

Factors Affecting Choice of Specialty Among First-year Medical Students of Four Universities in Different Regions of Turkey

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Aim To determine the factors affecting medical students' choice of the specialty of family medicine.

Methods The study was conducted in the period from 2004-2006 and comprised 770 first-year medical students from Ondokuz Mayis, Karadeniz Technical, Kocaeli, and Adnan Menderes Universities, Turkey. The questionnaire included questions on demographic data and 6 "yes/no" or open-ended questions on students' career aspirations and the specialty of family medicine.

Results The response rate was 93.1% (n = 717, 54.7% male). Nearly all students (n = 714, 99.6%) showed an intention to specialize after receiving the medical doctor degree. A total of 187 students (26.2%) showed an intention to work in primary care without specialization "for a temporary period" to "gain some experience." Family medicine was the least preferred specialty (n = 7, 0.9%). The most important reasons for the choice of specialty were "better financial opportunities" and "prestige" (n = 219, 30.5%), followed by "personal development" (n = 149, 20.8%), "more benefits for the patient" (n = 128, 17.9%), and "wish to work in an urban area" (n = 32, 4.5%). The most preferred specialties were cardiology (n = 179, 25.0%), pediatrics (n = 121, 16.9%), ophthalmology (n = 47, 6.6%), physical therapy and rehabilitation (n = 34, 4.7%), and obstetrics and gynecology (n = 32, 4.5%).

Conclusion Prestige, money, and personal development are important factors in career decision-making among medical students in Turkey. This should be taken into consideration when conducting reforms at the primary level.

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Undergraduate medical education in Turkey lasts six years. Medical school graduates may choose either to work in a primary health care setting without specialization or to specialize in family medicine or some other specialty. There are about 29 000 physicians without postgraduate professional training working in the National Primary Health Care System (28% of all physicians) (1). These physicians are called “practitioners,” rather than general practitioners (GP) or family physicians (FP), ie, physicians with specialized training in family medicine/general practice (2).

Physicians who choose to specialize have to pass a standard examination, which allocates them to a residency program according to their exam score. Only 1 in 10 physicians a year passes this examination, while only 5%-10% of these show preference for the specialty of family medicine (2). The physicians who do not pass the examination but want to specialize are granted a practitioner’s position in the National Primary Health Care System by the Ministry of Health (2). In Turkey, family medicine is a relatively new specialty, as the residency program was implemented in 1985 (3). There are approximately 1800 family medicine specialists and 700 family medicine residents (4). They are employed in vertically organized primary care units (like mother and child health centers), secondary and tertiary care hospitals, and the private sector. According to the Turkish regulations, there are no positions for specialists (family medicine or other) in primary care centers under the Ministry of Health. Other specialty groups work in secondary or tertiary care hospitals or in the private sector (4).

Although most of the students will have to work in primary care in the future, family medicine does not seem to be an attractive area. The most important reason for this is the lack of prestige and money (2). Beside,

students generally believe that primary care is not an effective area for personal development (2,5-7). There are ongoing efforts to improve such a situation (8).

Therefore, the priorities and perceptions of future family physicians have to be determined to maximize the efficacy of a standard core curriculum. The aim of our study was to assess the attitudes of first-year medical students toward primary care and selection of medical specialty in order to construct a better curriculum in the following years.

Methods

We selected 770 first-year students from four medical schools located in four different regions of Turkey – East, North, Northwest, and Southwest (web extra material).

In January 2004, the study started at Karadeniz Technical University and Ondokuz Mayıs University medical schools with the objective to assess the attitudes of the first-year students for three years. The questionnaire was distributed to 85 students at Ondokuz Mayıs University and 175 students at Karadeniz Technical University. In January 2005, it was distributed to 160 students at Ondokuz Mayıs University and 107 students at Karadeniz Technical Universities. In 2006, family medicine courses were removed from the first-year curriculum at the Karadeniz Technical University, but meanwhile they were introduced at the Kocaeli and Adnan Menderes Universities. In January 2006, the questionnaire was distributed to 45 students at Kocaeli University, 136 students at Ondokuz Mayıs University, and 62 students at Adnan Menderes University. All participants provided their informed consent. In addition to demographic data, the questionnaire had 6 “yes/no” or open-ended questions on students’ career aspirations and primary care. Themes emerging in the answers were identified and grouped by one researcher

from each university. All themes were evaluated by the researchers at a consensus meeting.

