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QUALITY OF THE PRACTICAL EDUCATION DURING UNDERGRADUATE INTERNSHIP AT THE MEDICAL UNIVERSITY – SOFIA

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Abstract. *Providing a good quality in higher education should be the result of the interaction between the academic team, the students and the institutional learning environment. The quality is guaranteed by the learning environment in which the content of the programs and training opportunities is appropriate for the particular purpose.* ***Aim:*** *To study the organization, quality, consistency and satisfaction in practical training.* ***Materials and Methods:*** *This article presents and analyzes the results of a survey by medical graduates about their assessment of the organization and quality of training during the undergraduate internship.* ***Results:*** *The results show that the practical training of medical graduates is generally at a very high level, according to the indicators, examined in our study.* ***Conclusion:*** *More efforts in improving quality of education are welcome.*

Key words: *quality, education, undergraduate internship, medicine*

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INTRODUCTION

Higher education is one of the sectors of the national economy, the task of which should be to prepare students for their active citizenship, for their future careers, as well as to support their personal development, to create a broad foundation of the latest knowledge and practical skills and to stimulate research and innovation [1, 4].

The World Health Organization and the World Federation for Medical Education (WFME) have established a joint policy to increase the efficiency of the health system by improving the education of healthcare professionals. The main scope of the Federation is to improve the health of the world population by promoting a high-quality medical education [31]. The WFME is committed to promote the highest scientific and ethical standards in medical education, as well as to support the development of training methods, new learning tools and innovative management of medical education. Providing an acceptable quality in higher education is a result of the interaction between

the academic team, the students and the institutional learning environment. The quality is guaranteed by the learning environment in which the content of the programs and training opportunities are appropriate for the goals set [7].

The educational process in the Medical University of Sofia is regulated by the State Requirements for The Acquisition of Higher Education in the specialty "Medicine" for the educational and qualification degree "Master-Doctor" and is managed in accordance with the Higher Education Act, the Law on the Development of the Academic staff in the Republic of Bulgaria and the internal regulatory documents of MU – Sofia. The medical education includes different forms of training: scientific courses, practical courses and internships. Practical courses and internships at the Medical University of Sofia (MU – Sofia) are mandatory [10]. All types of practical courses and internships of the students from MU – Sofia are held in educational, scientific or health institutions according to programs, developed by the specialized departments of the University. The methodological leadership of the internships is carried out by university lecturers and qualified specialists from the respective health institution. In the regular training at MU – Sofia there are mandatory practical courses and internships provided in the curriculum of each specialty [11].

The undergraduate internship of the last (6th) year students from the specialty "medicine" of the Medical University of Sofia aims to provide highly professional training to the students in the field of the studied specialty, as well as the mastery of scientific, professional, technical, management and other knowledge, which are closely related to the immediate working activity of the future medical doctor [3, 4]. Another important goal of the internship is to improve the practical knowledge and skills, acquired during the educational course and thus to build working and theoretical abilities for organizational, prophylactic, diagnostic and therapeutic activities. The goal of this article is to describe and analyze the opinion of medical graduates about the organization and quality of their training during the undergraduate internship [4, 11].

The **aims of our study** were to study/analyze the:

- organization of practical training in terms of planning, duration and place of conduct;
- existence of systematization and logical consistency of the learning material from practical training;
- satisfaction of undergraduates with the received preliminary theoretical preparation for practical training;
- role of practical training in the mastering of the learning material;
- consistency between the taught material and the requirements for the examination, as well as knowledge of the assessment criteria.

MATERIALS AND METHODS

This study was a questionnaire-based one. A survey was conducted among medical graduate students of Medical University – Sofia, through the electronic survey system of MU – Sofia – Rectorate, asking the following questions:

1. Are you satisfied with the organization of the practical training (planning, duration, venue)?
2. Is the learning material from the practical training systematized and does it have a logical sequence?
3. In your opinion, does the received preliminary theoretical training support the implementation of practical training?
4. Does the practical training help learning the material?
5. Is there a correspondence between the taught material and the exam requirements?
6. Are the evaluation criteria disclosed in advance?

The survey was conducted among students who graduated Medical University – Sofia between 2019 and 2021, using the electronic survey system of the MU – Sofia – Rectorate, and 100% of the graduates were covered. Participants were randomly selected, which makes our results representative.

Statistical analysis

Descriptive and analytical methods were used:

1. Descriptive analysis – the frequency distribution of the considered signs, matched by research groups (in tabular form).
2. Analysis of Variance – to assess the central tendency and statistical dispersion.
3. Graphical analysis – for visualization of the obtained results.

Quantitative analyses were performed with a statistical package of application program – SPSS 17.0. for Windows for tabular and graphic processing and presentation.

RESULTS

The satisfaction of medical students was evaluated through the electronic survey system of Medical University – Sofia. This system collects data anonymously and gives us the opportunity to analyze the

organization and quality of education by the time of practical courses and internships.

