

SPECIALTY "PREVENTIVE MEDICINE": FROM APPLICANT TO SPECIALIST

Shepeleva OM , Gerasimova ES, Churilin MI


Kursk State Medical University, Kursk, Russia

Preserving and strengthening the health of the population of the Russian Federation is impossible without ensuring sanitary and epidemiological welfare. Furthermore, the staff shortage of preventive medicine specialists is observed in a number of regions, along with the decline in popularity of this specialty among applicants manifesting itself in the lower number of applications and the lower average USE scores of admitted students together with the lower passing scores in educational institutions. The study was aimed to assess the social and psychological portrait of the student studying at the faculty of preventive medicine and his/her motivation for further professional activity. The anonymous online questionnaire survey of 153 students showed that only 57.5% of students made a conscious choice of profession, 54.3% remain confident in their choice throughout the learning process, 28.8% doubt their choice, and 16.9% would never do the same choice. A total of 34.0% respondents are concerned about the success of their employment. At the same time, the majority of students show good academic performance, while career orientation and competitiveness are the major factors that drive their successful study.

Keywords: preventive medicine, training of specialists, Rospotrebnadzor, medical students, applicants

Author contribution: Shepeleva OM — study concept, developing the research design, literature review, description of results, manuscript writing and formatting; Gerasimova ES — online questionnaire survey, data processing; Churilin MI — literature review, description of results.

Compliance with ethical standards: the online questionnaire survey was anonymous, it did not endanger the subjects or infringe their rights. When starting polling, the respondent was asked to give the consent to study participation. When the option "don't agree to participate in the study" was chosen, no further questions could be opened.

 **Correspondence should be addressed:** Olga M. Shepeleva
Karl Marx str., 3, Kursk, 305041, Russia; olgapottap@mail.ru

Received: 01.12.2023 **Accepted:** 17.02.2024 **Published online:** 16.03.2024

DOI: 10.24075/rbh.2024.090

СПЕЦИАЛЬНОСТЬ «МЕДИКО-ПРОФИЛАКТИЧЕСКОЕ ДЕЛО» — ОТ АБИТУРИЕНТА ДО СПЕЦИАЛИСТА

О. М. Шепелева , Е. С. Герасимова, М. И. Чурилин


Курский государственный медицинский университет, Курск, Россия

Сохранение и укрепление здоровья населения Российской Федерации невозможно без обеспечения санитарно-эпидемиологического благополучия. При этом в ряде регионов наблюдается кадровый дефицит специалистов медико-профилактического дела, а в образовательных организациях — снижение популярности этой специальности среди абитуриентов, проявляющееся уменьшением числа подаваемых заявлений, снижением среднего балла ЕГЭ поступивших и проходных баллов. Целью исследования было изучить социально-психологический портрет студентов факультета медико-профилактического дела и их мотивацию к дальнейшей профессиональной деятельности. Анонимное онлайн-анкетирование 153 студентов показало, что осознанный выбор профессии сделали только 57,5% обучающихся, 54,3% сохраняют уверенность в своем выборе в процессе обучения, 28,8% сомневаются в сделанном выборе, а 16,9% никогда не повторили бы такой выбор. У 34,0% опрошенных выявлена обеспокоенность по поводу успешности будущего трудоустройства. При этом большинство обучающихся имеют хорошую успеваемость, а основными факторами, стимулирующими их к успешной учебе, являются карьероориентированность и конкурентоспособность.

Ключевые слова: медико-профилактическое дело, подготовка специалистов, Роспотребнадзор, студенты-медики, абитуриенты

Вклад авторов: О. М. Шепелева — концепция статьи, разработка дизайна исследования, работа с литературой, описание результатов, написание и оформление статьи; Е. С. Герасимова — онлайн-анкетирование, обработка результатов исследования; М. И. Чурилин — работа с литературой, описание результатов.

Соблюдение этических стандартов: онлайн-анкетирование было анонимным, не подвергало опасности участников и не ущемляло их прав. В начале анкетирования спрашивали согласие респондента на участие в исследовании. При выборе варианта «не согласна(ен) на участие в исследовании» дальнейшие вопросы не открывались.

