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STUDY OF MEDICAL STUDENTS' PREDISPOSITION TO TYPES OF PROFESSIONAL ACTIVITIES

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Abstract. According to statistics, about 70–74% of the total number of those accepted for training graduate from medical higher educational institutions. Of the total number of graduates of medical universities, up to 30% do not go to work in practical healthcare. One of the reasons for this is an insufficiently formed professional identity, which can be formed in the learning process if the predisposition of students of a medical university to various types of professions and other types of professional activities in the field of healthcare are identified and taken into account in the educational process. The content analysis of the nomenclature of medical specialties made it possible to compile models of possible combinations of types of medical professions and characterize them. The place of the professional subtype "Medicine" in the structure of professions of the socionomic type has been established. One-, two-, three-component models of professions of socionomic type, subtype «Medicine» and their classification are proposed. The results of career guidance testing based on E.A. Klimov's differential diagnostic questionnaire are presented. The predisposition of students in medical areas of training and specialties of the St. Petersburg State Pediatric Medical University to a certain type of professional activity has been established. Differences in the predisposition of students of different courses of study to combinations of types of professions were revealed.

Key words: medicine; health; students; professional identity; career guidance; socionomic professions.

ИССЛЕДОВАНИЕ ПРЕДРАСПОЛОЖЕННОСТИ СТУДЕНТОВ МЕДИЦИНСКОГО ВУЗА К ТИПАМ ПРОФЕССИОНАЛЬНОЙ ДЕЯТЕЛЬНОСТИ

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Резюме. Согласно статистическим данным, медицинские высшие учебные заведения заканчивают порядка 70– 74% общего числа принятых на обучение. Из общего количества выпускников медицинских вузов до 30% не идут работать в практическое здравоохранение. Одной из причин этого является недостаточно сформированная профессиональная идентичность, которая может вырабатываться в процессе обучения, если будут выявлены и учтены в образовательном процессе предрасположенности обучающихся медицинского вуза к различным типам профессий и другим видам профессиональной деятельности в сфере здравоохранения. Проведенный контент-анализ номенклатуры

медицинских специальностей позволил составить модели возможных сочетаний типов медицинских профессий и дать им характеристику. Установлено место профессионального подтипа «Медицина» в структуре профессий социономического типа. Предложены одно-, двух-, трехкомпонентные модели профессий социономического типа, подтипа «Медицина» и их классификация. Представлены результаты профориентационного тестирования на основе дифференциально-диагностического опросника Е.А. Климова. Установлена предрасположенность обучающихся медицинских направлений подготовки и специальностей Санкт-Петербургского государственного педиатрического медицинского университета к определенному типу профессиональной деятельности. Выявлены различия в предрасположенности обучающихся разных курсов обучения к сочетаниям типов профессий.

Ключевые слова: медицина; здоровье; обучающиеся; профессиональная идентичность; профориентация; социономические профессии.

RELEVANCE

The quality of medical care provided to population depends on many factors, one of which is training of medical personnel. Professional training of healthcare specialists involves a longer period of study in higher education institutions compared to other areas of training. On average, the training period for a healthcare specialist ranges from 6 to 9 years.

Every year, there is a high demand for medical specialties among graduates of comprehensive schools. This is confirmed by statistics from the Federal State Statistics Service (Rosstat) [3]. According to these data, about 60 000 people are admitted every year to higher education institutions (HEIs) implementing educational programs in the field of health. The largest number of students is recruited in the field of training “General Medicine” (55 % of the total number of those admitted in 2020/2021), “Dentistry” (16 %), “Pediatrics” (15 %). However, approximately 70–74 % of the total number of those accepted for training graduate with the appropriate qualification, i.e., in fact, 25 % of students drop out for a variety of reasons (Fig. 1).