Statistical analysis

All statistical analyses were performed using the Statistical Package for the Social Sciences, version 9.0 (SPSS Inc., Chicago, IL, USA). Descriptive data are given as frequencies and percentages. Differences in distributions were analyzed by χ^2 test. The level of significance was set at $P < 0.05$.

Results

Out of 770 students, 717 (93.1%) filled out the questionnaire (54.7% male). Out of these, 454 (63.3%) students were from Ondokuz Mayıs University, 163 (22.7%) from Karadeniz Technical University, 61 (8.5%) from Adnan Menderes University, and 39 (5.5%) from Kocaeli University.

There were 714 (99.6%) students who stated that they wanted to specialize and only 3 (0.4%) who stated that they did not want to specialize.

The most important reasons for specialization were "better financial opportunities" and "prestige" ($n = 219$, 30.5%). Other reasons were "personal development" ($n = 149$, 20.8%), "feeling that their specialty training was more beneficial for the patient" ($n = 128$, 17.9%), and "wish to work in an urban area" ($n = 32$, 4.5%). An additional factor was "easiness" of the specialty, ie, greater control over one's work schedule, resulting in a better lifestyle (Table 1). There was

Table 1. Main reasons for specialization of first-year medical students in Turkey

Reason	No (%) of students
Money and prestige	219 (30.54)
Personal development	149 (20.78)
Benefits for the patient	128 (17.85)
Wish to work in urban area	32 (4.46)
Easiness	12 (1.68)
Personal interest	12 (1.68)
Other	12 (1.68)
Missing data	153 (21.33)
Total	717 (100.0)

no significant difference between the medical schools ($P = 0.404$) and sexes ($P = 0.451$) in the reasons for specialization.

Students' preferred specialties were cardiology ($n = 179$, 25.0%), pediatrics ($n = 121$, 16.9%), ophthalmology ($n = 47$, 6.6%), physical therapy and rehabilitation ($n = 34$, 4.7%), and obstetrics and gynecology ($n = 32$, 4.5%). Female students preferred pediatrics ($P = 0.001$) and obstetrics and gynecology ($P = 0.003$), while male students preferred cardiology ($P = 0.001$) and ophthalmology ($P = 0.038$) (Table 2). When we classified other specialties in surgical and non-surgical, we found that men preferred surgical specialties more frequently ($P = 0.021$) (Table 2).

Table 2. Initial specialty preferences of first-year medical students in Turkey

Specialty	No. (%) of students			P^*
	total	female	male	
Cardiology	179 (25.0)	59 (33.0)	120 (67.0)	0.001
Pediatrics	121 (16.9)	73 (60.3)	48 (39.7)	0.001
Ophthalmology	47 (6.6)	15 (31.9)	32 (68.1)	0.038
Physical therapy and rehabilitation	34 (4.7)	21 (61.8)	13 (38.2)	0.049
Obstetrics and gynecology	32 (4.5)	22 (68.8)	10 (31.3)	0.003
Internal medicine	31 (4.3)	17 (54.8)	14 (45.2)	0.368
General surgery	30 (4.2)	4 (13.3)	26 (86.7)	0.001
Otolaryngology	19 (2.7)	5 (26.3)	14 (73.7)	0.092
Psychiatrics	18 (2.5)	11 (61.1)	7 (38.9)	0.104
Other (surgical)	97 (19.5)	33 (34.0)	64 (66.0)	0.021
Other (not surgical)	50 (7.0)	37 (74.0)	13 (26.0)	0.001
Family medicine	7 (0.1)	2 (28.6)	5 (71.4)	0.371
No preference	52 (7.3)	26 (50.0)	26 (50.0)	0.482
Total	717 (100.0)	325 (45.3)	392 (54.7)	

* χ^2 test.