 **Для корреспонденции:** Ольга Михайловна Шепелева
ул. К. Маркса, д. 3, г. Курск, 305041, Россия; olgapottap@mail.ru

Статья получена: 01.12.2023 **Статья принята к печати:** 17.02.2024 **Опубликована онлайн:** 16.03.2024

DOI: 10.24075/rbh.2024.090

Training of specialists at the medical universities undergoes significant changes in the context of modernization of educational and healthcare systems. In today's reality, high demands that can be hardly met due to lower relevance of the specialty and lower quality of applicants are placed on the educational institutions as providers of skilled and competent specialists. While the interest of applicants in the clinical medicine specialties remains constant or even grows, the relevance of specialties 32.00.00 "Health Sciences and Preventive Medicine", including specialty 32.05.01 "Preventive Medicine" has been decreasing noticeably in recent years, despite the demand for specialists [1]. Admission to the

specialty "Preventive Medicine" is often based on the leftover principle [2], since applicants and students do not consider their future work as prestigious.

The Kursk State Medical University has been training specialists in this field since 1998, satisfying the need of its own and neighbouring regions for personnel. In recent years, a progressive decrease in the applicants' interest in the specialty has become relevant. This was especially evident during the admission campaign 2023 due to amendments to the "Procedure for Admission to Study in Accordance with the Higher Education Programs — Bachelor's Programs, Specialty Programs, Master's Programs" and introduction

of priority system at the stage of application for study [3]. Thus, the decrease in the number of applications for this specialty within the framework of general competition by 32.9% relative to the previous year was reported during the admission campaign 2023. Furthermore, among applicants, less than 12.0% marked "Preventive Medicine" as top priority, and the highest USE scores of applicants with such top priority was only 230. This, students with high scores gave top priority to the clinical medicine specialties.

The development goals of healthcare in the Russian Federation are increasing population, life expectancy, healthy life expectancy, decreasing mortality and disability rates, respect for the rights of citizens in the field of health protection, and ensuring state guarantees related to these rights [4]. These goals cannot be achieved without the population's adequate sanitary and epidemiological welfare ensured by specialists in preventive medicine. Training of highly qualified personnel is an essential condition for ensuring sanitary and epidemiological welfare, as reflected in the roadmap for the development and consolidation of the system of federal state sanitary and epidemiological surveillance for the years 2021–2028 [1, 5]. This task can be implemented only in case of close cooperation of the educational institutions and institutions of Rospotrebnadzor when conducting career guidance activities, selecting trained applicants, and communicating at the stage of educational program realization.

The study was aimed to create the social and psychological portrait of the student studying at the faculty of preventive medicine of the Kursk State Medical University and assess his/her motivation for professional activity.

METHODS

The study was conducted in October 2023 through anonymous online questionnaire survey performed using Yandex Forms (Yandex; Russia), which reduced the likelihood of intentional falsification of the results by the respondents aimed at getting approved by the academic staff. The study involved 153 1st–6th-year students studying at the faculty of preventive medicine of the Kursk State Medical University, which accounted for 92.0% of the total sample. Among them 34 (22.0%) were males and 119 (78.0%) were females. The sample was representative and characterized the overall structure of students studying at the faculty of preventive medicine.

The questions to be included in the questionnaire were selected based on the literature review. The questionnaire comprised three sets of questions: the first set was about the respondents' socio-economic status, the second was about professional self-determination, and the third was about personal characteristics.

Statistical data processing was performed by standard methods using the MyOffice Standard software package (New Cloud Technologies; Russia).

RESULTS

The questionnaire survey has yielded the following socio-economic characteristics: 43.1% of the respondents live in the student dormitory, 36.6% rent accommodation, 11.1% live with their parents, 9.2% have their own housing. A total of 4.6% respondents are married. The respondents have reported their financial status as good (46.4%) and satisfactory (40.5%); 7.2% have reported excellent and 5.9% have reported bad financial status. The majority of students (70.0%) fail to combine study with work. Slightly less than a third of respondents combine

educational activities with work: 5.0% (5th–6th-year students) work in the Center for Hygiene and Epidemiology as middle-level medical personnel, another 25.0% work in the areas not related to their future specialty. The vast majority of students admitted to the faculty are graduates of comprehensive school (8.0%), 12.4% are graduates of medical colleges, 0.6% already have higher education.

