

Factors influencing medical students' choice of family medicine

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A – Study Design, **B** – Data Collection, **C** – Statistical Analysis, **D** – Data Interpretation, **E** – Manuscript Preparation, **F** – Literature Search, **G** – Funds Collection

Summary Background. In Georgia, like in many countries, the specialisation of family medicine suffers from a lack of interest, which has a negative impact on the number of properly qualified family doctors.

Objectives. The aim of the research is to assess the attitudes of medical students towards the profession of a family doctor and to observe the reason for choosing this field of work.

Material and methods. A quantitative approach using a cross-sectional survey was carried out. 408 out of 500 medical students from the two major Georgian universities were surveyed.

Results. Only a small percentage of students (2.9%; $n = 12$) expressed interest in the profession of a family doctor, and the absolute majority of them were female. Students' choice of family medicine is related to the following factors: a duration of residency ($n = 12$; 100%), the ability to form long-term relationships with patients ($n = 10$; 83%), the influence of family or community ($n = 8$; 67%), the ability to solve multiple medical problems ($n = 11$; 92%), the simplicity of medical practice ($n = 10$; 83%), the opportunity to find a job ($n = 10$; 83%), the advantage of working in rural areas ($n = 8$; 67%) and the ability to balance career and personal life ($n = 10$; 83%).

Conclusions. The decision to become a family doctor is influenced by numerous factors. The profession of a family doctor is less popular in Georgia, which is mainly caused by society's stereotypical attitudes. To popularise the profession of a family doctor, it is necessary to introduce effective methods of its financing and to develop a flexible model of family medicine residency education, which would be based on the improvement of a continuous, professional practice.

Key words: family medicine, medical education, medical students, career choice.

Verulava T. Factors influencing medical students' choice of family medicine. *Fam Med Prim Care Rev* 2022; 24(1): 66–70, doi: <https://doi.org/10.5114/fmpr.2022.113017>.

Background

In order to provide a high-quality primary health care system, qualified family doctors are needed [1]. The extremely low number of properly qualified family physicians is a worldwide problem [2, 3]. Countries are using various strategies in order to solve this problem, for instance they are encouraging medical students to choose family medicine as a profession. Despite these attempts, family medicine still struggles with a lack of interest, while the determination to choose a specialised career is increasing. According to studies, a very small number of undergraduate medical students chose family medicine as a profession [4–7].

The decision to become a family doctor is influenced by the following characteristics: age, gender, family status and rural life [8]. Studies show that students who choose family medicine are more likely to be socially oriented instead of seeking leadership opportunities, they have a strong desire to help people and obtain a doctor's certificate in a relatively short period of time [9].

Students who choose the profession of a doctor are influenced by the following factors: prestige, intellectual level, payment method, income, researching opportunities, faculty status and work-life balance [10–13]. Compared to family doctors, specialists can obtain quite a high salary for performing "high-tech" procedures [14].

Furthermore, studies have also revealed the negative aspects of a family doctor's specialty, such as managerial orientation, professional isolation and the need to compile excess documentation, low prestige and intellectual level, as well as the extremely wide, unlimited and general scope [15]. Medical students are scared of the government's pressure, as they seem

to try to force newly graduated family doctors to work in remote or rural areas [16, 17]. Family physicians are also facing some difficulties, such as overwork, stress and dissatisfaction with medical practice, and they are forced to provide medical care to patients during non-working hours in emergencies [18].

In some countries, postgraduate medical education requires students to choose a specialty at an early stage of their education. Consequently, they have a limited opportunity to pursue an alternative residency curriculum [19].

Conducting a comprehensive analysis of the factors that influence medical career choice and advancing the strategies properly is key to increase interest in family medicine. The aim of the research was to assess the attitude of medical students towards the profession of a family doctor and to find out the reasons that influence medical students' choices.

