patients to quit using tobacco.¹⁷ In Italy, 87.7% of students believed that health professionals should receive specific training in techniques to quit smoking.¹⁸ In India GHPSS 91.0% of students expressed that health professionals should get specific training on cessation techniques.¹¹

Most of the students said that they were taught in any of their classes about harmful effects of smoking. However, only half of them had discussed reasons why people smoke. Nearly all of the students had learned about the necessity to record tobacco use as a part of medical patient's history. In a study from Berlin, only one third of the students indicated that they felt qualified to council patients about tobacco depending, and that 51.2% of the students gave an advice to

smokers about quitting.¹⁹ GHPSS 2005-7 found out that in 73 of 80 sites, less than 40% of the students reported they received such training.¹⁷ The data of India GHPSS indicated a general lack of training by health professionals in patient cessation counselling techniques.¹¹

Our findings show that most of the students learned something about smoking in their schools. The high prevalence of smoking indicates that these are not efficient or enough. Most of the students are willingness to take specific formal training on smoking related issues. Medical curriculum needs to be improved regarding to standardised education in terms of tobacco cessation techniques.

Comprehensive programs for tobacco control are essential to reduce prevalence of tobacco use. Cornuz²⁰ implied that physician counselling and pharmacotherapeutic interventions for smoking cessation were among the most cost-effective clinical interventions. Keiding²¹ suggested that smoking cessation therapies were among the most cost-effective preventive healthcare measures. These studies show that drug therapies should be one of the main components of these programs. Treatment with varenicline for smoking cessation is cost-effective compared with nortriptyline and unaided cessation and even cost-saving compared with bupropion and nicotine replacement therapy.²² Annemans et al. concluded that varenicline was a cost-effective alternative to brief counselling and unaided cessation, and was a cost-saving treatment in comparison with bupropion and nicotine replacement therapy, in a Belgian population of smokers willing to quit.²³

Nicotine replacement therapy is well known among the students. Anti-depressant and varenicline are less known compared to nicotine replacement therapy. Therefore, varenicline deserves more attention of the medical students in Turkey.

CONCLUSIONS

More than half of the current smokers had tried to quit smoking last year, and overwhelming majority had taken no help or advice. Majority of students believe that health professionals have a role in giving advice or information on smoking cessation. Most of the students learned something about smoking in their schools, but these are not efficient or enough. Most of the students are ready to take specific formal training on smoking related issues and medical curriculums, and health care services in Turkey need to be revised regarding to

tobacco cessation.

Table 1. Smoking cessation behaviors of the current smoker or other tobacco user, GHPSS-2010, Turkey.

Questions	Total		% of "Yes" answer	95% CI
How soon after you awake do you smoke your first cigarette?	Within 30 minutes	140	30.5	19.5-44.4
	Within an hour	140	44.9	22.8-69.1
Do you want to stop smoking cigarettes now ?	Cigarette smokers	151	56.2	45.2-66.7
Do you want to stop using chewing tobacco, snuff, bidis, cigars or pipes now?	Other tobacco users	45	30.8	18.5-46.6
During the past year, have you ever tried to stop smoking cigarettes?	Cigarette smokers	174	60.4	53.7-66.8
Have you ever received help or advice to help you stop smoking cigarettes?	Cigarette smokers	198	16.4	9.2-27.6

Table 2. Opinions of the students on the specific training for health professionals, GHPSS- 2010, Turkey.

Questions	Total	% of "Yes" answer	95% CI
Should health professionals get specific training on cessation techniques? n = 1205			
Males	575	88.7	81.4-93.4
Females	630	93.1	89.2-95.7
Should health professionals get specific training on cessation techniques? n = 1211			
Current cigarette smokers	231	81.3	73.1-87.4
Current any tobacco users	346	84.6	78.1-89.5
Current other tobacco users besides cigarettes	229	87.1	77.7-92.8
Never other tobacco users besides cigarettes	552	94.4	88.9-97.2
Never cigarette smokers	521	95.3	91.4-97.5
Never any tobacco users	378	95.4	90.1-97.9
Total	1115	92.1	86.7-94.2

Table 3. Opinions of the students on health professionals role and advise to stop smoking, GHPSS-2010, Turkey.