When assessing professional self-determination, it was found that slightly more than a half of students (57.5%) consciously, voluntarily chose their profession, 22.9% followed the advice of their parents, relatives or teachers, and one fifth (19.6%) came quite by accident, since the USE score was not enough for admission to the clinical medicine specialties. Furthermore, currently 77.8% of the respondents like their future specialty, 3.9% do not like it, while 18.3% of the respondents have not come to a firm conclusion.

When answering the question "Would you choose this specialty again?", 28.8% found it difficult to answer, 16.9% were sure they would never repeat the same choice, and 54.3% were sure that their choice was correct. Moreover, 34.0% of the respondents feel insecure about the possibility of future employment by specialty, 10.5% have never thought about the employment, and 55.5% of the respondents are confident in the prosperous outcome of employment. It should be noted that 42.4% of the student sample have entered the university to receive targeted training that guarantees their future employment.

When assessing educational process as a whole, only a tenth of respondents (10.5%) reported they did not like study at the university. Among causes of such negative responses (multiple selection), the respondents reported high workload (42.0%), didactic nature of teaching (9.0%), "poor" educational process organization (schedule, in-class lectures, "floating" start of intermediary classes) (23.0%). Among other causes, 10.5% of the respondents reported a large number of "unnecessary" academic disciplines and insufficient (in their opinion) duration of practical training.

As for their academic performance, 15.0% of the respondents reported it was excellent, 64.1% reported it was good, 20.9% reported it was satisfactory, which was confirmed by objective academic performance indicators. The average students' score for the last five years based on the interim assessment results is 4.2 ± 0.2 points ($M \pm \sigma$). Motivation for educational activity is provided in Fig. 1.

As is well-known, studies at the university go hand in hand with the socially useful and research activities. The survey results have shown that less than one third of the respondents have a proactive stance and are engaged in extracurricular areas of university life: 32.0% participate in community activities (volunteering, working in the trade union committee, student council, etc.), while 29.0% are engaged in research activities on their own initiative. The first place in the structure of low level of participation in the above activities is occupied by the lack of time reported by 36.0% of the respondents. No interest in public affairs is reported by 17.7% of the respondents, in research activity — by 26.2%; 9.2% of students believe that public affairs are futile, 5.2% believe that research activities are futile. Other reasons for community activities are reported by 37.1% of the respondents, while that for research activities are reported by 32.6%.

When characterizing psychological climate in the team and interpersonal relationships between students and students and teachers, we can say that these are beneficial. Thus, 96.7% of the respondents assessed their relationships with teachers as good or satisfactory, while poor relationships were reported only