One of these reasons, according to O.V. Denisova, is insufficiently formed professional identity of future doctors [2]. The development of this personal formation largely depends on a person’s predisposition to a certain type of profession, i.e. on his professional focus [1, 4, 6, 8]. In addition, most students choose specialties in which there is already an excess of doctors, and out of the total number of medical graduates, up to 30 % do not go to work in practical healthcare [7, 9].

Thus, from the moment of entering the university until the moment of employment, only half of all those who, for various reasons, planned their professional growth in the medical field make it.

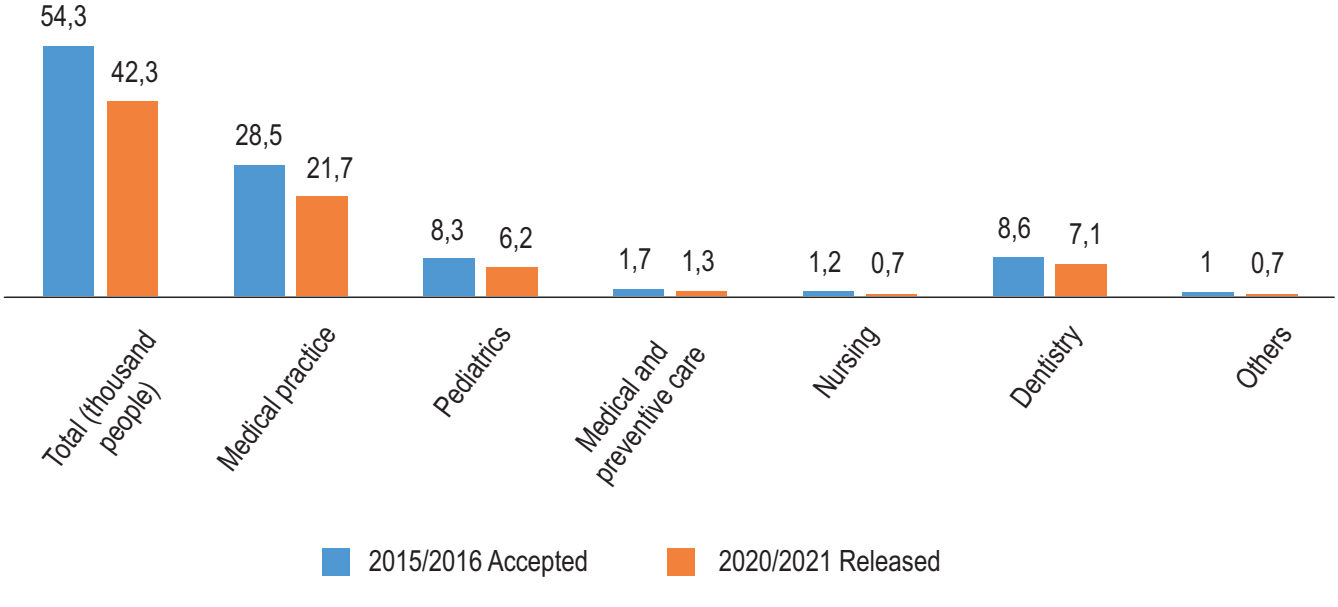

Fig. 1. Number of graduates of educational institutions of higher education for the healthcare system (thousand people)
Рис. 1. Количество выпускников образовательных организаций высшего образования для системы здравоохранения (тыс. чел.)

A physician as profession, according to the classification of E.A. Klimov, belongs to a "person — person" type which presupposes direct interaction of at least two subjects (doctor — patient). At the same time, the rapid development of medicine, methods of treatment, medical technology indicates multi-vector and versatility of the professional activity of a physician, on the one hand, and possibility of applying knowledge inherent in other types medical professions, on the other.

AIM

The aim of this study is to examine the predisposition of students of a medical university to various types of professions, as well as to determine the predisposition of students to other types of professional activities in the field of healthcare.

MATERIALS AND METHODS

The main research methods were: career guidance testing based on E.A. Klimov's differential diagnostic questionnaire, content analysis of regulatory legal acts, statistical data processing.