Questions	n	% of "Yes" answer	95%CI
Do health professionals serve as "role models" for their patients and the public?			
Current cigarette smokers	232	77.5	69.5-83.8
Current any tobacco users	347	79.6	72.5-85.2
Current other tobacco users besides cigarettes	230	81.0	75.5-85.5
Never cigarette smokers	520	96.4	94.3-97.7
Never other tobacco users besides cigarettes	551	96.7	94.9-97.9
Never any tobacco users	377	97.8	95.8-98.9
Total	1209	92.1	89.4-93.6
Should health professionals routinely advise their patients who smoke to quit smoking?			
Current cigarette smokers	232	78.7	64.2-88.4
Current any tobacco users	348	80.3	66.8-89.2
Current other tobacco users besides cigarettes	231	83.6	76.7-88.7
Never other tobacco users besides cigarettes	551	96.2	93.0-98.0
Never cigarette smokers	529	96.4	93.1-98.2
Never any tobacco users	377	97.1	89.4-99.2

Total	1211	93.3	82.9-95.2
Should health professionals routinely advise their patients who use other tobacco products to quit using these products?			
Current cigarette smokers	229	79.4	62.7-89.8
Current any tobacco users	345	80.5	66.7-89.5
Current other tobacco users besides cigarettes	229	82.3	75.5-87.5
Never other tobacco users besides cigarettes	549	96.2	93.5-97.8
Never cigarette smokers	518	96.3	92.8-98.1
Never any tobacco users	376	97.6	93.7-98.3
Total	1207	92.6	82.7-95.1
Do health professionals have a role in giving advice or information about smoking cessation to patients?			
Current cigarette smokers	231	87.1	69.3-95.3
Current any tobacco users	347	89.3	78.7-95.0
Current other tobacco users besides cigarettes	230	93.3	87.3-96.5
Never other tobacco users besides cigarettes	550	97.9	95.9-99.0
Never any tobacco users	337	98.6	96.3-99.5
Never cigarette smokers	519	98.8	97.1-99.5
Total	1209	94.4	92.5-97.1
Are a patient's chances of quitting smoking increased if a health professional advises him or her to quit?			
Current cigarette smokers	228	85.4	72.8-92.7
Current other tobacco users besides cigarettes	226	85.5	77.0-90.9
Current any tobacco users	342	86.0	75.8-92.3
Never other tobacco users besides cigarettes	548	91.7	88.4-94.2
Never cigarette smokers	518	93.8	88.9-96.7
Never any tobacco users	376	94.4	88.7-97.3
Total	1203	89.9	87.3-93.3
Are health professionals who smoke less likely to advise patients to stop smoking?			
Current other tobacco users	227	48.3	42.6-54.0
Current cigarette smokers	228	48.7	37.4-60.1
Current any tobacco users	342	49.4	46.8-51.9
Never cigarette smokers	521	63.5	53.8-72.3
Never any tobacco users	379	64.5	50.4-76.4
Never other tobacco users	552	65.4	54.8-74.6
Total	1204	60.8	55.0-62.7
Are health professionals who use other tobacco products less likely to advise patients to stop smoking?			
Current cigarette smokers	228	45.9	34.3-57.9
Current other tobacco users	228	47.7	41.9-53.6
Current any tobacco users	343	48.4	44.7-52.1
Never cigarette smokers	519	64.4	55.8-72.2
Total	1203	60.8	55.7-62.6

Table 4. Percentage of "Yes" answers to questions on curriculum and training, GHPSS- 2010, Turkey.

Questions	Total response	% of "Yes" response	95% CI
During your school training, were you taught in any of your classes about the dangers of smoking?	1195	87.2	81.5-91.3
During your school training, did you discuss in any of your classes the reasons why people smoke?	1205	50.4	30.9-69.8
During your school training, did you learn that it is to record tobacco use history as part of a patient's general medical history?	1200	90.8	84.9-94.6
During your school training, have you ever received any formal training in smoking cessation approaches to use with patients?	1196	48.2	26.9-70.2
During your school training, did you learn that it is important to provide educational materials to support smoking cessation to patients who want to quit smoking?	1202	61.2	44.7-75.4
Have you ever heard of nicotine replacement product therapies in tobacco cessation programs?			
Current cigarette smokers	227	90.7	84.0-94.7
Never other tobacco users	552	91.1	84.5-95.1
Current other tobacco users besides cigarettes	225	91.4	84.5-95.4
Current any tobacco users	340	91.4	84.6-95.4
Never any tobacco users	378	91.6	87.1-91.6
Never cigarette smokers	518	92.2	88.4-94.8
Total	1203	91.5	86.1-95.0
Have you ever heard of using antidepressants in tobacco cessation programs (such as bupropion or Zyban)?	1204	45.7	
Have you ever heard of using varenicline (Champix) in tobacco cessation programs?	1202	30.8	

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