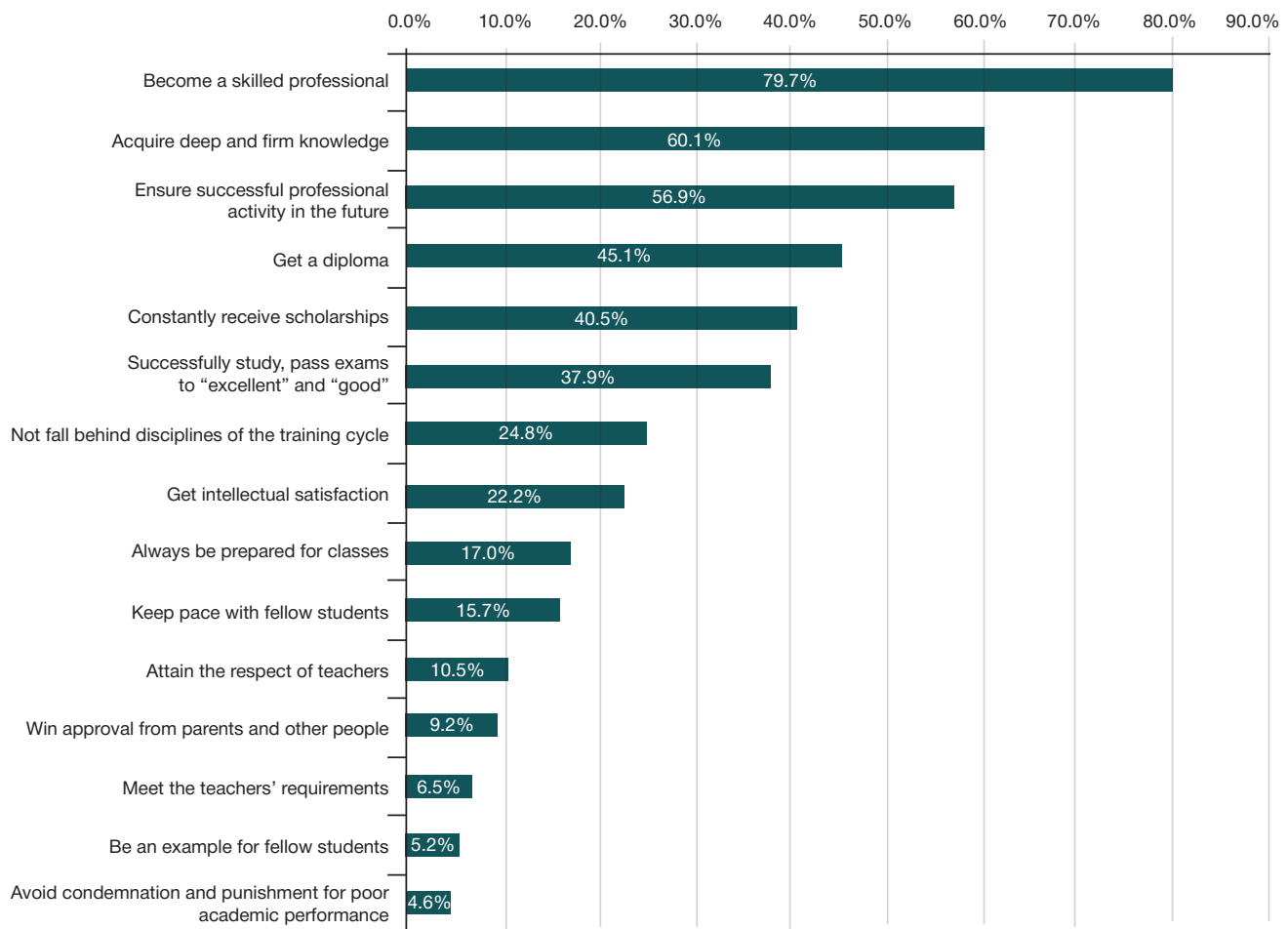


Fig. 1. Motivation for successful learning (multiple selection)

by 3.3%. The fact attracts attention that students appreciate more positive personal characteristics of teachers (multiple selection), such as sincerity, honesty, empathy (92.8%), while profound professional knowledge is ranked first by 58.8% of the respondents and pedagogical exaction is ranked first only by 14.4%. Only 2.0% of the respondents report poor relationships between students; furthermore, opinions of fellow students are important for 54.0% of the respondents, and nearly three-quarters of respondents (74.5%) rely on their help. The respondents believe that the main factors contributing to success in various spheres of life and to general well-being include the ability to adjust, good health, diligence, integrity, as well as proper goal setting (96.1–97.4% of the respondents), while social status, help of relatives, relationships, money are considered important by 75.8–81.0% of the respondents. Significance of various factors is provided in Fig. 2.

High-quality acquisition of knowledge is possible only with the properly organized leisure time. When assessing their leisure activity, the respondents were offered to choose up to three most frequent types of free time activities. According to the survey results, more than a half of students prefer to pursue a hobby (54.9%) and meet up with friends (54.2%) in their spare time; a small number of students (3.9–9.8%) prefer outdoor recreation or watching TV. The complete distribution pattern for the leisure activity types is provided in Fig. 3.

DISCUSSION

According to the questionnaire survey results, the socio-economic characteristics of the sample of students studying

at the faculty of preventive medicine are generally compliant with the data of similar studies involving medical students: the sample is represented by graduates of schools, females; the vast majority of nonresident students lives in the dormitories; about a third have their own income due to combining study with work; the vast majority is not married [6, 7].

The analysis of consciousness of the choice of specialty has shown that there is high percentage of casual people among students. Assessment of the impact of educational process on the attitude towards future profession has revealed an upward trend in the number of students who like the profession. However, the share of students concerned about their choice is higher than that among students of clinical medicine specialties [7]. This category of students requires special attention of both academic staff and potential employers, since targeted work with the category makes it possible to motivate students to stay in the profession.

