

Trends and motives in the post-graduate professional orientation of the young doctors of the 2023 class of Medical University-Sofia

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Abstract

The grown-up individual's need for self-affirmation is a unified whole with his professional and labor activity and with the successful realization in it. For this reason, professional choice is a complex decision-making process, determined by social and personal factors, as it is dictated not only by the needs of society, but also by the interests, opportunities, needs and inclinations of the individual. In view of this, the present article will present and analyze data from an empirical study investigating the trends, motives and conditions in the professional orientation of young doctors of the 2023 Class of Medical university-Sofia.

Keywords

trends, motives, young doctors, professional development

Introduction

The professional division of labor arose in order to achieve the fullest use of people through their professional specialization, which in turn leads to the further development of the profession and professional differentiation. The profession represents a set of specialized and generalized functions, or knowledge, skills, work habits and formed abilities acquired through training or work, through which a person realizes himself, performing a socially useful service, determining his place in the social structure (Vodenitcharov 1986).

The grown-up individual's need for self-affirmation is a unified whole with his professional and labor activity and with the successful realization in it. For this reason, professional choice is a complex decision-making process, determined by social and personal factors, as it is dictated

not only by the needs of society, but also by the interests, opportunities, needs and inclinations of the individual.

The choice of a profession predetermines to a large extent the life path of an individual, the development of his individual qualities and abilities, the unfolding of his essential powers, his realization as a working and social being. The labor and professional path affects the overall social behavior and social activity of the person. Educational and professional plans are the most important components of youth life plans (Vodenitcharov 1986; Vodenitcharov and Borisov 2021).

The uniqueness of the medical profession has been known since Antiquity, when the Father of Medicine, Hippocrates, in his writings “On Good Conduct” and “On the Physician” listed the rich palette of cognitive, temperamental, emotional and character qualities that a good doctor must

possess. Individuals who choose the medical profession face specific professional requirements that shape their personality much more fully only when this choice meets the opportunities and interests of young people.

The training of future young doctors in higher medical schools in the Republic of Bulgaria is a six-year course and is regulated by the Ordinance on the Uniform State Requirements for the Acquisition of Higher Education in the Specialty "Medicine" and is conducted in accordance with the Law on Higher Education, the Law on development of the academic staff in the Republic of Bulgaria and the internal normative documents of the relevant medical university (Kirkov et al. 2022; Kirkov 2023). The training of the medical personnel does not end with their student training, during which they acquire theoretical and practical knowledge and skills and thus build labor and theoretical training for independently solving organizational, prophylactic, treatment-diagnostic and other professional tasks (Kirkov 2023). The medical profession provides a rich opportunity for young doctors after completing their student education for postgraduate training, thus realizing the professional differentiation among doctors to ensure meeting the current and future health needs of Bulgarians citizens.

The post-graduate training of young doctors is carried out by the higher medical schools in the Republic of Bulgaria and it is regulated by the state through Ordinance No. 1 of 2015 (Regulation No. 1 2015) on the acquisition of a specialty in the health care system of the Council of Ministers. According to this regulation, postgraduate training varies between 3 and 5 years, depending on the specialty chosen by the young doctors. According to the nomenclature of specialties in the health care system, doctors in Bulgaria can choose from 61 clinical and 15 non-clinical specialties.

The **PURPOSE** of this article is to present and analyze the trends, motives and expectations of the young doctors of the 2023 Class of Medical university-Sofia for their post-graduate professional development.

To fulfill the goal, the following **TASKS** were set and studied:

- Research and analysis of the wishes of young doctors when choosing a specialty after completing their student studies;
- Study of the expectations of young doctors for their future realization and the prerequisites for this;
- Establishing the reasons and conditions for choosing the postgraduate professional qualification of young doctors;

Materials and research methodology

The object of the study is the graduating students in medicine. The technical unit of observation is Medical University - Sofia. A questionnaire survey was distributed among the young doctors of the 2023 Class.

The study was conducted during the October 2023 – December 2023 period in the city of Sofia and included 239 young medical doctors, whereby the percentage ratio of male to female participants was 45.61% to 54.39% respectively and the average age of the respondents was 24.80 years.

A wide range of **sociological and statistical methods** are used in the survey: documentary method; questionnaire survey method - medical students from MU-Sofia were surveyed with an independently developed questionnaire card; descriptive analysis; analysis of variance; Pearson's χ^2 test; graphical analysis - for visualizing the results obtained. The indicators were assessed at $\alpha=0.05$ level of significance.

The quantitative analyses were performed with the SPSS 17.0 statistical software package. MICROSOFT OFFICE products were used for tabular and graphical processing and presentation.