The study was conducted at the St. Petersburg State Pediatric Medical University. It involved 1st-3rd year full-time students of "Pediatrics", "Nursing", "General Medicine", "Dentistry", "Clinical Psychology", and "Defectology" (n = 525) faculties.

RESULTS AND DISCUSSION

At the first stage, the nomenclature of medical specialties was studied and models of possible combinations of types of professions and their brief characteristics were compiled.

In accordance with the Order of the Ministry of Health of the Russian Federation dated 07.10.2015 No. 700n "On the nomenclature of specialties of professionals with higher medical and pharmaceutical education", 104 names of specialties, reflecting the key areas of activity of medical staff, may be noted [5]. The specialties presented in the nomenclature may be considered within the framework of the classification proposed by E.A. Klimov, as professions of the socionomic type and attributed to a professional subtype "Medicine" (Fig. 2).

The subtype "Medicine" includes all areas of professional activity, one way or another connected with the provision of medical and pre-hospital care for a person. These specialties include physician, paramedic, obstetrician, psychologist, etc. They can be represented by one-, two-, three-component models, implying a combination of the leading "person — person" type of profession and related areas:

- bionomic ("person — nature", "P-N");
- technonomic ("person — machinery", "P-M");

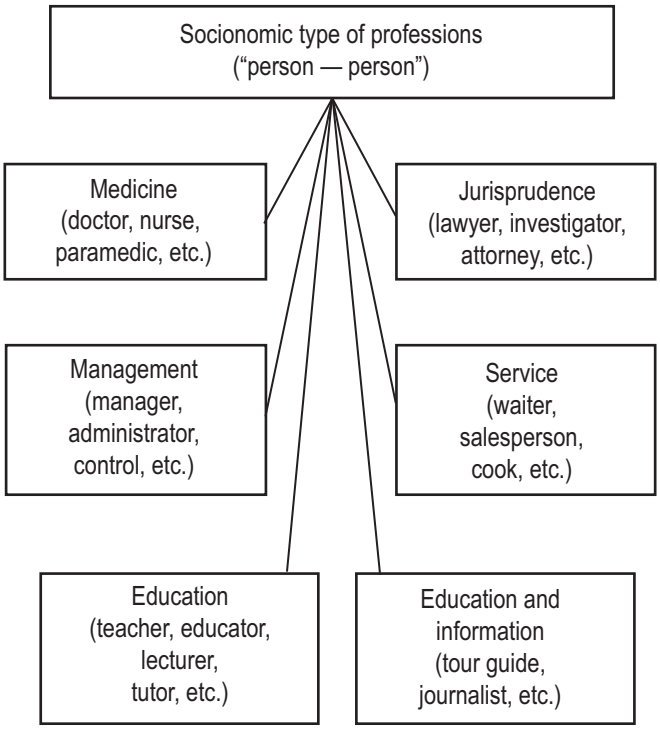

Fig. 2. Professional subtype "Medicine" in the structure of professions of the socionomic type

Рис. 2. Профессиональный подтип «Медицина» в структуре профессий социономического типа