The final result of professional self-determination, starting as early as at school, is largely dependent on the students' satisfaction with educational process. It should be noted that just a small portion of the respondents does not like to study at the university. The main cause of negative response to the educational process is represented by high workload that is typical for training at medical universities [7, 8]. Furthermore, the students are not satisfied with practical classes: both duration and process of practical training. Despite the fact that the educational program is compliant with the requirements of the federal state educational standard in terms of structure and size, real organization of practical training of future sanitary physicians and epidemiologists faces great difficulties

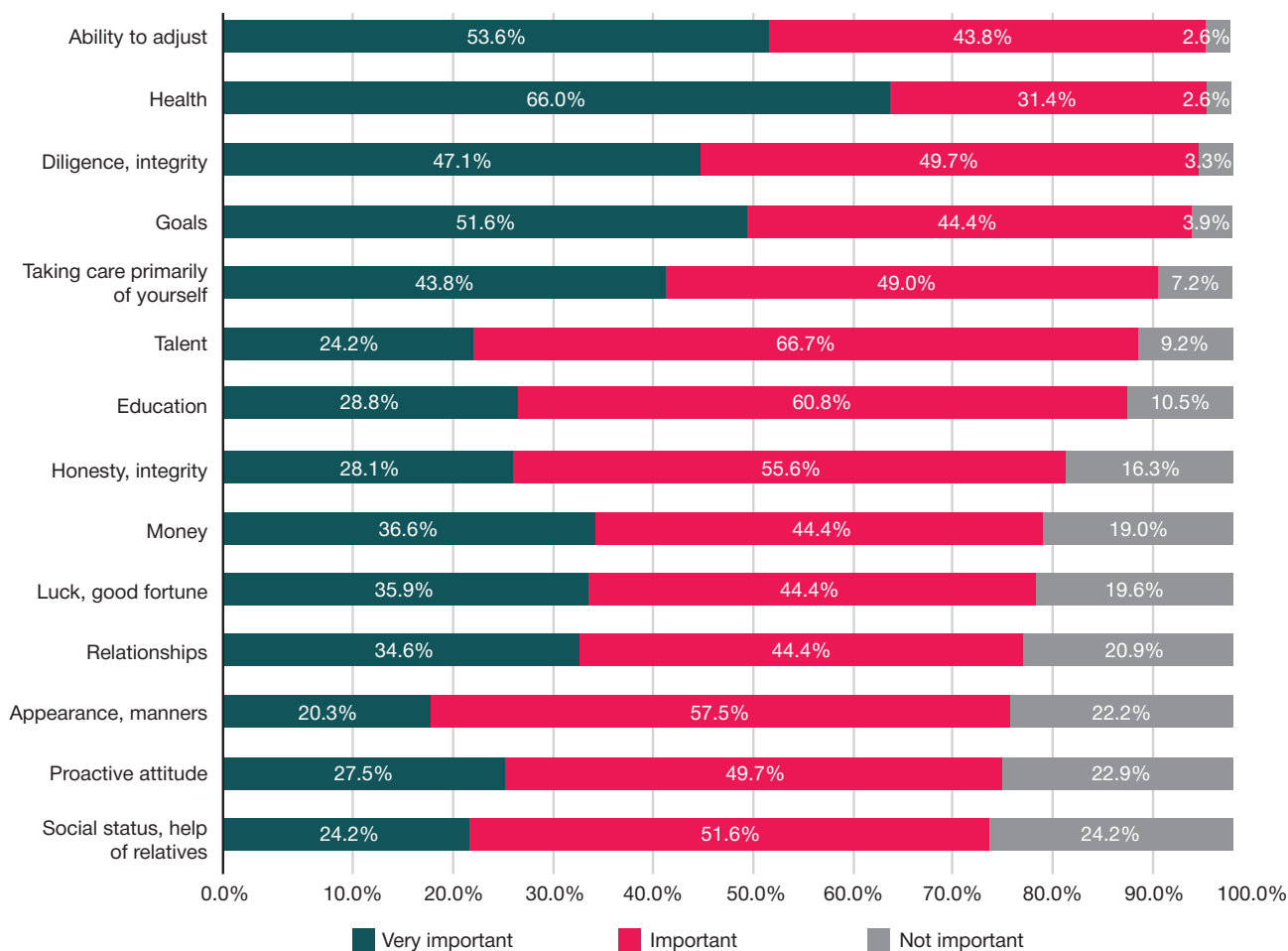


Fig. 2. Significance of various factors for success in life

due to current legislation on inspecting. Reduction of the overall number of inspections associated with moratorium on inspections is combined with the right of the inspected objects to restrict the access of individuals not listed in the order on inspection. Thus, students can be forced into the situation, when they are unable to take part in the on-site control and monitoring activities throughout practical classes and have to limit themselves to working with documents. The above limitations impose extra responsibility regarding the use of practice-oriented and simulation training methods during practical training on the educational institution.

