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Trajectories of a doctor's professional development: a narrative interview. Part 1

Nadezhda V. Prisyazhnaya¹, Nadezhda Yu. Vyatkina^{1, 2}¹ The First Sechenov Moscow State Medical University, Moscow, Russia;² Financial University under the Government of the Russian Federation, Moscow, Russia**ABSTRACT**

BACKGROUND: Medical education is one of the most prestigious and in demand at the present stage, which, first of all, is reflected in the high competition rates for admission to a medical university. At the same time, the digital development of the Institute of Medicine determines the increasing academic load and the need to expand the range of disciplines studied at a medical university.

AIM: To study of the trajectories of professional development of a young doctor in the Russian healthcare system in modern conditions.

METHODS: The study of the trajectories of professional development of young doctors was carried out by the method of narrative interview ($n=52$) in September–December 2022 on the basis of the Institute of Social Sciences of Sechenov University. The study involved young internists ($n=11$), pediatricians ($n=11$), obstetricians and gynecologists ($n=10$), dentists ($n=10$), surgeons ($n=10$).

RESULTS: The analysis of the array of narratives allowed us to identify three key semantic and semantic data blocks (including seven subgroups), which served as the empirical basis of the standard narrative plot: the pre-university stage ["playing the profession" (3–7 years), "premonition" of professional choice (8–11 years), professional self-determination or the formation of professional intentions (12–17 years)]; university stage [obtaining medical education as the "foundation" of professional socialization (1–2 years), determining the desired trajectory of the professional path (3–6 years)]; postgraduate stage [debut of professional activity (residency), "challenges of professional autonomy"].

CONCLUSION: The analysis of the corpus of narratives of young doctors made it possible to identify the key temporal points of the trajectory of their professional formation in the modern situation, and showed that the formation and professional self-determination of a medical specialist is determined not only by internal motivation, but also by the influence of social agents (specific for each stage), the conditions of the social and professional environment.

Keywords: narrative interview; young doctors; trajectories of professional development; professional choice; motivation.

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ОРИГИНАЛЬНОЕ ИССЛЕДОВАНИЕ

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Траектории профессиональной социализации врача: нарративное интервью. Часть 1

Н.В. Присяжная¹, Н.Ю. Вяткина^{1, 2}¹ Первый Московский государственный медицинский университет имени И.М. Сеченова, Москва, Россия;² Финансовый университет при Правительстве Российской Федерации, Москва, Россия

АННОТАЦИЯ

Обоснование. Медицинское образование выступает одним из наиболее престижных и востребованных на современном этапе, что прежде всего отражается в высоких показателях конкурса при поступлении в медицинские высшие учебные заведения. При этом цифровое развитие института медицины определяет возрастание учебной нагрузки и необходимость расширения диапазона дисциплин, осваиваемых в медицинском высшем учебном заведении.

Цель. Изучение траекторий профессионального становления молодого врача в российской системе здравоохранения в современных условиях.

Методы. Изучение траекторий профессионального становления молодых врачей было реализовано методом нарративного интервью ($n=52$) в сентябре–декабре 2022 г. на базе Института социальных наук Сеченовского Университета. В исследовании приняли участие молодые врачи-терапевты ($n=11$), педиатры ($n=11$), акушеры-гинекологи ($n=10$), стоматологи ($n=10$), хирурги ($n=10$).

Результаты. Анализ массива нарративов позволил выделить 3 ключевых семантико-смысловых блока данных (включающих 7 подгрупп), которые выступили эмпирической основой стандартного сюжета нарративов: довузовский этап [«игра в профессию» (3–7 лет), «предчувствие» профессионального выбора (8–11 лет), профессиональное самоопределение или формирование профессиональных намерений (12–17 лет)]; вузовский этап [получение медицинского образования как «фундамента» профессиональной социализации (1–2 курс), определение желаемой траектории профессионального пути (3–6 курс)]; послевузовский этап [дебют профессиональной деятельности (ординатура), «вызовы профессиональной автономности»].

Заключение. Анализ корпуса нарративов позволил выявить ключевые темпоральные точки траектории профессионального становления молодых врачей в современной ситуации и показал, что становление и профессиональное самоопределение медицинского специалиста определяется не только внутренней мотивацией, но и влиянием социальных агентов (специфичных для каждого этапа), условиями социальной и профессиональной среды.

Ключевые слова: нарративное интервью; молодые врачи; траектории профессионального становления; профессиональный выбор; мотивация.

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BACKGROUND

The development of a physician (the process of professional self-determination and socialization) and the development of the personal traits and qualities necessary for this profession begin at the stage of pre-university training and largely determine the professional path that medical students will take [1–3]. Thus, one of the currently widespread options for specialized training is the combination of specialized classes in schools and training in pre-university schools [4]. In addition to in-depth knowledge of the chosen profile, students gain an understanding of the specifics of the medical profession and the necessary personal traits of a physician, primarily altruism and ethics [5], along with empathy, reflection, observancy, and communication skills [6, 7]. In addition, modern researchers include digital competencies among the qualities that are professionally significant for a physician [8]. Psychophysiological characteristics, the presence of altruistic attitudes, the ability to manage stress, and patience with children are also important for a doctor to have [9, 10].

The professional development of a physician entails a prolonged period of training at a higher educational institution (HEI). This training is distinguished by two key characteristics: a practical orientation, exemplified by the Russian school of medicine's longstanding tradition of "training at the patient's bedside", and a rigorous academic workload [11, 12]. It is students' stable motivation to obtain professional knowledge, skills, and abilities in their chosen area of specialty that is the leading condition for success [13, 14].

The process of professional socialization during the stage of transition from school to university is accompanied by high adaptation loads. According to Yu.N. Timofeeva, the level of medical students' adaptation changes depending on the duration of study at the HEI, and the most active adaptation mechanisms are used by junior students [15]. During the process of studying at an HEI, the evolution of the future doctor's personality continues and includes the creation of the medical student's professional identity [16, 17]. Considering that in the first years of study students are faced with forced separation from their families, the need to make new contacts, and the change in their educational routine [18], the emotional, psychological, and physical stress of students increases significantly. In this case, professional socialization can be defined as a continuous "socio-psychological adaptation and integration process, whereby an individual's internal orientation and the development of specific personal resources are carried out" [19] on the basis of insufficient adaptation skills among young people. This can result in a distorted trajectory of professional socialization, which may in turn lead to the formation of an incorrect professional identity or a student's refusal to study in the chosen specialty [20].

At the same time, early professional socialization researchers note a tendency among first-year students

to focus exclusively on the study of basic medical disciplines, which often leads to the formation of a "monoprofessional" identity and self-limitation [18, 21]. Thus, it is increasingly noted in the scientific literature that the transformation of modern medical education and the widespread introduction of innovative technologies require a revision of the model of "doctor-patient" interaction in the context of setting new tasks "to prepare a doctor with professional competencies, communication skills and ethical attitudes" [14].

In many ways, the success of professional socialization during medical school is associated with the involvement of students in clinical practice, the acquisition of experience in teamwork, and interaction with a mentor, who often becomes an example to follow, a role model, the so-called "significant other" [22, 23]. The importance of knowledge continuity and mentoring in the development of a medical specialist is primarily determined by the need for medical students to understand possible errors in clinical practice and the experience of practicing doctors and mentors in overcoming difficult situations during the training stage [24]. In addition, mentoring plays an important role during the initial stages of work, when a young medical specialist adapts to an established medical team, begins to apply independently existing professional knowledge, and learns to construct effective communication with patients [25].

In general, according to official data, 97% of medical school graduates find employment in their specialty within the first year after graduation [26]. However, various estimates suggest that up to 25% of certified specialists subsequently decline to work in accordance with their qualifications. The main reasons for leaving the profession include a heavy workload, irregular working hours, discrepancies between wages and expectations, the low prestige of the medical profession, and a high level of professional burnout [27]. Taking into account the persistence of personnel shortages in the healthcare system and the duration and intensity of training a medical specialist, it seems necessary to study the peculiarities of modern medical education and the factors and obstacles that influence the commitment of young medical specialists to their professional choice.