Material and methods

Quantitative, descriptive, cross-sectional research was carried out. Data was collected from January to May 2021. Ivane Javakhishvili Tbilisi State University and Tbilisi State Medical University were selected for the study. The databases of these universities were used to select students. Fifth- and sixth-year students participated in the study, including 156 students of Ivane Javakhishvili Tbilisi State University and 252 students of Tbilisi State Medical University. A non-probabilistic random sampling technique was used for the study.

The survey was carried out via a structured online questionnaire, which was mainly based on existing studies and included



close-ended questions. The survey was conducted through an online platform (Google Forms) and was sent after validation and testing with a group of students. Data was collected during January and May 2021. Students were invited to participate through social networks. The survey was open for five months, with two reminders of participation.

Written informed consent was obtained from all the participants of the study. Any information that would reveal the identity of the participant was destroyed, and all data was collected without revealing any personal information.

The questionnaire was composed of twenty-two questions divided into three sections: demographics, the choice of specialty after graduation and factors associated with the choice of career in family medicine (factors influencing the attitude of students). The demographic section asked about gender, age, marital status, residence (village, city) and presence of doctors within the family – parents, brothers or sisters. Section two asked about the choice of specialty after graduation (family medicine, surgery, gynaecology, internal medicine, cardiology, radiology, paediatrics, ophthalmology, psychiatry). Section three investigated factors influencing the decision of medical students in choosing family medicine as a career. Participants were asked about their career choice through the two following questions: ability to form long-term relationships with patients, duration of residency, interest in specialty clinical practice, influence of family, friends or community, positive experience with doctor/lecturer, experience/impression during training or on shift at a clinic, ability to work on complex medical cases, intellectual perception of the profession, the advantages of working in rural areas, expected income, prestige, ability to solve a variety of medical problems, opportunity to find a job, pleasure gained from professional work, further professional development perspective and the ability to balance work and personal life.

The responses were extracted by Excel, coded and then analysed using SPSS software (V23). The statistical analyses were descriptive. Categorical data was presented as a frequency and percentage. Statistics were generated by frequency tables. A *p*-value of 0.05 was considered significant.

Ethical clearance was obtained from the Institutional Ethics Committee of the Caucasus University (17.2021_01_09_CU).

Results

Of the 500 eligible medical students from two major Georgian universities, 408 participated in the survey (response rate 81.6%). Students' socio-demographic statistics are shown in Table 1. The majority of respondents (73%; *n* = 296) were female. Students 20 to 30 years of age participated in the study, in which the majority of them, almost 81% (*n* = 330), were under 25 years of age. The average age of the respondents was 23.6 (\pm 2.8) years. The majority of respondents were single (90%; *n* = 368), and 96% (*n* = 391) were from the city. Only 16% of the students (*n* = 64) were from a medical family and had a professional connection to medicine.

A very small number of respondents (2.9%; *n* = 12) revealed that they were interested in the profession of a family doctor. The majority of students chose other specialties of medicine: surgery (17%; *n* = 66), gynaecology (15%; *n* = 58), internal medicine (13%; *n* = 51), cardiology (12%; *n* = 47), radiology (9%; *n* = 36), paediatrics (7%; *n* = 28), ophthalmology (6%; *n* = 25), psychiatry (5%; *n* = 21).

The results show that only females wanted to choose a career as a family doctor (*n* = 12; 100%), which indicates that gender is a determining factor in choosing the profession of a family physician (*p* = 0.031). Rural students preferred family medicine as their occupation (*n* = 9; 75%). None of the students who chose the career of a family physician were from a medical family.

The students' choice of family medicine is related to the following factors: the duration of residency (*n* = 12; 100%; *p* = 0.001), the ability to form long-term relationships with patients (*n* = 10; 83%; *p* = 0.001), the influence of family, friends or community (*n* = 8; 67%; *p* = 0.015), the ability to solve multiple, various medical problems (*n* = 11; 92%; *p* = 0.017), the simplicity of medical practice and the ability to start their occupation as soon as possible (*n* = 10; 83%; *p* = 0.037), the opportunity to find a job (*n* = 10; 83%; *p* = 0.03), the advantage of working in rural areas (*n* = 8; 67%; *p* = 0.001), the ability to balance career and personal life (*n* = 10; 83%; *p* = 0.047) (Table 2).