Results and discussion

In order to study the trends among the young doctors of the Class of 2023. of the Medical University-Sofia about the choice of specialty for their post-graduate qualification, we asked the first question of the survey. The results of Table 1 show that the most desired specialty is "Anesthesiology and intensive care" - 12.22%, followed by the surgical specialties "Surgery" and "Obstetrics and gynecology", respectively with 9.97% and 9.36% . From the therapeutic specialties, as can be seen from Table 1, the most desired among newly graduated doctors are "Cardiology" - 8.39%, "Pediatrics" - 6.75%, "Psychiatry" and "Internal diseases", respectively with 3.86%. It is noteworthy that young doctors are also interested in the specialties "Ophthalmology" and "Dermatology and Venereology". The proportion of respondents /0.32%/ who expressed a desire for professional development in non-clinical specialties is extremely low. 16.90% of the participants in the study have not decided which of the specialties in the field of health care to focus on. Planning the professional development of doctors is a complex process influenced by many determinants. The leading determinants among young doctors in their choice of specialty are, on the one hand, economic factors, i.e. the opportunities provided by the relevant specialty for additional work and income in private outpatient practice or in outpatient medical care. (Michalik B., M. Kulbat et al. 2024) On the other hand, determinants such as gender and personal preferences /interests/ to the relevant specialty, as practice has proven that different medical specialties require different and diverse qualities that must possess and to manifest the doctors who chose them. For example, most surgical specialties require more physical endurance from doctors than usual, given the high workload and the unpredictability of the duration of the respective operation, which defines these specialties as "difficult" or even "masculine". On the third side are the determinants related to working conditions and, more specifically, the balance

Table 1. In which field of medicine do you plan to specialize after completing your higher education?

Anesthesiology and intensive care	12.22%
Surgery	9.97%
Obstetrics and gynecology	9.36%
Cardiology	8.39%
Pediatrics	6.75%
Ophthalmology	4.82%
Psychiatry	3.86%
Internal Medicine	3.86%
Dermatology and venereology	3.22%
General medicine	3.22%
Radiology	2.57%
Gastroenterology	2.25%
Clinical Immunology	2.25%
Endocrinology	1.93%
Orthopedics and traumatology	1.93%
Nephrology	1.28%
Neurology	1.28%
Infectious diseases	1.00%
ENT	1.00%
Pathology	0.64%
Pulmonology	0.64%
Emergency Medicine	0.64%
Non-clinical specialty	0.32%
I haven't decided	16.90%

between private and professional life. Because this group of factors is crucial, given that some of the specialties are accompanied by heavy workloads, heavy shifts, both full-time and night-time, and work other than in hospital and outpatient settings. All this defines these specialties as burdening the psychoemotional health of the individual, which in turn inevitably affects the family and domestic environment of the doctor (Smith et al. 2017; Kumwenda 2019; Kirkov et al. 2022; Michalik et al. 2024).

The second question of the survey examines the expectations of young doctors regarding their career development in the future. The analysis of the data from Table 2 shows that nearly 90% of the respondents see themselves as doctors in clinical practice, about 9% of the respondents expect to become general practitioners or specialists in prehospital care. Less than 3% of the participants in the study intend to develop as researchers as well, which in turn requires them to continue their work in a University hospital and go through a competition for tenure and an academic position at one of the higher medical schools or to develop as scientific and teaching staff in one of the nonclinical departments of the medical universities. Less than 0.5% of the respondents see their realization in one of the health institutions of the public health service, dealing with the organization of the health system and with the trends and problems of public health.

Table 2. How do you see your future realization?

As a doctor in clinical practice	87.11%
As a doctor in pre-hospital care (GM, specialist)	8.99%
As a researcher	2.73%
As a medical representative of a pharmaceutical companies	0.78%
In an administrative structure (MOH, NHIF, etc.)	0.39%

In order to explore the opinion of the respondents regarding their expectations of whether they will be better realized in Bulgaria or abroad, we asked the third question in the survey. The results show that according to the majority of respondents - 62.50%, they would have a better career development if they continued their professional career in Bulgaria, while 37.50% were of the opposite opinion (Table 3). The analysis of these data shows a reversal of the trend of the last 10 years - more than 50% of the graduates of “medicine” in Bulgaria looking for their professional realization abroad.

Table 3. In your opinion, where can you realize yourself better?