AIM

The study aims to investigate the trajectories of young doctors' professional development in the current Russian healthcare system.

MATERIALS AND METHODS

The study of young medical specialists' professional development was conducted from September to December 2022 at the Institute of Social Sciences of Sechenov University. In accordance with the research methodology (narrative interview, $n=52$), the sample was created using the snowball

method and mass mailing of an invitation to participate in the study via instant messaging (department chats, university graduate chats, and professional communities).

Inclusion criteria

The criteria for inclusion in the sample were the medical HEI diploma, at least one year of work experience in the specialty and no more than five years in Moscow healthcare system organizations at the time of the survey, consent to participate in the study, and consent to publish the research results for scientific purposes.

Data collection

In accordance with the methodology of narrative interviews [28], respondents were given a form with an informational motivating appeal which explained the aims of the study and the format of the data collection (narratives). The collection of narratives included a phase of narrative impulse (request for a story), a phase of free narration of the history of professional development, motivation for choosing a specialty, aspects of adaptation in the professional environment during the first years after graduation, experience, life plans, career expectations, and, in some interviews, a phase of narrative questioning [29, 30]. All interviews were transcribed preserving the author's sequence of the story and emotional components of verbal speech (gestures and laughter).

Data analysis

The analysis of the research data included identifying key narrative strategies, plots, personalities (respondent, family members, school teachers, university teaching personnel, and colleagues), and temporal characteristics of the stories. In accordance with the chosen buildup strategy of narrative analysis [31], the data were grouped, discursive vectors of the stories and stable social practices were identified [32], and three key semantic sense blocks of data (including seven subgroups) were identified. These steps served as the empirical basis for analyzing the temporal sequence of the standard plot of the narratives, which runs as follows: "playing at a profession" (3–7 years of age), "premonition" of a professional choice (8–11 years of age), professional self-determination or formation of professional intentions (12–17 years of age), obtaining a medical education as a "fundamental" stage of professional socialization (1–2 years of study), determining the desired trajectory of the professional path (3–6 years of study), the debut of professional activity (residency), and "challenges of professional autonomy".

Study participants

The study participants ($n=52$) included 11 therapists, 11 pediatricians, 10 obstetricians-gynecologists, 10 dentists, and 10 surgeons. At the time of the survey, the age of the respondents was in the range of 25–32 years. The average age was 28.2 years and the median age was

28 years. The respondents' work experience in the specialty, in accordance with the inclusion criteria, ranged from 1 year to 5 years (the average was 2.8 years and the median was 3 years).

RESULTS

The analysis of the narrative interviews permitted the identification of several features of the empirical material. Primarily, in the vast majority of stories, the structure of the presentation of events was linear (direct or reverse) and consistent, while chaotic stories were the exception. This may be associated with the peculiarities of the clinical thinking of young doctors and a retrospective presentation (comprehension) of the history of their professional development. In addition, the key temporal points of the story (which coincided mainly with the stages of determining the respondent's professional choice and development) in most cases not only reflected the events and factors that influenced the professional choice but also included specific individuals or social groups that played the role of social agents of professional socialization.

The data analysis facilitated the identification of three stages of doctors' professional self-determination: pre-university, university, and post-university (professional development). Each of these stages was further delineated into two or three substages.

Pre-university stage of professional self-determination

"Playing the profession"

The first temporal point and part of the typical plot was the stage of childhood interest in the profession, presented in half of the stories analyzed. "In principle, I have always been attracted to medicine since early childhood. And considering that I am the older brother and I had to take care of two younger brothers, pediatrics began for me right from early childhood" (male, 32 years old, pediatrician, in-patient hospital, four years of experience).

In approximately one-third of cases, interest in medical manipulations was based on the desire to treat a long-term or frequently ill relative and to improve their condition. "I realized that I wanted to become a doctor in early childhood, largely because I saw how a close relative of mine suffered from an illness, and I wanted to help him" (male, 29 years old, obstetrician-gynecologist, in-patient hospital, four years of experience). "I have been treating and helping someone my entire conscious life. My grandfather (dad's father) was very ill, and my grandmother on my mother's side had diabetes. I saw what a doctor meant to them, and I wanted to help them, to cure them. The choice of medicine happened by itself" (female, 30 years old, pediatrician, outpatient-polyclinic facility (OPF), four years of experience).

At this stage, the narrators observed that obtaining the approval of their family (parents and grandparents) was crucial. However, this approval was of a somewhat utilitarian (mercantile) nature in some cases. "I thought about becoming a doctor from an early age, and my parents approved it; it is good to have your own doctor at home. And my grandfather told me that a doctor will always be well fed; well, that was the measure of success in life for that generation" (male, 31 years old, therapist, in-patient hospital, four years of experience).

Most often, the approval of "playing doctor" was expressed both when a family member was seriously ill and when family members were doctors (support for the dynasty). "In early childhood, probably before I was five, I realized that I wanted to become a doctor. My father and grandfather were doctors. But my father's image became a role model. And such a hereditary factor was of primary importance. My father's example was the most striking" (male, 28 years old, dentist, in-patient hospital, four years of experience). In addition, approval was expressed in families where the medical profession was romanticized. "My parents probably accepted my desire with hope as a doctor is always needed in the family [laughs]. And in general, there was a cult of doctors in the family, incredible respect. Doctors were always spoken of as saviors" (male, 29 years old, obstetrician-gynecologist, in-patient hospital, four years of experience).

In addition, the child's commitment to this play was considered a condition for the development of positive (socially approved) personal qualities such as empathy, sympathy, care, and having a "good reputation". "... my parents believed that a doctor is a good profession, and if a son plays a doctor, he will grow up to be a kind, understanding, sympathetic, and generally good person" (male, 28 years old, therapist, in-patient hospital, two years of experience).

Respondents noted lack of family support as one risk of abandoning the career path of medicine. "... if the family did not support me, I would forget about becoming a doctor" (female, 28 years old, dentist, OPF, four years of experience). And, "... we played together with a friend, but her family believed that doctors are poverty and snot. And she stopped. Her dad was a businessman; the interests in the family were slightly different" (female, 28 years old, obstetrician-gynecologist, in-patient hospital, three years of experience).

"Premonition" of professional choice

Another key point on the path to professional self-determination, highlighted in the structure of the narratives, arises in the period of study in primary school (8–11 years) and is often associated with the preliminary choice of the future profile of the class, for example, medical and biological, natural sciences, or chemical and biological or medical. "I already said in elementary school that I would be a doctor, and I plan to transfer to a medical class in high school. I kind

of felt like an adult, important, well ... such a future savior of life on Earth" (male, 32 years old, pediatrician, in-patient hospital, four years of experience), and "... we had an experimental profiling of the class. And somehow, we were selected for the transition to specialized classes already in grade 3 or 4, depending on the inclinations. I immediately wanted to get into the natural sciences" (female, 27 years old, surgeon, in-patient hospital, one year of experience).

At this stage, support from school teachers was an important motivator for choosing one's professional path. "... my teacher did a lot. She told me, 'You can become a good doctor. You have the necessary qualities, and you are attentive. You feel people. You see when they feel bad.' Such faith in the child on the part of the teacher, and we perceived teachers as an authority, determines your future path" (female, 27 years old, neurosurgeon, in-patient hospital, one year of experience).

Parents' support for the child's desire to obtain in-depth knowledge in the medical field largely reinforced the motivation to master the specialty chosen. However, the narrators clarify that the parents "... did not perceive this as a serious final choice. Rather, my parents thought that I would receive more in-depth knowledge at school, which would be useful for my development" (male, 30 years old, otolaryngologist surgeon, in-patient hospital, five years of experience). "My family supported me, but they were also afraid that I would not enter or would be disappointed with my choice. They gently told me that a doctor is an altruist. It is a wonderful, good profession, but there are others, too" (female, 30 years old, pediatrician, OPF, four years of experience).