A total of 187 (26.2%) students said that they would like to work in primary care "for a temporary period" to "gain some experience," but without specializing in primary care; 526 students (73.4%) said they would "never" like to work in primary care; and 4 students (0.06%) said that they were not sure whether they would like to work in primary care. There was no significant difference between the schools in their wish to work in primary care ($P = 0.435$).

Family medicine was the least popular specialty ($n = 7$, 0.9%) (Table 2). Students who

preferred family medicine mentioned that this specialty was easier because there were fewer emergencies, allowing them to have a better control over their lives.

Discussion

Our study showed a continuous disinterest of medical students in family medicine. Nearly all of them preferred to attend hospital-based specialty trainings, as shown in previous studies (2,5-7).

Lower interest in family medicine than in other specialties is noticeable in many countries (2,5-9). This trend is greater in competition-based health care systems than in state-administered ones (5). In Turkey, primary care system is mainly state-administered.

In Pakistan (6) and Taiwan (10), personal interest was found to be the most important factor influencing the choice of specialty. In our study, the most important factors were financial opportunities and prestige, and personal interest ranked fifth, which is similar to the findings by Newton et al (11). Specialty choices of students suggest that lifestyle may be an important factor in career decision-making because students preferred greater financial rewards and higher social status (2).

Recently, it has been observed that medical students choose specialties that enable them to have control over their work schedule (12-14). Twelve of our students also mentioned "easiness" of the specialty. Our students also believed that, although it gave them control over their work schedule, working in primary care did not benefit their personal development or their patients. This may be influenced by financial and referral problems in Turkey, which is why patients prefer to solve their primary health care problems in hospitals rather than in primary care facilities (15).

Some studies found that internship with practical sessions in primary care affected the career choices of students (7,8,16). Primary care faculty advisors and role models also had positive influence on students (17-19). Positive impact of general practice rotation may be explained by the benefit students had received from providing health care in the community rather than in the hospital (20,21). In another study it was shown that general practice rotation has no effect on students' choice of family medicine as a specialty (22). Even though family medicine constitutes a part of the curriculum in all four medical schools in the first semester of the first year, family medicine is not a preferred specialty. However, community-based education plays only a small part in the curricula of all four medical schools.

We did not find a significant difference between sexes in the preference for family medicine, similar to the study by Buddeberg-Fischer et al (5). In a Canadian study, students preferring primary care were found more likely to demonstrate social concerns (23). Physicians choosing family medicine as a specialty were mostly attracted by a short duration of specialty training and low investment needed to start a practice (5). The number of students in our study who preferred family medicine was too small to address these factors. In our study, male students preferred cardiology and surgeries, while female students preferred pediatrics and obstetrics and gynecology.

A limitation of the study may be a small number of questions in the questionnaire. Also, we interviewed only first-year students and older students may have different attitudes. We chose first-year students to learn about their first thoughts on career choice. Our plan is to repeat the study with the same students in their sixth year to evaluate the changes in their opinions. In the three-year

period of our study, few students chose family medicine, even after the exposure to the family medicine curriculum in the first semester of the first year, which confirms that there was a greater interest for other specialties. This is the most important point of our study, because most of our students will have to work in primary care in the future even though they do not prefer so. The aim of the primary health care reform in Turkey, within the framework of the health transition project, is to improve the quality of care at the primary level and leading to an increase in the prestige and status of primary care physicians. Specific benefits of this project include an increase in income and job satisfaction (24,25).

In conclusion, the results of this study are worrying from the public health perspective. Family practice attracts fewer students than other specialties. Our study may be a basis for the reform of primary care in Turkey, and further studies about the attitudes toward primary care, especially in final-year students, should be performed.

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