When assessing the factors driving students towards successful learning, career orientation and future competitiveness attract attention, while approval from close and distant people plays no important role. Such characteristics are typical for the majority of Generation Z representatives, along with high levels of pragmatism and individualization [9]. Academic success of the majority of students is accompanied by little interest in the socially useful and research activities. On the one hand, this can be caused by the lack of time resulting from high educational workload, while on the other hand this can be explained by the Generation Z representatives' relative reticence and difficulty talking face-to-face, which limit social activity, as well as by inability to focus their attention for a long time against the background of strive for quick decision making and yielding the results [9], which is unusual for research work. Furthermore, the students largely rely on their own strength instead of outside assistance, when trying to achieve good results.

The study participants' predominant orientation towards the teachers' positive personal traits (kindness, empathy, sincerity,

tolerance) instead of expertise results from psychological characteristics of modern youth (high levels of sensitivity and anxiety, low levels of stress tolerance), as well as from the decline in authoritarian stance of the "know-it-all teacher" due to easy availability of information on the Internet [9, 10].

Respondents consider the main difficulty in organizing leisure time to be the lack of free time, which is typical for studying at a medical university. The leisure activity types are generally similar to that in other medical students [11].

CONCLUSIONS

The resulting social and psychological portrait of the student studying at the faculty of preventive medicine is indicative of career orientation in combination with the need for psychological comfort, good financial position, rapid achievement of results, as well as from the desire to be independent. The large share of casual people, who doubt the right choice of specialty, can lead to withdrawal from the profession both during training and after getting the diploma, which can further exacerbate the existing staffing shortages. High levels of responsibility of a specialist in preventive medicine, the lack of visualization of performance indicators, not always positive attitude of society towards the activities of the service run counter the beliefs of today's generation of young people [12]. The findings should be considered when planning career guidance work with potential applicants and students in order to motivate them to stay in the profession. Furthermore, the authorities should consider the change in psychological attitudes and values when planning targeted training of specialists,