Interestingly, it is at this stage that the importance of friends' opinions about the chosen professional path begins to grow. "My school friends jokingly called me Aibolit as I always had some sick animal, picked up on the street, which I treated. And they came to me for advice with their 'cats-puppies.' Of course, my status as a 'doctor' was an element of coolness and authority for me" (female, 27 years old, neurosurgeon, in-patient hospital, one year of experience). Furthermore, personal experience of helping influences the awareness of professional interest. "I nursed kittens from a pipette (the cat died during labor). And this experience, when you have a life in your hands, albeit a small one, and you held it... I realized that I should continue to save and help. Well, here I am — saving and helping" (female, 25 years old, obstetrician-gynecologist, in-patient hospital, one year of experience).

At this stage, the risks associated with abandoning the chosen professional path, as reported by respondents, include a lack of support from loved ones and an awareness of the complexity of a doctor's practical work. "My parents, teachers, even neighbors always supported me. But I saw, for example, how at school they laughed at my classmate like, 'What kind of teacher are you? You don't know anything,' and he, you know, 'faded.' And I understand that if they had

told me that, I probably would have also abandoned further education in this field" (female, 28 years old, dentist, OPF, four years of experience). And, "I remember my teacher telling me that being a doctor is always just work, and there will be no time for walks or games, and ... I thought hard: 'May be screw it, this medicine?' But then curiosity and interest won out" (male, 28 years old, surgeon, in-patient hospital, four years of experience).

Professional self-determination or formation of professional intentions

According to the data obtained, the key starting point in determining a professional path is the period of study in middle and high school (12–17 years). During this period, most narrators confidently realize their professional purpose. Slightly more than a third of respondents thought about choosing a medical profession for the first time at this age. "At about 13, I realized that I wanted to become a doctor, to 'do good' to people. And it was objectively clear that I meet the requirements of this profession. I have the necessary qualities" (female, 31 years old, pediatrician, in-patient hospital, five years of experience). And, "In grade 7 or 8 of school, I already knew that I would be a dentist. I somehow clearly chose it. Although my parents are not doctors, they immediately oriented me toward this specialty. I understood that it was interesting, prestigious, and I would have a salary" (male, 26 years old, dentist, OPF, two years of experience).

The narratives reflect a connection between the choice of career path and the internal motivation and confidence in the respondent's own professional destiny, along with favorable external conditions (support from family and friends, a stable financial situation in the family). Thus, the study participants noted that, during this period, the motivation for choosing a profession was created primarily on altruistic attitudes to "help people", the desire to get the opportunity to be part of a "good cause" (there were more than 46 variants of semantically related words with the concept of "helping people" according to the analysis of the respondents' opinions in the Concepts tool ATLAS.ti), "... because in addition to some of my own interests, there is also such a good goal, namely, to help people, to realize that you are part of this" (male, 28 years old, trauma surgeon, in-patient hospital, two years of experience).

In addition, for high school students planning to develop their skills in the medical profession, the main marker of success is social significance and the demand for doctors in the labor market. "When I was choosing, I thought that I needed the profession that was most required, and it seemed to me that it was a doctor. The most needed and the most important" (female, 28 years old, obstetrician–gynecologist, OPF, one year of experience).

Strong motives for choosing a medical specialty are confirmed by the absence of focus on high earnings. "This [low salary] has never put me off" (female, 27 years old, therapist, OPF, less than one year of experience), and

"...we didn't really understand about money and the social component, what the role of a doctor in society is, what kind of money there is. Although we were not very rich, we were not very interested in this issue" (male, 30 years old, otolaryngologist surgeon, in-patient hospital, five years of experience). The financial situation of the respondent's family was an important factor in the choice. "My parents didn't earn much at that time, but my grandmother said that if I wanted to become a doctor, she would pay for the courses and a tutor — everything that was needed. If it weren't for her, I might not have become a doctor" (female, 27 years old, neurosurgeon, in-patient hospital, one year of experience). "For my parents, this was a fairly significant expenditure item; I was constantly learning something in these endless courses, books, specialized museums, and tutors. But without all this, it would have been difficult to enter university" (male, 31 years old, therapist, in-patient hospital, four years of experience).

In many ways, it is during this period that respondents come to realize how unique the profession is. "After all, medicine is such a unique specialty. Yes, there is a desire to learn something new, unknown, and unusual. And the more I delved into the profession and took some new disciplines, the more interesting it became" (male, 31 years old, urological surgeon, in-patient hospital, four years of experience). Moreover, an interest in certain areas of medicine develops. "Currently, I am a general practitioner. Initially, I really wanted to be a psychotherapist. This decision was influenced by Viktor Frankl's book *Say Yes to Life!* which I read at the age of 16. I was so fascinated by psychotherapy that I realized that I would enter medical school" (female, 29 years old, general practitioner, OPF, four years of experience).

Interest in medicine is supported by mastering the program in specialized subjects. "Biology. I was generally the king of the school. I wrote such essays every week, wall newspapers" (male, 30 years old, otolaryngologist surgeon, in-patient hospital, five years of experience), and "I chose medicine because I have always been drawn to related sciences (biology, chemistry)" (male, 27 years old, surgeon, in-patient hospital, two years of experience). In addition, the presence of a specialized class at school (chemical and biological, medical, and others) and the creation of new friendly ties among classmates based on common interests also contributed to strengthening the motivation for a professional choice. "... when I realized that this field was interesting to me, I chose the chemistry and biology class. And when I started studying in this class, a completely different circle of friends formed around me. Our interests in the shared field somehow reinforced my choice. If you mainly study biology and chemistry and your friends also look in this direction, you see only one goal, to become a doctor" (male, 26 years old, dentist, OPF, two years of experience). And, "... we had a natural sciences class, which was later transformed into a chemistry and biology class. This immediately put me on this professional path. My first teacher gave us such a good base. We worked with microscopes,

went to museums, and volunteered" (female, 27 years old, surgeon, in-patient hospital, one year of experience).

The choice of profession at this stage was determined largely by the presence of a significant "other" for the narrators [33, 34], for example, relatives who are doctors whose professional success or career serves as a guideline when making decisions about professional development. "All my family are doctors, so since childhood I have oriented myself toward this specialty. My grandmother had a special influence. She is a famous surgeon, and I wanted to continue this dynasty. I also wanted to become a surgeon and help people" (female, 28 years old, therapist, in-patient hospital, two years of experience). In addition, some participants admitted that their parents played a major role in determining the direction of their education. "It was not my idea, but my parents' because it was quite prestigious, and they kind of encouraged me to achieve some kind of success" (female, 27 years old, therapist, OPF, less than one year of experience). And, "...including at the suggestion of my parents, from my mother's side, we thought that medical education was a good story. If there's anything, you can always successfully go to work as a sales representative. Generally, you will always have money" (female, 27 years old, therapist, OPF, less than one year of experience).

The prestige of the medical profession influences the professional choice. "I have always believed that the specialties of a doctor and a teacher are the most prestigious" (female, 29 years old, obstetrician-gynecologist, in-patient hospital, four years of experience). Furthermore, popularization of the medical profession in the media also has a positive effect on reinforcing the choice of the medical profession. "My motivation to get into medicine began with a series of good programs, 'Moscow Rescue Service' (male, 30 years old, therapist, OPF, four years of experience).