In Bulgaria	62.5%
Abroad /highly developed EU countries and USA	37.5%

To clarify the motives among the group of young doctors who expressed a desire to work in Bulgaria, we asked the next question in the empirical study. The analysis of the data from Table 4 shows that among this group of respondents, the leading reasons for their desire to live in Bulgaria are “National self-awareness and moral obligation to Bulgaria” /31.58%/, as well as “Family and friends”/ 30.86%/, i.e. on the one hand, the moral obligation to the homeland, which has invested in their development as individuals, in order to guarantee the provision of the health needs of the Bulgarian society in the future, and on the other, the family and the social environment of the individual. It is noteworthy, the large share of respondents from this group - 30.86%, who indicate as a reason for implementation in Bulgaria and the easier “development of personnel in Bulgaria”, which shows the good opportunities for professional implementation provided by the Bulgarian health system.

Table 4. Your desire to realize yourself in Bulgaria is due to.

National self-awareness and moral obligation to Bulgaria	31.58%
Family and friends	30.86%
Personnel development in Bulgaria becomes much easier	30.86%
Life is much better in Bulgaria	4.45%
Higher level of medical science and practice	1.79%
Other	0.46%

In order to clarify the motives among the considerable percentage of young doctors who would like to work abroad, the following question was asked in the survey. The data from Table 5 show that the leading motive for seeking employment abroad among the respondents is “better material pay” - nearly 40%, i.e. the economic determinants. Next, about 20% of respondents cited the “better organization of the health system” of the highly developed countries of the EU and the US, and 16.86% cited “the higher level of medical science and practice” as a reason. About 1/6 of those who responded indicated as the reason for their desire to work abroad “the more difficult development of personnel in Bulgaria”, and about 6% of them - “the better way of life abroad”.

Table 5. Your desire to realize yourself abroad is due to.

Better material pay	39.58%
Better organization of the health system	19.79%
Personnel development in Bulgaria is becoming much more difficult	16.86%
Higher level of medical science and practice a	16.86%
Living abroad is much better	6.45%
Other	0.46%

The last question of the empirical study examines and analyzes the opinion of the young doctors from Graduates 2023 of Medical University-Sofia, regarding the conditions for their successful professional realization. As can be seen from Table 6, about half of the respondents /48.44%/ indicate as the leading condition “Quality training”, consisting of the material and technical base, teachers and curricula. About 1/3 of the respondents /36.33%/ answer with “Motivation and desire”, and 15.23% indicate “Persistence and patience” as a condition for their successful implementation. The analysis of the data shows that the production of the medical specialists is a complex process, combining both the personal qualities and preferences of individual individuals, as well as many social determinants that cannot be influenced by the young doctors, but are determined by the respective country, through the organization of the health system and the organization of higher medical education.

Table 6. In your opinion, the most important condition for successful realization in the profession is?

Quality training / base, teachers, education. programs/	48.44%
Motivation and desire	36.33%
Perseverance and Patience	15.23%

Findings and conclusion

The production and improvement of medical specialists is a complex and multifaceted process of national importance, necessary for the qualitative reproduction of the health system of the country, to ensure and to ensure the meeting of the current and future health needs of the population.

Based on the results of an empirical study, regarding the conditions and trends in the career development of young doctors of the 2023 class of MU-Sofia, we come to the conclusion that professional guidance is a process that unites both the personal characteristics and preferences of individual

individuals, as well as numerous social determinants. As can be seen from the meta-analyses, the greater share of young doctors see their professional career path in Bulgaria. There is a significant reduction /about 1/3 of the total number/ of the well-known trend of the last decade, for more than half of the young graduating doctors to work abroad. The leading reasons among this group of young doctors for economic determinants. The significant share of respondents in the study will realize themselves as doctors in clinical practice, choosing specialties according to their personal characteristics, allowing them, on the one hand, a balance between the professional and family-life environment, and on the other hand, providing them with opportunities for additional work and income in the private sector and outpatient practice.

The quality of human capital in the healthcare system is determined to the maximum extent by its professional training and preparation. The relationship between the level of training, potential and competitiveness of medical specialists and the state of the health system, whose main function is to meet the current and future health needs of Bulgarian citizens, is particularly strong.

Therefore, the provision and production of quality medical personnel is of strategic importance for society in order to carry out health activity based on the best examples of medical knowledge and health practice, in accordance with ethical principles and norms and on the basis of scientific evidence.