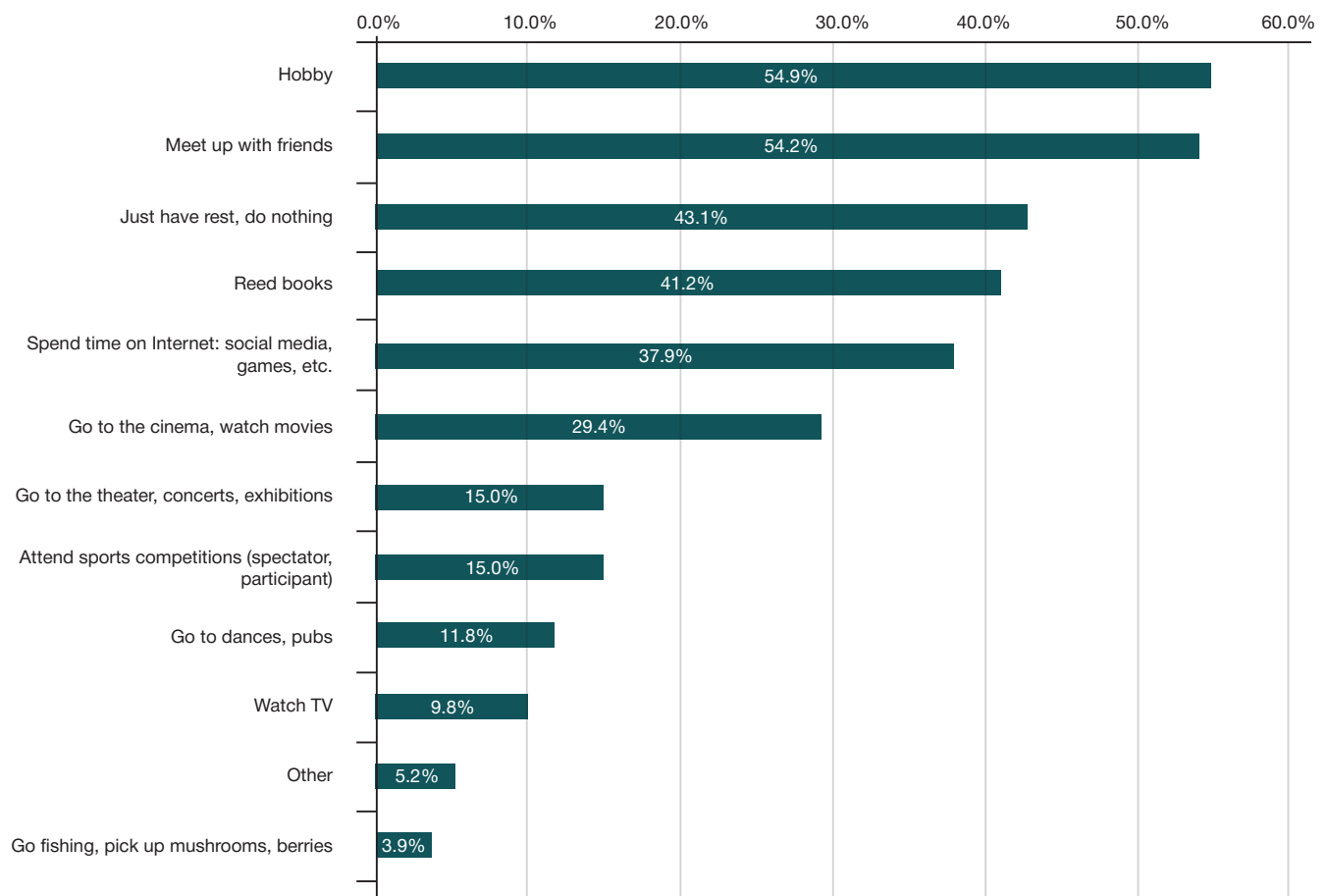


Fig. 3. Leisure activities (multiple selection)

as well as the issue of expansion of supportive measures for both employer-sponsored students and young specialists. Presumably, the experience of the Rural Doctor program

implementation should be considered to fill the shortage of personnel in the distant regions, to which young professionals go with great reluctance.

References

- Melcer AV, Pronina AA, Hurcilava OG, Erastova NV, Aristova TI, Kolomenskaja TV, et al. Podgotovka vrachej mediko-profilakticheskogo profilya v usloviyah razvitiya i ukrepleniya sistemy federal'nogo gosudarstvennogo sanitarno-jepidemiologicheskogo nadzora: otdel'nye aspekty. *Profilakticheskaja i klinicheskaja medicina*. 2021; (3): 9–19 (in Rus.).
- Leshheva GA, Kiek OV. Puti realizacii professional'noj podgotovki specialistov po special'nosti "Mediko-profilakticheskoe delo" v usloviyah modernizacii vysshego professional'nogo obrazovanija. *Mezhdunarodnyj zhurnal jeksperimental'nogo obrazovanija*. 2013; (4): 166–8 (in Rus.).
- Prikaz Minobrnauki Rossii ot 21.08.2020 № 1076 (red. ot 10.02.2023) "Ob utverzhdenii Porjadka priema na obuchenie po obrazovatel'nym programmam vysshego obrazovanija — programmam bakalavriata, programmam specialiteta, programmam magistratury". (In Rus.).
- Ukaz Prezidenta Rossijskoj Federacii ot 06.06.2019 № 254 "O Strategii razvitiya zdravoochranenija v Rossijskoj Federacii na period do 2025 goda". (In Rus.).
- Rasporjazhenie Pravitel'stva RF ot 30.12.2020 № 3680-r "Ob utverzhdenii plana meroprijatij («dorozhnoj karty») po razvitiyu i ukrepljeniju sistemy federal'nogo gosudarstvennogo sanitarno-jepidemiologicheskogo nadzora na 2021–2028 gody". (In Rus.).
- Zaljaev AR. Social'nyj portret i professional'nye strategii rossijskogo studenta-medika (rezul'taty jempiricheskogo issledovanija). *Vestnik Tomskogo gosudarstvennogo universiteta. Filosofija. Sociologija. Politologija*. 2017; (39): 204–15 (in Rus.).
- Kojchueva SM. Rezul'taty izuchenija nekotoryh aspektov obrazovatel'nogo processa v medicinskom universitete. *Medicinskoe obrazovanie i professional'noe razvitie*. 2020; 11 (3): 206–20 (in Rus.).
- Dregalo AA., Uljanovskij VI. Studenty-mediki: sociologicheskij portret. *Jekologija cheloveka*. 2007; (3): 53–8 (in Rus.).
- Ermolova TV, Litvinov AV, Savickaja NV, Logvinova OK. Prioritety psihologo-pedagogicheskij raboty s pokoleniem Z (zarubezhnyj opyt). *Sovremennaja zarubezhnaja psihologija*. 2020; 9 (4): 89–102 (in Rus.).
- Spiridonova OE. Osobennosti profilakticheskij raboty so studentami pokolenija Z. *Bazis*. 2020; 2 (8): 75–8 (in Rus.).
- Batova EA, Makov IV. Dosug v zhizni studentov meditsinskogo instituta. *Nauka-2020*. 2019; 30 (5): 80–3 (in Rus.).
- Amelicheva DV, Semenova EA, Belova OR, Tihanov NE. Cennostnye orientiry i kar'ernye predpochtenija pokolenija Z: kakie jekonomicheskie izmenenija prineset molodoe pokolenie. *Vestnik Akademii znaniy*. 2021; 47 (6): 24–30 (in Rus.).