One of the media images that influenced the choice of profession was that of Gregory House, a doctor from the series "House M.D.". "Back then, I wanted to become an oncologist. When I went to medical school, I thought that I would become an oncologist. It is not connected with any situation. I just watched 'House M.D.' and thought, 'Oh! This is important' (female, 28 years old, obstetrician-gynecologist, OPF, one year of experience). And, "... for me, the main example was Dr. House. I thought that I would become a doctor and also solve various medical mysteries" (female, 29 years old, pediatrician, in-patient hospital, three years of experience). Notably, despite his image as a cynical, rather egotistical doctor with a low level of empathy, respondents saw Dr. House as an intellectual focused on patients' interests and a highly professional specialist striving to solve complex clinical problems and improve the work of the hospital. They did not give as much importance to his negative traits. ("... there was also a series, "House M.D.". I was fascinated by the situations described there, how they solved the puzzle, how cleverly and unusually he did it. House is incredibly cool. He is a genius. We see that he systematically evaluates the problem and looks for unconventional solutions, although

he is not very good with ethical issues" (male, 27 years old, therapist, OPF, one year of experience).

Nevertheless, it was largely the visual, on-screen image of the doctor and the specifics of his interaction with patients that allowed respondents to "feel" the specifics of the profession. "When you look at the screen and see that the doctor works with real people, with a wide variety of nosologies and anamnesis, lifestyles, you transfer this to yourself, your future. Somehow, I immediately skipped from the childhood image of Doctor Aibolit to Doctor House and sobered up a little from the understanding that responsibility for life, for this specific person, will be on me. Of course, this is scary" (female, 31 years old, pediatrician, in-patient hospital, five years of experience).

However, about a third of the respondents indicated that as schoolchildren they had a backup option for choosing a professional path. "... when I was in school, I was interested in several specialties, including medicine" (male, traumatologist-orthopedist, residency 2019). The moment that one chooses a specialty is characterized by the presence of alternative career development opportunities. "...there was an option to enter a sports school, with the swimming specialty, the Olympic Reserve School. I had to choose. It so happened that the school had a medical group. And off we go!" (male, 30 years old, trauma surgeon, in-patient hospital, three years of experience). And, "Until the last moment, I still thought about entering the law faculty, to follow, so to speak, in my father's footsteps" (male, 31 years old, urologist surgeon, in-patient hospital, four years of experience).

An important milestone of this stage is the transition from school to university; in many ways, respondents at this stage noted anxiety about passing exams and entering a university. "Entering a medical university turned out to be a serious test for me. I was afraid that I would not get in, that I would not have enough knowledge and would have to go to another field" (female, 27 years old, therapist, in-patient hospital, two years of experience). "First exams, then entering; no matter how well a schoolchild prepares, there is fear" (female, 29 years old, obstetrician-gynecologist, in-patient hospital, four years of experience). However, getting a place at university is perceived as achieving an intermediate goal on the trajectory of a doctor's professional development. "... when I was enrolled, I felt like that was it. My dream came true. I am a doctor. And then the realization comes that I still have to study and study to become a doctor" (female, 25 years old, pediatrician, in-patient hospital, three years of experience). In addition, in many ways, the transition to studying at a medical university is perceived through the prism of self-affirmation. "I was filled with pride, because I entered the First Medical University. Do you understand? This means that I am, at the very least, cool" (male, 30 years old, otolaryngologist surgeon, in-patient hospital, five years of experience).

It is at this stage that the narrators set their primary career goals. "...initially, I wanted to be a pediatric oncologist

surgeon. I wanted to save people and make the world a happier place. It is a kind of armchair heroism [laughs]. And I had a lot of courage, but I had little understanding of how it would work in practice. A child's view of medicine levels out existing problems, blood, labor, nerves, and takes into account only the result, a successful result at that. I imagined the profession back then as 'I came, I saw, I conquered'" (male, 29 years old, obstetrician–gynecologist, in-patient hospital, four years of experience).

Thus, the analysis of the text demonstrates that the process of professional self-determination (the pre-university stage of professional socialization), traditionally associated with the choice of senior school students to become doctors, actually has broader time boundaries, often starting in early childhood. Altruistic attitudes and interest in medicine, examples of professional self-actualization in family members who work in the field of health care, the image of characters in films or books, and mastery of specialized disciplines at school are the factors that contribute to future doctors' professional self-determination and their motivation to obtain specialized education before graduating from high school. Social agents of professional socialization at the pre-university stage are parents, teachers, friends, and classmates, whose opinions decisively influence the preparedness of the future doctor to study at medical school. Important aspects of commitment to professional choice are the adolescent's awareness of a doctor's social role, the prestige of the profession, support from the social environment, and the financial situation of the family.

The stage of professional self-determination at university

Obtaining a medical education as a foundation of professional socialization

In most of the narratives, the start of professional training is described as a process of inclusion in the professional community and "the official start of a professional path". When describing this period, narrators noted that entering medical school was interpreted as inclusion in a professional community. "As soon as I entered university in my first year, I realized that that was it. I was 'home'. This was my life, my profession. I was among my own" (female, 28 years old, dentist, OPF, four years of experience).

In many ways, this was because of the desire to meet the expectations of family and friends. "When I got in, of course, I breathed a sigh of relief. I lived up to the expectations of my family. I was not ashamed in front of my friends. I told everyone that I was going to be a doctor" (female, 25 years old, dentist, OPF, two years of experience). "Of course, I was proud of myself when I entered. I didn't let my family down, and I'm a good guy. I'm practically a doctor already" (male, 30 years old, trauma surgeon, in-patient hospital, three years of experience).

The respondents indicated that the first years of study are associated first of all with acquiring a large amount of knowledge. "It was interesting to study. I wouldn't say it was difficult, but the first years were not easy" (male, 28 years old, dentist, in-patient hospital, three years of experience). "The first years are, in principle, about dry, bookish knowledge and the delight from the place where you are" (male, 30 years old, otolaryngologist surgeon, in-patient hospital, five years of experience).

Considering that they receive basic knowledge in their first years, many students perceived the learning process as a continuation of the school curriculum with an in-depth study of their favorite subjects. "The first year was a bit of a slog because it was still the school curriculum. Everything that was not school, subjects like anatomy, I was back on a high horse there" (male, 30 years old, otolaryngologist surgeon, in-patient hospital, five years of experience). "I was interested in everything that the teachers told me. Even the subjects that had already been covered superficially in school and many students considered boring I considered an important stage that simply needed to be completed, and I tried to find something useful and interesting for myself there" (female, 27 years old, therapist, in-patient hospital, one year of experience).

One of the difficulties for many narrators was adapting to the educational process at university. "For me, medicine during my studies at university seemed like a huge museum, and I, as a spectator, moved from room to room, admiring the exhibits without deeply penetrating the essence. It was difficult to comprehend, adapt to the rhythm of studying at university, start working, and not get emotional" (male, 28 years old, pediatrician, in-patient hospital, one year of experience). However, the main array of narratives sounds like an imperative for the growth of professional motivation as the difficulties of studying are overcome. "The first years of study flew by quite quickly, and although there were, of course, some individual difficulties (hello to the department of pathological anatomy!), I was able to master everything successfully, and these difficulties even somehow strengthened me in my desire to be a doctor. According to the classics, what comes easy is not appreciated, and you begin to love more what requires effort" (male, 29 years old, obstetrician–gynecologist, in-patient hospital, four years of experience).

Nevertheless, it is the initial stage of study at university that becomes a "test of professional suitability" for some students. First of all, the narrators noted the heavy academic workload. "There was so much to keep in mind that even in year 2, I was thinking about leaving despite the fact that I liked studying here. But some subjects were extremely difficult. ... I thought, 'Maybe I should quit all this?' (female, 28 years old, obstetrician–gynecologist, OPF, one year of experience). And, "... I can't say that I was the oldest in the group. There were people even older than me, but the main contingent was 18 years old. They felt like they were still at school. Some people had their heads in the clouds,

and they barely managed to cope with the studies. Someone even left because of this workload" (male, 32 years old, pediatrician, in-patient hospital, four years of experience).