Table 1. Demographic characteristics of the respondents

Demographic characteristics	Family physician career <i>n</i> = 12 (2.9%)	Medical specialist career <i>n</i> = 396 (97.1%)	All <i>n</i> = 408 (100%)	<i>p</i>
Age				
< 25	10 (83%)	320 (81%)	330 (81%)	0.001
≥ 25	2 (17%)	76 (19%)	78 (19%)	
Gender				
female	12 (100%)	284 (72%)	296 (73%)	0.031
male	0 (0%)	112 (28%)	112 (27%)	
Marital status				
single	10 (83%)	358 (90%)	368 (90%)	0.00
married	2 (17%)	38 (10%)	40 (10%)	
widow	–	–	–	
Residence				
village	9 (75%)	8 (1%)	17 (4%)	0.001
city	3 (25%)	388 (99%)	391 (96%)	
Parent is a doctor				
yes	0 (0%)	62 (16%)	62 (16%)	0.1
no	12 (100%)	334 (84%)	346 (84%)	

Table 2. Factors influencing the decision of medical students in choosing family doctor as a career

Factors	Family physician career <i>n</i> = 12 (%)	Medical specialist career <i>n</i> = 396 (%)	All <i>n</i> = 408	<i>p</i>
Ability to form long-term relationships with patients	10 (83%)	153 (39%)	163 (40%)	0.001
Duration of residency	12 (100%)	206 (52%)	218 (53%)	0.001
Interest in specialty clinical practice	3 (25%)	360 (91%)	363 (89%)	0.010
Influence of family, friends or community	8 (67%)	197 (55%)	205 (50%)	0.015

Table 2. Factors influencing the decision of medical students in choosing family doctor as a career

Factors	Family physician career <i>n</i> = 12 (%)	Medical specialist career <i>n</i> = 396 (%)	All <i>n</i> = 408	<i>p</i>
Positive experience with doctor/lecturer	5 (42%)	266 (67%)	271 (66%)	0.016
Experience/impression during training or on shift at a clinic	4 (33%)	178 (45%)	182 (45%)	0.21
Ability to work on complex medical cases	3 (25%)	303 (77%)	306 (75%)	0.001
Intellectual perception of the profession	5 (42%)	275 (69%)	280 (69%)	0.018
The advantages of working in rural areas	8 (67%)	56 (14%)	64 (16%)	0.001
Expected income	3 (25%)	268 (68%)	271 (66%)	0.009
Prestige	5 (42%)	270 (68%)	275 (67%)	0.0012
Ability to solve a variety of medical problems	11 (92%)	296 (75%)	307 (75%)	0.017
Early exposure to discipline	10 (83%)	194 (49%)	204 (50%)	0.037
Opportunity to find a job	10 (83%)	250 (63%)	260 (63%)	0.03
Pleasure gained from professional work	9 (75%)	356 (90%)	365 (89%)	0.00
Further perspective of professional development	4 (33%)	361 (91%)	371 (91%)	0.17
Ability to balance work and personal life	10 (83%)	224 (57%)	234 (57%)	0.047

Discussion

The study indicates students' low level of interest to take up the career of a family physician in the future. Surgery (17%; *n* = 66) and gynaecology (15%; *n* = 58) were the first choices. This can be explained by the prestige and increased demand of these specialties, with consequently better remuneration. Only 2.9% (*n* = 12) of those questioned were interested in the role of a primary health care doctor. Studies in other countries also confirm the fact that the professional career of a family physician suffers from a lack of interest [20], although in Georgia, this statistic is much lower. In Egypt, only 4.7% showed any intention to choose this as a future career [21]. In Turkey, it was the least popular specialty, at only 0.9% [22]. In countries where family medicine has been established for a longer time, it was the most popular specialty. Therefore, in the United Kingdom, for 40% of medical students, general practice was an attractive career option [23].