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References

- Grancharova G, Velkova A, Aleksandrova S (2009) Social medicine, Pleven.
- Kim YY, Kim UN, Kim YS, Lee JS (2016) Factors associated with the specialty choice of Korean medical students: a cross-sectional survey. *Human Resources for Health* 22 14(1): 45. <https://doi.org/10.1186/s12960-016-0141-8>
- Kirkov V (2023) A training quality optimisation model for the undergraduate internship in Medical university – Sofia, Sofia 2023. PhD Thesis, Medical University of Sofia.
- Kirkov V, Zlatanova-Velikova R, Vodenicharova Al, Leventi N (2022) Quality of the practical education during undergraduate internship at the Medical university Sofia. *Acta Medica Bulgarica Journal*, Vol. XLIX 4/2022, ISSN: 0324-1750, 48–53. <https://doi.org/10.2478/amb-2022-0042>
- Kirkov V, Zlatanova-Velikova R (2022) Approaches and methods for quality assurance of medical education in Bulgaria regulated in normative documents. *Man, society medicine, Kardzhali*, 2022, ISBN 978-954-652-037-1, 380–386.

- Kirkov V (2024) The impact of the COVID-19 pandemic on the quality of higher medical education. <https://doi.org/10.3897/pharmacia.71.e128039>
- Kumwenda B, Cleland J, Prescott G, Walker K, Johnston P (2019) Relationship between sociodemographic factors and specialty destination of UK trainee doctors: a national cohort study. *BMJ Open* 9: e026961.
- Papapanou M, Routsis E, Tsamakidis K, Fotis L, Marinos G, Lidoriki I, Karamanou M, Papaioannou T G, Tsiptsios D, Smyrnis N, Rizos E, Schizas D (2021) Medical education challenges and innovations during COVID-19 pandemic. *Postgraduate Medical Journal* 98(1159):, Pages 321–327. <https://doi.org/10.1136/postgrad-medj-2021-140032>
- Michalik B, Kulbat M, Domagała A (2024) Factors affecting young doctors' choice of medical specialty-A qualitative study. *PLoS ONE* 19(2): e0297927. <https://doi.org/10.1371/journal.pone.0297927>
- Ministry of health – Republic of Bulgaria (2021) National Health Strategy 2021–2030. <https://old.mh.government.bg/bg/politiki/strategii-i-kontseptsii/strategii/nacionalna-zdravna-strategiya-2030/>
- Regulation No. 1 (2015) On acquiring a specialty in the health care system of the Council of Ministers, 13.06.2023 Regulations for management, structure and criteria of a system for evaluating and maintaining the quality of education and the academic staff at MU-Sofia (2019), adopted by decision of the Academic Council dated 23.07.2019. <https://musofia.bg/za-universiteta/normativni-dokumenti/pravilnici-mu> [found on 05/01/2024]
- Medical University-Sofia (2024a) Regulations for preparation and organization of the 2020/2021 academic year at MU-Sofia. <https://mu-sofia.bg/za-universiteta/normativni-dokumenti/pravilnici-mu/> [found on 01.05.2024]
- Medical University-Sofia (2024b) Regulations for the organization and activities of Medical University-Sofia. <https://mu-sofia.bg/za-universiteta/normativni-dokumenti/pravilnici-mu/> [found on 01.05.2024]
- Medical University-Sofia (2024c) Regulations for the organization and conduct of educational practices and internships at Sofia University. <https://mu-sofia.bg/za-universiteta/normativni-dokumenti/pravilnici-mu/> [found on 01.05.2024]
- Smith V, Bethune C, Hurley K (2017) Examining Medical Student Specialty Choice Through a Gender Lens: An Orientational Qualitative Study. *Teaching and Learning in Medicine* 30: 1–12. <https://doi.org/10.1080/10401334.2017.1306447>
- Soethout MBM, Heymans MW, Olle J (2008) Career preference and medical students' biographical characteristics and academic achievement, *Medical Teacher* 30(1): e15–e22. <https://doi.org/10.1080/01421590701759614>
- Southworth E, Gleason SH (2021) COVID 19: A Cause for Pause in Undergraduate Medical Education and Catalyst for Innovation; *HEC Forum* 33: 125–142. <https://doi.org/10.1007/s10730-020-09433-5>
- UNESCO (1989) International Conference on Education. 41st session. Higher Education Policy and Strategy and its Diversification, Paris.
- Vodenitcharov Tz (2018) *Beyond the Limits of the Possible*. GorexPress.
- Vodenitcharov Tz (1986) *Profession doctor. Medicine and physical education*.
- Vodenitcharov Tz, Borisov V (2021) *The Public Health Phenomenon in a Changing World, Second Revised Edition*. Gorex Press, ISBN 978-954-616-311-0, c. 229.
- Vodenitcharov Tz (1992) *Way in medicine, Sofia*.
- WHO (2019) *The Global Action Plan for Healthy Lives and Well-being for All (SDG3 GAP)*. <https://www.who.int/initiatives/sdg3-global-action-plan>