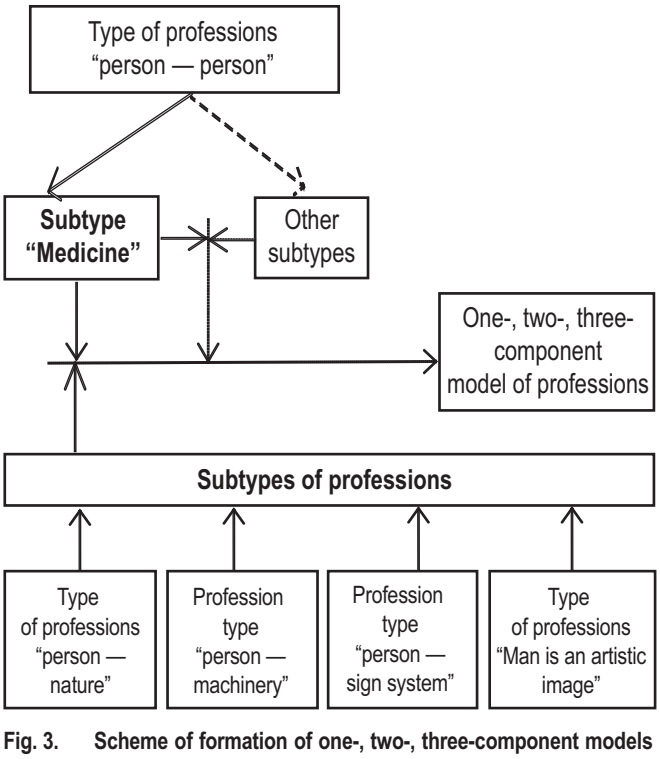

Fig. 3. Scheme of formation of one-, two-, three-component models of professions of socionomic type, subtype "Medicine"

Рис. 3. Схема формирования одно-, двух-, трехкомпонентных моделей профессий социономического типа, подтипа «Медицина»