According to the results of the research, many factors influence the career choices of medical students. These include demographics – age, gender, marital status, residence (city or village). It would be unfair not to mention the fact that none of the twelve students who chose the profession of family physician were male, which shows that gender has a significant influence on the choice of profession [24]. According to studies in other countries, females also have a more positive attitude towards family medicine than males [25]. In contrast to what was commonly believed, another study conducted in Egypt and in Morocco concluded there was no statistical difference between males and females regarding their intention to choose family medicine as a future career [26, 27].

The study showed that students living in rural areas preferred family medicine more than those living in urban areas, which confirm that encouraging the admission of students from rural areas to medical universities will increase the number of rural family physicians [28].

The students' choice of profession is influenced by public attitudes towards the profession, as well as prestige. According to the students, other specialties of medicine are more prestigious and valued in society than family doctors. Consequently, fewer students choose a career in family medicine. Studies in other countries also confirmed the institutional stigmas against family medicine, the under appreciation and the lack of prestige of the specialty [29].

Students who choose the profession of a family doctor attach great importance to a lifelong continuous relationship with the patient, a shorter period of residency and work in the countryside, which means that the career of a family doctor involves and an emotional connection based on trust and mutual respect.

The students' career choice is also influenced by the following factors: learning environment, advice received from family and relatives, future working conditions, job satisfaction, expected income, working time. Compared to medical specialists, a career in family medicine offers limited prospects for professional improvement (academic career and research).

The work schedule of family doctors is drawn up in advance, and as a result, after working hours, they can leave the workplace and, consequently, devote more time to family, children and personal life. Meanwhile medical specialists often do not have such an opportunity. Similar results have been obtained from a study conducted in Pakistan, where the most reported factors for choosing a specialty were high income and flexible working hours [30]. Many other studies have presented the work-life balance as a perk of a profession in family medicine [31, 32].

Despite the exhausting and invaluable work, primary care physicians earn a lower income than their specialist counterparts. This has a detrimental impact on the choice of students to become a family doctor. Studies in Canada and Australia have shown that the number of students choosing to be a family physician as a specialty has dropped due to the low income [33].

The growing trend of an aging population in Georgia is likely to increase the demand for family physicians. Therefore, the decrease in interest towards family medicine will lead to even more considerable deficits. At this point, implementation of innovative strategies is needed, as this would increase the motivation of students to choose family medicine.

The influence of medical parents (family members) on students is considered to be an important factor while choosing a career, but as the present study shows, only 16% of respondents had a medical parent. This indicates that the choice of profession is made by the student, and the parent factor is less significant, which is concordant with existing literature [34].

According to most students, job satisfaction is one of the crucial factors in choosing a profession. However, very few students who are thinking of becoming a family doctor consider that this choice would guarantee a pleasant career. The choice of a career as a family doctor is especially influenced by the opportunity to find a job and start the medical practice easily.

A medical student's choice of future profession is less influenced by the relationship with the doctor/lecturer during studies and the clinical rotation experience, which means that the internships during study turned out to be less interesting for the students, especially for those willing to connect their future careers to family medicine. Similar results have been obtained in other studies [35]. Regarding this, strengthening the relations of students and family physicians during their studies at university may have a positive effect on dispelling myths about the low intellectual level of family medicine.

Limitations of the study

The present study has some limitations. This study was conducted in a small student community. Only two major Georgian universities were surveyed. However, the results of the current study yielded important findings for further investigation.

Conclusions

All things considered, medical students' decision to become a family doctor is influenced by multiple factors; therefore, the

decision-making process itself is characterised by complexity. The profession of a family doctor is less popular, and the basic reason for this is society's stereotypical attitude. To popularise the profession of a family doctor, it is necessary to develop a customised programme for a career in family medicine, as well as a flexible model of family medicine residency education based on the improvement of a continuous, professional practice.

Source of funding: This work was funded from the author's own resources.

Conflicts of interest: The author declare no conflicts of interest.

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Received: 27.07.2021

Reviewed: 07.08.2021

Accepted: 16.09.2021

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