The respondents emphasized that the ability to endure a heavy workload is one of the main criteria of a "right" doctor. "There was a group of girls whom one of the teachers later called 'decorative doctors.' I remember they passed chemistry on the fifth try, in year 1. They could not cope with the large volume of knowledge, physical and mental workload, stress, that is, everything that a doctor lives with constantly" (male, 32 years old, pediatrician, in-patient hospital, four years of experience). The narrators believe that the key to adapting to the academic workload is the student's discipline ("... if you do not miss, you immediately work on everything, mobilize. That's it. You fit into the process and go along the beaten path" (female, 25 years old, pediatrician, in-patient hospital, three years of experience). "These complaints about the difficulties of adapting in medicine ... A disciplined student is a disciplined doctor. If you handle everything strictly according to the schedule and study so that the workload will be normal, and studying will be interesting" (male, 28 years old, surgeon, in-patient hospital, four years of experience).

In addition, for some students, the need to master several disciplines that require research with cadaveric materials, organs, tissues, biological fluids (primarily blood), and other pathoanatomical materials becomes a challenge. "... there were those who left after the first anatomy class. These were girls, but there was also a man; he left... It was just a physiological reaction; they could not overcome their fear of blood, of the body, the need for manipulation. You make an injection into rubber calmly, but when you work with tissues, it's different" (female, 27 years old, surgeon, in-patient hospital, one year of experience). "You must know whether your body will let you down. It is true that some leave after their first encounter with real medicine, where there is blood, fluids, and death. There can be fainting, panic, heart palpitations, all that" (male, 30 years old, pediatrician, OPF, four years of experience).

The respondents consider preliminary testing of high school students or applicants for "physiological compatibility with the profession" one possible option to prevent such situations. "What was important was to understand that you correspond to your specialty and the profession in general. ... This, of course, is a shame when a person has undergone such training, passed all the exams, gotten a place, and even studied for some time and understands that he cannot work in his already beloved profession. It would be good if he went into a related field. Therefore, we need to come up with some other test, a check for physiological compatibility with the profession. For our work, this will be very much in demand. Not everything can be taught and not everything can be overcome" (female, 27 years old, surgeon, in-patient hospital, one year of experience). "Some kind of testing mechanism is probably needed at the stage of career

guidance, that is, for stress resistance, absence of allergies, and fear of working with blood and corpses" (male, 30 years old, pediatrician, OPF, four years of experience).

In general, having personal qualities like stress resistance, responsibility, empathy, love for the profession, the desire to help people, and altruism are, in the opinion of the study participants, one of the most important requisites for doctors and one of the conditions for adapting to studying at a university and later on a work team. "... many go to medical school not realizing that different specialists must have different personal characteristics. For example, stress resistance in any specialization where you work with people is very important. Sometimes I look at a person and do not know how she will continue to work with her hysterics and other problems" (male, 30 years old, pediatrician, OPF, four years of experience). And, "...you have to be into medicine... I wanted to be only in medicine. For me, a doctor is always a person who helps people, brings good. That is the Red Cross, an altruist. The best, the smartest, responsible, confident, calm, loving and understanding his patients, and stress-resistant. And only then will he be able to acquire all the knowledge and skills at university, gain experience, and fit on the team. In general, he will be able to stay in the profession, not burn out, not give it up, and not lose motivation" (female, 28 years old, dentist, OPF, four years of experience).

For first-year students, the motivation for studying and professional socialization is primarily movie characters. "I still had an image in my head, the healer Adams. He was like that, very pro-patient. I wanted to be on the level, to match the best examples" (female, 27 years old, therapist, OPF, less than one year of experience). And, "...when you study, you have a certain image that you focus on, what you want to be. I saw myself somewhere between House and Pirogov [laughs]. But the competition was high, because half of the faculty were such Houses. Among earthly [people] (author's note), our teachers were an example, we had fantastic surgeons" (male, 28 years old, surgeon, in-patient hospital, 4 years of experience). In addition, successful groupmates and senior students served as examples of success. "Of course, in our first years, we looked at senior students with our mouths open — they had already published articles and worked — and we wanted to be in this hospital story, too" (male, 32 years old, pediatrician, in-patient hospital, four years of experience).

An important condition for maintaining and strengthening one's motivation to master the profession is a medical student's "safety margin", which depends on not only personal characteristics but also their health, support from loved ones, and financial and time resources. "At medical school, if you study conscientiously, you must have a resource of support, both psychological and financial, and just need to be cheered up somehow, felt sorry for, fed on time" (female, 27 years old, general practitioner, in-patient hospital, two years of experience). "The motivation to choose

surgery was supported by the availability of health resources so that I can work many hours calmly, my hand is steady, and I am stress-resistant. Plus, I was ready to spend day and night at the department and the clinic" (male, 27 years old, surgeon, in-patient hospital, two years of experience).

In addition, respondents were motivated by their loved ones' asking for advice on health issues. "Both my friends and family immediately began to treat me as a 'trained' doctor. They asked for advice and listened to my recommendations. Of course, I tried to learn everything as best as possible, to master it, in order to work on my 'reputation' (female, 28 years old, dentist, OPF, four years of experience)". Remarkably, the family often provides basic support to a medical student, and in the event of a difficult life situation in the family, the risks of a young person's leaving the profession increase. "If the family is 100% supportive, if everything is fine in the family both in relationships and with finances, then the student is in a position to study. Our girl's parents got divorced; the situation with money was really bad. She left after year 2 and started working as a manager, selling windows" (male, 30 years old, otolaryngologist surgeon, in-patient hospital, five years of experience).

Thus, at this stage of professional socialization, future doctors face different challenges. The first is the need to adapt to a new team and a heavy academic workload (the need to acquire a wide range of knowledge, skills, and abilities as a basic condition for entering the profession). Students need to assess their compliance with the requirements of the profession (absence of hemophobia, high efficiency, responsibility, stress resistance, discipline, empathy, and love for the specialty chosen). The key social institutions of professional socialization at this stage are the institutions of education and medicine, and the social agents of professional socialization at this sub-stage are primarily university professors, groupmates, students in other courses, and parents. The support of these people, along with the future doctor's confidence in their own professional purpose, desire to obtain a professional education, and desire to integrate into the professional environment, is of decisive importance in staying motivated to obtain a medical education.

Defining the desired trajectory of a professional path

Factors in choosing a professional specialization and difficulties in professional self-determination

The curriculum of the final years of medical specialties (years 4–6) is designed to introduce students to narrowly specialized disciplines and strengthen their specialized knowledge. At this time, students choose a specialization and decide on their choice of residency. The data array reflects that respondents were guided in choosing their future path by a sense of their vocation. "I am sure that this is my vocation, and this contributes to my immersion in work and responsibility for a small patient" (female, 28 years old, pediatrician, in-patient hospital, four years

of experience). In addition, respondents were also guided by professional interests. "Why obstetrics and gynecology? There are several reasons. First of all, it is my interest as I have always been interested in the question of the origin of life, interested in how a child develops, what processes occur in the mother's body, how to help people who cannot experience the joy of parenthood" (female, 29 years old, obstetrician-gynecologist, OPF, two years of experience).

An example of a "significant other" (parents, close relatives, and family friends) in the medical profession, supported by the desire to "continue the medical dynasty" was also important for the study participants. "I did not have to choose a specialty. It's a dynasty, you understand. And then my father trained me, shared the nuances with me as a colleague, got me interested, so I didn't see any other path" (male, 30 years old, trauma surgeon, in-patient hospital, three years of experience). "My parents are also doctors, and I didn't see any other professional path for myself. ... When it was time to decide on a specialty, a life situation occurred that determined my choice of therapeutic profile. A loved one fell ill. We couldn't understand what the problem was, and a good therapist helped" (female, 27 years old, therapist, in-patient hospital, two years of experience). In addition, the narrators note that having a relative who is a doctor helps medical students better understand the practical foundations of the profession. "I never thought about what kind of doctor and what specialization I would be. My fate was decided, and now I am very happy about it. During my internship, I felt like a leader. I already knew how to do a lot thanks to my father. From the first years, I had the opportunity to assist my father. He has his own dental office" (male, 28 years old, dentist, in-patient hospital, four years of experience).