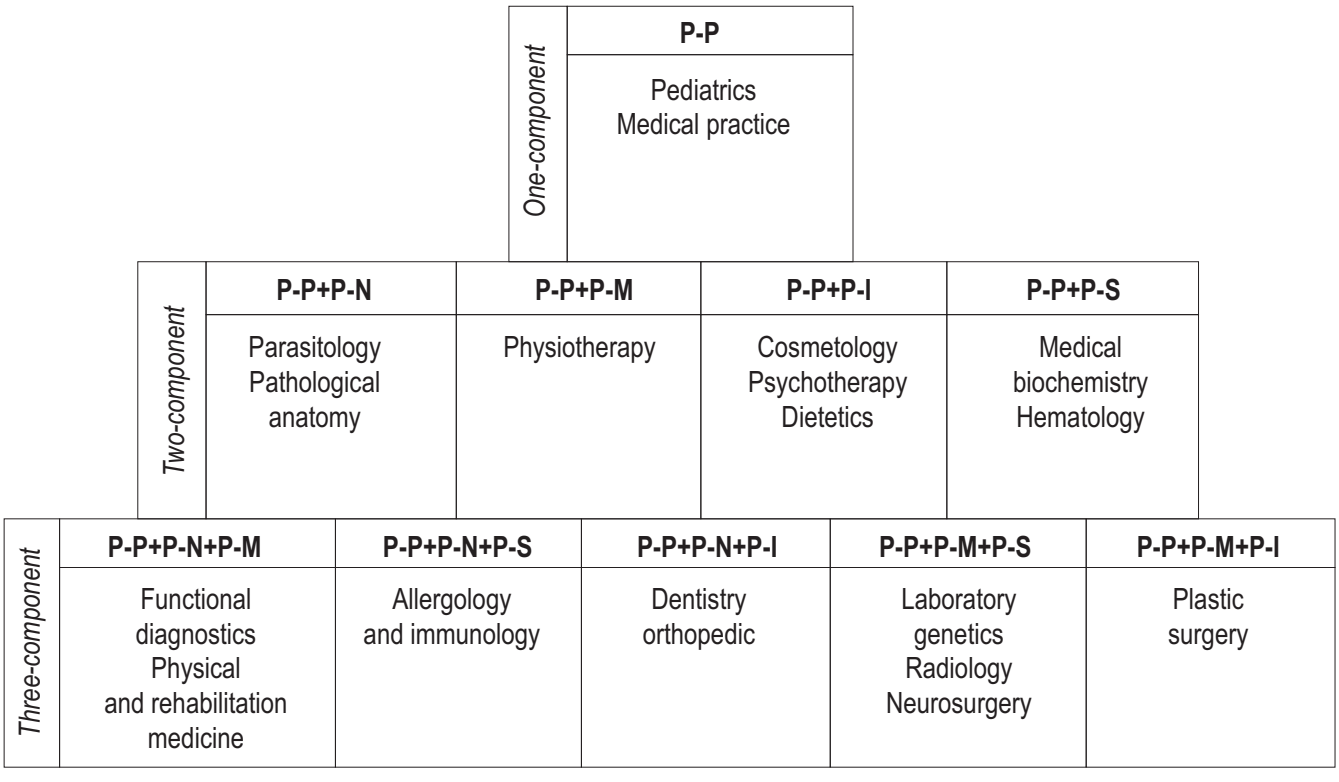

Fig. 4. Examples of models of professions of socionomic type, subtype "Medicine"
Рис. 4. Примеры моделей профессий социономического типа, подтипа «Медицина»

- signonomic ("person — sign system", "P-S");
- artonomic ("person — image", "P-I") professions (Fig. 3).

Let us consider in more detail the one-, two-, three-component models of professions of the socionomic type, subtype "Medicine" (Fig. 4).

Thus, an example of a one-component model of socionomic professions of the subtype "Medicine" is a combination of the fields "Pediatrics" and "General Medicine". Such specialties are aimed to a greater extent at direct human interaction, involve close communication between a doctor and patient, and require knowledge of the basics of psychology and pedagogy [10].

Two-component models, as it is shown in the figure, can be presented by a combination of the "person — person" professions type of the "Medicine" subtype with another type of profession. For example, in combination with the "person — nature" type, the "Medicine" subtype is represented in areas related to parasitology and anatomy, and in combination with the "person — image" type, in directions of aesthetic medicine.

Three-component models are combinations of the "Medicine" subtype with two other types of professions. An example is the professional direction of functional diagnostics, as well as physical rehabilitation, reflected in the combination of the "Medicine" subtype with the types of professions "person — nature" and "person — machinery".

At the second stage, an experimental study on the predisposition of medical students to various types (combinations of types) of professions was conducted.

Thus, the study revealed that in the first year, students with the identified type of "person — image" predominate (33 % of the contingent). This may be due to the high level of significance of internal interests in the field of creativity (hobbies: drawing, singing, theatrical art). Another reason is the choice of the direction of study without complete understanding of future professional activity. During the second year, a change in the ratio of students with different professional predispositions is noted. Thus, among the second-year students there are predisposition to work related to interaction within the social environment predominate, i.e. the "person — person" professional type (42 %). This indicator is also preserved among third-year students (Fig. 5), which allows us to assert that after the completion of the first year of study, where most of the academic workload falls on the cycles of humanitarian and natural science disciplines, there is a dropout of students who do not identify themselves with the group of socionomic professions. Some of these students decide to change their field of study, another one cannot cope with the academic workload, and are disappointed in the chosen vector of professional development.