Литература

1. Мельцер А. В., Пронина А. А., Хурцилава О. Г., Ерастова Н. В., Аристова Т. И., Коломенская Т. В. и др. Подготовка врачей медико-профилактического профиля в условиях развития и укрепления системы федерального государственного санитарно-эпидемиологического надзора: отдельные аспекты. Профилактическая и клиническая медицина. 2021; (3): 9–19.
2. Лещева Г. А., Киек О. В. Пути реализации профессиональной подготовки специалистов по специальности «Медико-профилактическое дело» в условиях модернизации высшего профессионального образования. Международный журнал экспериментального образования. 2013; (4): 166–8.
3. Приказ Минобрнауки России от 21.08.2020 № 1076 (ред. от 10.02.2023) «Об утверждении Порядка приема на обучение по образовательным программам высшего образования — программам бакалавриата, программам специалитета, программам магистратуры».
4. Указ Президента Российской Федерации от 06.06.2019 № 254 «О Стратегии развития здравоохранения в Российской Федерации на период до 2025 года».
5. Распоряжение Правительства РФ от 30.12.2020 № 3680-р «Об утверждении плана мероприятий («дорожной карты») по развитию и укреплению системы федерального государственного санитарно-эпидемиологического надзора на 2021–2028 годы».
6. Заляев А. Р. Социальный портрет и профессиональные стратегии российского студента-медика (результаты эмпирического исследования). Вестник Томского государственного университета. Философия. Социология. Политология. 2017; (39): 204–15.
7. Койчуева С. М. Результаты изучения некоторых аспектов образовательного процесса в медицинском университете. Медицинское образование и профессиональное развитие. 2020; 11 (3): 206–20.
8. Дрегалю А. А., Ульяновский В. И. Студенты-медики: социологический портрет. Экология человека. 2007; (3): 53–8.
9. Ермолова Т. В., Литвинов А. В., Савицкая Н. В., Логвинова О. К. Приоритеты психолого-педагогической работы с поколением Z (зарубежный опыт). Современная зарубежная психология. 2020; 9 (4): 89–102.
10. Спиридонова О. Е. Особенности профилактической работы со студентами поколения Z. Базис. 2020; 2 (8): 75–8.
11. Батова Е. А., Маков И. В. Досуг в жизни студентов медицинского института. Наука-2020. 2019; 30 (5): 80–3.
12. Амеличева Д. В., Семенова Е. А., Белова О. Р., Тиханов Н. Е. Ценностные ориентиры и карьерные предпочтения поколения Z: какие экономические изменения принесет молодое поколение. Вестник Академии знаний. 2021; 47 (6): 24–30.