The choice of professional path by medical school students was influenced largely by the passion they saw in the work of their professors. "... my teachers — I was lucky with them — set an example for us. I remember Zagorovskaya's lectures most of all, but there were other teachers who captivated us with their subjects, so, in the end, I chose pediatrics" (female, 29 years old, pediatrician, in-patient hospital, three years of experience). "Almost all the teachers were so absorbed in their specialty that I involuntarily became infatuated, saw a wide range of professional growth in this field, and saw myself as nothing but a dentist" (male, 26 years old, dentist, OPF, two years of experience).

A striking example of a successful professor also motivates students to achieve. "By the way, some teachers became examples. When you see that there are such cool people like Bokeria or Reshetov, somewhere inside, you start thinking, 'I want to become like them!' And if even deeper in your soul, then, 'I want to become better, cooler!' Or even, 'I can become cooler!' (male, 29 years old, obstetrician-gynecologist, in-patient hospital, four years of experience)". And, "I wanted to become a neurosurgeon after a university internship in Croatia, where I was greatly inspired by the local

head of the neurosurgery department" (female, 27 years old, neurosurgeon, in-patient hospital, one year of experience).

One of the factors that determines the choice of path for further professional development is interaction with university professors on joint research projects. "I attended various conferences, courses, and most importantly, worked in a student club. There, I gradually became imbued with surgery" (male, 27 years old, surgeon, in-patient hospital, two years of experience). And, "I chose this specialty back in my year 4 and attended various clubs and conferences in order to come to residency prepared" (female, 27 years old, surgeon, in-patient hospital, one year of experience). A number of narratives highlight the key role of a supervisor or informal mentor in students' choice of specialization. "...it is important that I got my supervisor. ...She was somehow well-disposed toward me. I published an article with her in my year 4, and she taught me a lot, plenty. And it was by looking at her that I chose my specialty" (female, 27 years old, obstetrician-gynecologist, OPF, two years of experience). And, "...life brought me together with a wonderful teacher, T.M. Zagorovskaya, who directed me along the therapeutic channel and explained that this profile would enable me to develop further in any direction of interest" (male, 27 years old, therapist, OPF, one year of experience).

Respondents noted that this format of knowledge transfer is also interesting for the teaching staff. "I got into this club. I liked everything. I got a very competent old professor as a scientific supervisor. It is always good to meet such a graybeard professor ... who does not need anything except to impart knowledge. We became such good friends with this 'grandfather' that the following year, already in year 5, I became the chairman of this club. And we began to work with him on a related pathology, deformity of the external nose" (male, 30 years old, otolaryngologist surgeon, in-patient hospital, five years of experience).

Respondents emphasize that knowledge, skills, and abilities are the "entrance ticket" to working in the chosen specialty. "... it is knowledge, skills, and abilities that become your 'pass' to the profession, but you still need to do a lot, namely, adapt to the work, to the patients" (female, 27 years old, neurosurgeon, in-patient hospital, one year of experience). And, "...at the institute, I was like a pioneer everywhere, the first. Wherever they sent us, I had to pass everything, prove myself" (female, 27 years old, obstetrician-gynecologist, OPF, two years of experience).

Interestingly, in the stories of narrators whose specialization is related to the health of mothers and children, "romantic" and altruistic motives for their choice are often emphasized. "...when I was studying at university, I understood that I wanted not only to work as a gynecologist in a consultation office but also, in addition to pregnancy management, to see the results of the work (the birth of a new life) and help people in critical situations" (female, 28 years old, obstetrician-gynecologist, in-patient hospital, two years of experience). "I chose my specialization simply

because I like it. I love children. It is interesting with them. After all, children's health is an investment in the future. I may be treating a future genius right now" (female, 30 years old, pediatrician, in-patient hospital, four years of experience).

Motives based on practical considerations for choosing a specialization are much less common in the narratives. Nevertheless, a number of incentives to choose a specialty based on "convenience" can be identified in the respondents' statements: the prestige of the specialty and a guaranteed level of income, employment opportunities and demand for a doctor of a certain specialty, the prospects for development and self-actualization in the profession, and emotional, psychological, and physical resources for working in the chosen field.

Thus, the choice of specialization is explained in many narratives by the prestige of the profession. "My motivation, of course, has changed as, in addition to the general desire to save humanity, there came an awareness of the prestige of the profession, respect for the status of a doctor, and the opportunities and community of the professional environment" (male, 29 years old, obstetrician-gynecologist, in-patient hospital, four years of experience). And, "What did I think at that time about my future work? That it is a prestigious job, a respected profession" (female, 28 years old, pediatrician, in-patient hospital, four years of experience).

For some respondents, the choice of specialization was determined by the prospects of earning a high income. "In years 3 and 4, I already began to understand that the specialty I was obtaining, under good circumstances, could bring in good money" (female, 26 years old, dentist, OPF, three years of experience). And, "... I chose the specialty looking at my uncle. I understood that he would help me with both my studies and work, and I would be able to earn good money" (female, 25 years old, dentist, OPF, two years of experience).

For young doctors, the possibility of guaranteed employment and demand in the labor market also became a significant factor in their choice. "Of course, I also chose the specialty so that I could easily find a job later. Surgeons were in demand when I was studying at university. They were in demand during the coronavirus epidemic, and they will be in demand in the future" (female, 27 years old, surgeon, in-patient hospital, one year of experience). And, "... everyone dreams of cardiac surgery in their first years. All that romance. And closer to year 6, the teachers themselves advise you to choose a general specialization (general therapy or general surgery) as it is easier to be employed, and you will always find a job. That is why I took steps toward general therapy" (female, 30 years old, therapist, OPF, four years of experience).

In addition, when choosing their field of specialization, future doctors considered opportunities for self-actualization in the profession. "I see that I can advance in this direction, that the specialty is in demand" (female, 27 years old,

pediatrician, OPF, one year of experience). And, "I chose the specialty in my senior years. It seemed to me that this field would develop. It is interesting from the standpoint of clinical cases and from a scientific point of view. The possibilities for specialization within obstetrics and gynecology are also quite great, so I will be able to be actualized fully in my profession" (female, 28 years old, obstetrician-gynecologist, OPF, one year of experience).

By senior years of study at university, medical students already have an idea of the requirements for doctors of various specialties. Therefore, students take into account their physical and emotional-psychological resources when choosing their specialization. "Ultimately, the choice came to be pediatrics since I decided for myself that this profession best suits my character and temperament" (male, 28 years old, pediatrician, in-patient hospital, one year of experience). "Somewhere around year 5, I realized that I would not be an oncologist because I would not be able to withstand the moral and physical stress. ... Despite the fact that I did not do this at university, I thought that a new life, obstetrics, would be so interesting. It is a whole world, so I decided on obstetrics and gynecology" (female, 28 years old, obstetrician-gynecologist, OPF, one year of experience).

Work in practical healthcare as an entry into the profession and a factor in professional self-identification

Understanding that the work of a doctor is associated with high risks serves as an incentive for the narrators to assimilate knowledge better and master practical skills during their studies at university. "And it is better to make mistakes when it is not you who is responsible for them but the teacher, and it is not the person who suffers but the simulation equipment" (female, 27 years old, surgeon, hospital, one year of experience). And, "Of course, at university, you are fascinated by everything you are told. You absorb... You understand that later no one will tell you. You will have to do everything yourself and be responsible for it" (female, 25 years old, dentist, OPF, two years of experience).

Interest in the specialty, the desire to join the profession, and understanding the need to improve one's qualifications determine the desire of future doctors to find employment. For the respondents, an important juncture on the professional path is getting the opportunity to work in mid-level medical positions after year 3 of university. Moreover, the financial component of work activity plays a secondary role during the stage of university studies. "... I have worked as a nurse since year 5 at the institute ... unofficially, for the sake of developing practical skills, for myself" (male, 30 years old, trauma surgeon, in-patient hospital, three years of experience). And, "I worked as a nurse during my studies. They paid very little money there. I did not go to work initially because of the money but to obtain more professional experience" (male, 30 years old, therapist, OPF, four years of experience).