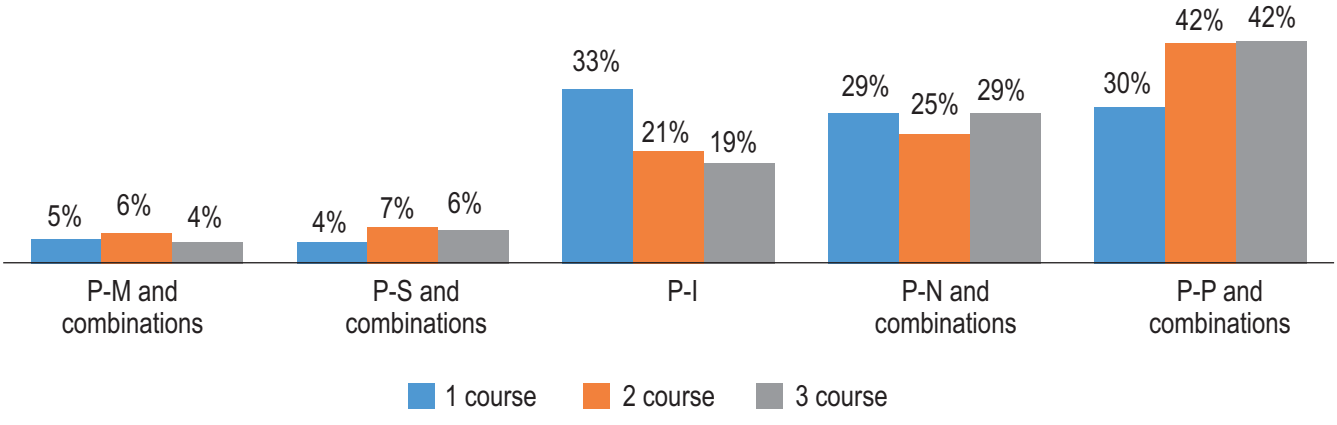

Fig. 5. Distribution of students in medical areas of training in accordance with the revealed predisposition to a certain type (combination of types) of professions

Рис. 5. Распределение обучающихся медицинских направлений подготовки в соответствии с выявленной предрасположенностью к определенному типу (комбинации типов) профессий

The healthcare sector covers a wide range of areas and includes, in addition to the main professional interaction and communication with different categories of people, work with various technical devices (medical equipment), sign systems (laboratory diagnostics, pharmacology, etc.), creative components (aesthetic medicine), as well as the natural environment (parasitology, microbiology).

Among students with a predisposition to work in the field of socionomic professions, those who had a professional orientation towards several types of professions were identified based on the results of their responses. That is, those who correspond to the parameters of two- and three-component models of professions (Fig. 6).

The first-year students distinguish combinations of the type “person — person” with the types “person — nature”, “person — image”, in the second such combinations are supplemented by combinations with “person — sign system”, and in the third — with “person — machinery”.

It is noteworthy that in all three years of study, students whose type corresponded to the three-component model noted that they are already working in chosen professional field.

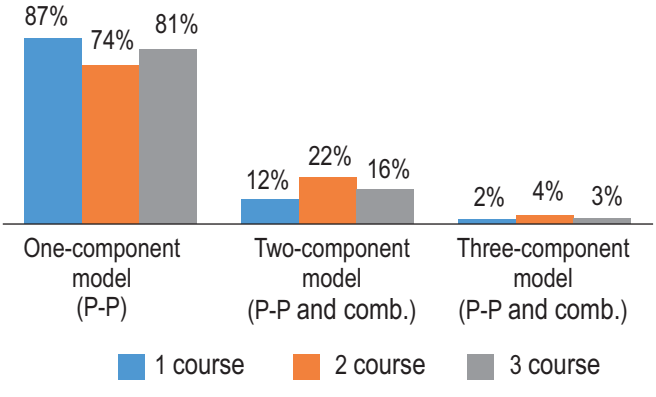

Fig. 6. Distribution of students in medical fields of study according to one-, two- and three-component models of professions

Рис. 6. Распределение обучающихся медицинских направлений подготовки по одно-, двух- и трехкомпонентным моделям профессий

CONCLUSION

Thus, the study allowed us to conclude:

1. All directions of medical professions may be classified according to the main area of activity in combination with other types of professions, as one-, two-, three-component.

2. In the process of training medical personnel, from the moment of admission to the HEIs and until the moment of employment in a medical organization, up to 50 % of students is dropped.

3. The predisposition to a certain type of profession varies among students of different courses. First-year students more often show a tendency towards artonomic professions, and second- and third-year students predisposed to professions of socionomic type.

4. The large number of students has a predisposition to the one-component type of socionomic professions.

ADDITIONAL INFORMATION

Author contribution. Thereby, all authors made a substantial contribution to the conception of the study, acquisition, analysis, interpretation of data for the work, drafting and revising the article, final approval of the version to be published and agree to be accountable for all aspects of the study.

Competing interests. The authors declare that they have no competing interests.

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Consent for publication. Written consent was obtained from the patient for publication of relevant medical information within the manuscript.

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Конфликт интересов. Авторы декларируют отсутствие явных и потенциальных конфликтов интересов, связанных с публикацией настоящей статьи.

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