In general, practical work experience in medical organizations or a clinical department is one of the factors in choosing the path of professional development. "I already worked part-time in my senior years in an ambulance, then in a surgical hospital as a nurse. That is how I chose surgery. After all, I acquired something on the job. I learned something" (male, 30 years old, surgeon, OPF, four years of experience). And, "My first job was in the trauma department, when I worked as a nurse. I started back in my year 5. ... I came to understand what a trauma department with an orthopedic department is like from the inside. And there I gradually began to understand how it all works and decided to take this way" (male, 30 years old, trauma surgeon, in-patient hospital, three years of experience).

In addition, work in practical healthcare (in the optimal situation or the specialty) helps respondents make their choice of career path and also acclimates to work responsibilities and the workload. "In general, because I was on duty in the emergency room of the city hospital and in the neurosurgery department while still at university, I understood perfectly well what neurosurgery was and where I was going" (female, 27 years old, neurosurgeon, in-patient hospital, one year of experience).

In many ways, it is work on a medical team that signifies "belonging to the profession" and inclusion in the professional community. "Yes, in my year 4, I received a certificate. I worked as a nurse in a clinic for 1.5 or 2 years. And even then, I felt my involvement in medicine. Of course, a nurse is not a doctor, but I thought that since I was studying at university to become a doctor and was already working, I was already a 'minimum salary doctor' (female, 27 years old, therapist, OPF, less than one year of experience). And, "... I was simultaneously studying at the institute and working as a male nurse at the Tushino hospital. Of course, then I felt that there is a medical 'brotherhood,' and I am a part of it. Working in conditions of complete immersion contributes to this" (male, 30 years old, therapist, OPF, four years of experience).

Often, it is teamwork, "immersion in the environment", that becomes a motivating factor both for professional development and the formation of the doctor's necessary qualities. "While still studying at a medical university, I tried to work. Starting from year 2, I took shifts as a nurse. After year 4, I worked as a nurse. After all, no experience will be superfluous. Then, I realized the responsibility for my actions when working with people, but this is also an introduction to the medical community. When you work, you immediately immerse yourself in a professional environment, try to become an ideal doctor, and develop the necessary qualities" (female, 27 years old, therapist, in-patient hospital, two years of experience). "At first, I worked as a hospital aide, then simultaneously graduated from medical school, after which I entered the institute. I thought that I was already in the profession since I had already worked in a hospital. I am already 'one of them' here, which means I have to live

up to it, master everything as well as possible so as not to let the team down" (female, 30 years old, pediatrician, OPF, four years of experience).

Difficulties in professional self-determination

Nevertheless, a significant proportion of respondents faced difficulties in professional self-determination. "At some point — in year 4 or 5 — I deviated from psychiatry and psychology. I thought that maybe I would be a dermatologist or a therapist. Later, I made my choice. I liked neurology, and in year 5, I definitely decided that it would be therapy, which combines many profiles" (female, 27 years old, therapist, OPF, less than one year of experience). And, "I couldn't decide on my choice of profession for quite a long time despite the fact that I spent a lot of time in hospitals (I even worked as a nurse in years 3 and 4) in addition to classes and practice at university. While still studying at the pediatric faculty, I considered mainly surgical specialties since I liked not only treating with drugs but also working with my hands" (male, 28 years old, pediatrician, in-patient hospital, one year of experience).

The choice of career path was complicated by a lack of relatives' support for the future doctors' professional interests. "Then, there were hesitations in my senior years. I wanted to choose a different specialty. I was interested in forensic medicine and neurosurgery, plus my relatives dissuaded me. They wanted me to be a gynecologist, dentist, pediatrician, or therapist, which, as it seemed to them, were more proper and feminine specialties. And I, having succumbed to pressure, still chose therapy" (female, 29 years old, therapist, OPF, four years of experience). "When I graduated from university, I did not quite know what I wanted to be. ... We had a family council. We were sitting and thinking. Mom said, 'You should be a cardiologist.' I said I didn't want to. And she left after that. She was offended. She didn't give advice. Of course, I was worried about this, which did not add resources to me, and there was not enough support during this period" (female, 28 years old, obstetrician-gynecologist, OPF, one year of experience).

In addition, by their senior years, students become aware of the difficulties that their specialty involves. The narratives express doubts about the suitability of the specialty that students have chosen because they know something about the working conditions and the interaction of specialists with patients. "When I was studying at the institute, I worked part-time as a nurse in endocrinology. I realized that it was still quite difficult to communicate with patients. For me, it is such a burden. ...In general, communication with patients periodically exhausts as you need to listen to everyone, explain. And I seriously thought about giving up therapy as there will only be patients there. I was thinking about radiology then. I imagined that it was something like looking at a picture, writing it down, and that's it. You don't need to communicate with patients" (male, 31 years old, therapist, in-patient hospital, four years of experience).

In addition, the financial factor can become a barrier to choosing the desired specialization. "There were hesitations because I was afraid that I would have to go to a paid residency, and it would be better to choose something else without pay. But I was able to do it. I was accepted, and I did not have to give up my dream" (male, 30 years old, surgeon, OPF, four years of experience). And, "It is clear that training to be a dentist requires a large financial investment (I did not even hope to get into a state-funded place), which will not pay off right away. ... And I had to work. It was especially difficult before the residency; if I had not worked part-time, I would not have been able to get an education. My parents invested everything they could in me, and I tried to justify the investment. Of course, I thought about what would happen if I could not handle it, where to go, in what field" (male, 26 years old, dentist, OPF, two years of experience).

Nevertheless, respondents noted that refusing to continue medical school at this stage is rather exceptional. "But even with all the doubts and difficulties, almost no one leaves the university as it's a shame to put in so much work. They advance until they receive their diploma" (female, 28 years old, dentist, OPF, four years of experience). "There are probably those who are disappointed with the profession, but in their senior years they no longer think about quitting. They just look for a paramedical field, such as registrars or business" (female, 26 years old, obstetrician-gynecologist, OPF, one year of experience).

Development of the doctor's personality during training

In general, the narratives frequently cite the importance of a doctor's personal characteristics such as empathy, responsibility, discipline, working ability, and stress resistance. "By the end of my university studies, I understood that a doctor should feel his patients, feel their pain and joy, try to help as much as possible. They are counting on you. You must bear this burden and be responsible for the consequences of your actions" (female, 25 years old, obstetrician-gynecologist, in-patient hospital, one year of experience). And, "...It is important to have special personal qualities such as compassion, a hardworking nature, responsiveness, and ambition... During the study of clinical disciplines, medical students are already beginning to understand the enormous responsibility that will accompany their entire professional activity" (male, 26 years old, dentist, OPF, two years of experience).

For many narrators, a doctor's responsibility for the life and health of a patient becomes a measure of professionalism. "But educating a doctor, training him to become a specialist is instilling discipline, understanding responsibility for the health and life of a patient. This comes in the senior years. Independent work is on the horizon, and you must live up to the title of a doctor, which is to be confident, responsible, organized, attentive, sociable, and kind" (female, 25 years old, dentist, OPF, two years of experience). And, "I realized that I am already responsible for decisions about people's health

on entering university. In fact, such a clear understanding probably came during the beginning of the internship directly 'at the patient's bedside.' This is where my most important qualities, such as persistence, a hardworking nature, and responsibility, came in handy" (female, 28 years old, pediatrician, in-patient hospital, four years of experience).

Discipline is of particular importance for a doctor. Analogies between the process of training a doctor and army training are related in the array of opinions. "... At the very start of medical school, you do not go through a breakdown but a gem cutting, when sharp corners are cut off. You are polished first for training at university, and then for work in practice. And it is better to go through this stage at university to understand that a doctor is the same as a soldier. He must be clear, disciplined, fast, and attentive" (male, 28 years old, surgeon, in-patient hospital, four years of experience). And, "That's why I started young. There must be a schedule. Everything must be according to an algorithm. Get up, eat, wash, shave, come, and do it. If you are not a schedule-oriented person in medicine—'Oh, I don't want to today. I'm not in the mood'—nothing will get done. Medicine is an army where everything is strictly according to schedule. Everything is strictly in order, all the dosages and so on. There should be no amateur activity, no matter how confident you are. Probably, only a genius in medicine could offer something like that of his own, because as soon as you take responsibility, it's your personal responsibility. You are fully responsible, not only before God's judgment but here, too. No one has canceled the court" (male, 30 years old, otolaryngologist surgeon, in-patient hospital, five years of experience).

Respondents note that a gradual "crystallization" of the awareness of a doctor's social role and his mission occurs during the training process. "In general, you enter university a little bit with rose-colored glasses, that is, to save people and sacrifice yourself, and then by the end of your studies, you already realize that you can, of course, sacrifice, but then you will save one or two, and the rest will not survive without you. The mission for which you were trained will fail. And this creates a certain responsibility and rationality, or something like that. And discipline is instilled. You need to act clearly, quickly, and confidently, but you still have to love people. Otherwise, the work is not pleasure and you will burn out" (male, 31 years old, therapist, in-patient hospital, four years of experience). "When I studied, I delved into all this. My motivation changed. We were instilled with responsibility to understand what is good and what is bad. The social role of a doctor is to do their job precisely, carefully, and without harming a person. This is what we have absorbed like the Lord's Prayer" (female, 28 years old, dentist, OPF, four years of experience).

Thus, the analysis of the young doctors' narratives shows that the period of university studies (the university stage of professional socialization) becomes a point of "determination". It determines both commitment

to the profession chosen and the path of professional advancement with the choice of specialization as the first step. The key factors that determine this choice are a sense of one's own professional destiny (vocation) and professional interest in a specific area of medicine, the desire to continue a medical dynasty, experience in joint scientific or practical work with university teachers (mentors or supervisors), examples of success in the profession, the prestige of the specialty, a guaranteed level of income, employment opportunities, demand for a doctor of a certain specialty, prospects for development and self-actualization in the chosen field, and emotional, psychological, and physical resources for work in the specialization chosen.

Risk zones at the university stage of professional socialization are the periods of primary adaptation to the specifics of the educational process and the workload of medical school, including the period of choosing a specialization (reducing options for the path of professional development). The difficulties of professional self-determination are associated with doubts about suitability of the specialty one has chosen. These doubts stem from an awareness of the working conditions and interaction of certain specialists with patients, lack of support from loved ones, an awareness of the difficulties associated with professional activity in the specialty, and financial difficulties in the student's family.

Nonetheless, the desire to obtain professional knowledge, skills, and abilities, characteristic of first-year students, is understandably transformed into the desire to put knowledge into practice by the time they complete their studies. According to the respondents, an important moment on one's professional path is the opportunity of employment in a medical organization or clinical department. However, during the stage of university studies, the financial component of work activity is of secondary importance. The priority motives are interest in the chosen field of medicine, the necessity of obtaining practical skills in the specialty, and the desire to enter the professional community (self-identification and awareness of "belonging to the profession") and assimilate professional cultural attitudes.

Furthermore, work on a medical team contributes to the development of the personal qualities needed in a doctor. The altruistic motives and romanticized view of the profession inherent in first-year students are transformed into a more rational approach and an acceptance of the specifics as they become involved in professional activity. Nevertheless, the importance of a doctor's personal characteristics such as empathy, responsibility, discipline, working ability, and stress resistance permeate the narratives. The key social institutions of professional socialization during the university stage are the institutions of education and medicine, and the social agents are teachers and practicing doctors (mentors, curators, and employers who represent a reference group for future

doctors), classmates, students from other courses, and the immediate family environment. In addition, the high social value of the medical profession in the eyes of “significant others” strengthens the narrators’ motivation for professional development and sharpens their awareness of professional prestige.

DISCUSSION

In international publications focused on the study of the professional development of medical specialists, research performed in the qualitative sociological tradition (narrative, in-depth, and focus group interviews) is one of the dynamically developing areas. However, the term “professional socialization” is often interpreted in light of “professional identity”, and the emphasis is placed on general linguistic gender features of professional communication, the role of continuity of knowledge, and skills and abilities in the medical environment [34–36].

Russian authors who have studied the problems of a doctor’s professional development note the significance of changes that occur in the structure of an individual’s professional self-awareness during the period of medical school and the development of oneself through self-understanding at the cognitive, motivational, emotional, and operational levels [19, 21]. According to researchers, the process of such self-understanding occurs in three stages. The key element of each stage is self-respect for one’s activities as a guarantee of professional success. When speaking about the development of professional self-awareness, researchers note that future doctors fully understand the humanistic foundations of a doctor’s activity not at the moment they choose a specialty but only by the end of their studies at university. This is associated with the recognition of professional responsibility for the patient’s health and life [17, 21, 37].

The pragmatic professional orientation of young people at present largely exacerbates the problem of personnel shortages in healthcare, which, according to several researchers, requires the development of early occupational guidance programs for schoolchildren [11, 14, 38, 39]. Thus, the refusal of one out of three certified specialists to work in their chosen specialty is due to the discrepancy between the expectations of medical school graduates and the actual working conditions (the workload, the specifics of interaction with patients, and the level of remuneration). This situation is largely the result of insufficient attention paid

to the individual characteristics of applicants upon admission and the lack of correlation between these characteristics and the requirements for a doctor’s personality. This situation can be aggravated by insufficient readiness to work in healthcare when one completes one’s university studies [4, 5, 14]. In order to select the most motivated young people with the personal qualities necessary for medical work, the authors propose occupational guidance work with high school students based on close interaction between universities, the population, government agencies, and healthcare management. This work should be carried out according to the model they have developed, a scheme, which includes three blocks (organizational, technological, and resulting) [23, 25, 40].

However, the particulars of the medical profession, the high level of stress and physical exertion, irregular working hours, and difficulties in adapting convince many young specialists to abandon their healthcare careers. That is why a comprehensive study of a physician’s career path is important for understanding the factors that contribute to the formation of a young specialist’s professional identity and consolidation in the chosen specialty at each stage of professional socialization [18].

CONCLUSION

The analysis of the narratives of young doctors enabled the identification of key moments in the trajectory of their professional development at the pre-university, university, and postgraduate stages. The analysis showed that the development and professional self-determination of a medical specialist is determined by internal motivation, the influence of social agents (specific to each stage), and the conditions of the social and professional environment.¹

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AUTHORS' INFO

* **Nadezhda V. Prisyazhnaya**, Cand. Sci. (Sociology);
address: 11 bldg. 2 Rossolimo street, 119021 Moscow, Russia;
ORCID: 0000-0002-5251-130X;
eLibrary SPIN: 6930-9377;
e-mail: prisyazhnaya_n_v@staff.sechenov.ru

Nadezhda Yu. Vyatkina;
ORCID: 0000-0003-3647-0066;
eLibrary SPIN: 7649-2912;
e-mail: vyatkina_n_yu@staff.sechenov.ru

ОБ АВТОРАХ

* **Присяжная Надежда Владимировна**, канд. социол. наук;
адрес: Россия, 119021, Москва, ул. Россолимо, д. 11, стр. 2;
ORCID: 0000-0002-5251-130X;
eLibrary SPIN: 6930-9377;
e-mail: prisyazhnaya_n_v@staff.sechenov.ru

Вяткина Надежда Юрьевна;
ORCID: 0000-0003-3647-0066;
eLibrary SPIN: 7649-2912;
e-mail: vyatkina_n_yu@staff.sechenov.ru

* Corresponding author / Автор, ответственный за переписку