The study included 769 medical students, all graduates from the years 2019, 2020 and 2021. The distribution of the number of students, who took the electronic survey is represented in Table 1 by year.

Table 1. Distribution of students, participated in the electronic survey by year

Year	Number of participants
2019	236
2020	260
2021	273
Total	769

The first question of the survey evaluated the satisfaction of the students in the organization of practical training in terms of planning, duration and place of conduct, we asked.

The results showed that 63.41% of the responders were satisfied in various degrees from the organization of practical training, with 41.46% fully satisfied / 21.95% answered yes. Dissatisfied in various degrees were 26.83% of responders (NO – 9.76%, rather NO – 17.07% (Figure 1).

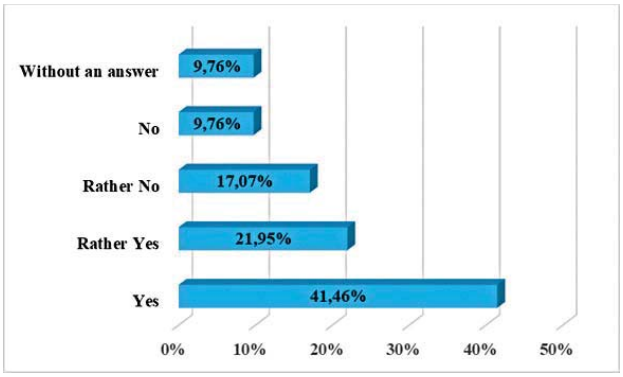


Fig. 1. Satisfaction of respondents with the organization of practical training (planning, duration and place of conduct)

The next question analyzed the opinion of the medical students about the systematization and logical consistency of the learning material from practical training. A very large proportion of respondents (41.46% answered YES and 36.59% – rather YES) believed that there was a logical consistency of the material from practical training, allowing them to build on their knowledge and skills (Figure 2). On the opposite opinion was the total of 14.64% of respondents (NO – 4.88% and rather NO – 9.76%), which necessitated the need to identify the reasons for this response and take corrective measures.

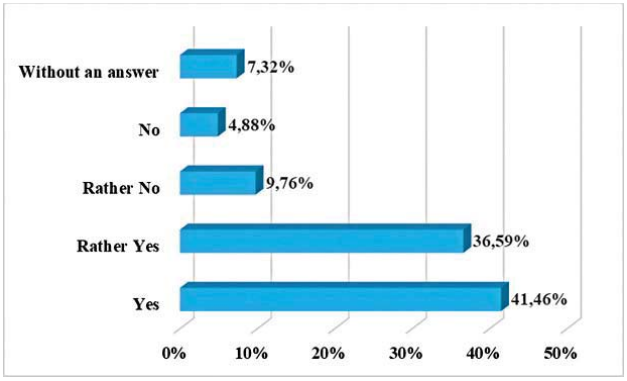


Fig. 2. Existence of systematization and logical consistency of the learning material from practical training

The preliminary theoretical training of medical students is very important for conducting full practical training, as the knowledge acquired during lectures and self-preparation in the learning materials helps students to be more confident in making decisions on the cases that have arisen during the practice. Related to this context was the next question in our survey. More than half (51.22%) of the respondents thought that the received preliminary theoretical training was relevant for the conduction of practical training, while 26.83% of the students answered with “rather YES”. In contrast, 14.64% of the students participating in the survey thought that there was no systematization and logical consistency of the learning material from practical training (NO – 7.32% and rather NO – 7.32%) (Figure 3).

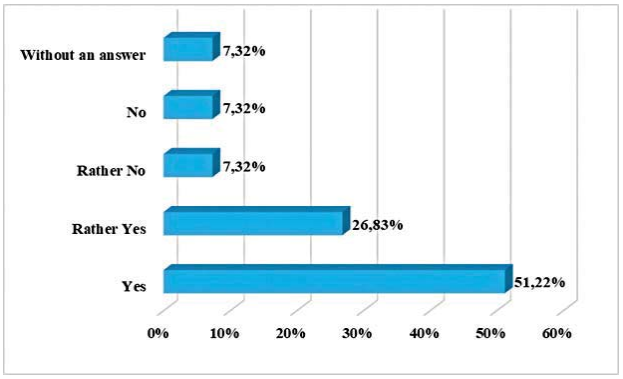


Fig. 3. Importance for practical training of the preliminary theoretical one

For the assimilation of the learning material, practical training plays a significant role, since using theoretical knowledge is applied in practice. This is also evident by the responses of medical students – 56.10%

of them believed that practical training was relevant for the assimilation of the learning material. Another 21.95% of the respondents answered “rather YES” (Figure 4). “DO NOT” responded 9.76% of the students, “rather NO” – 4.88%.

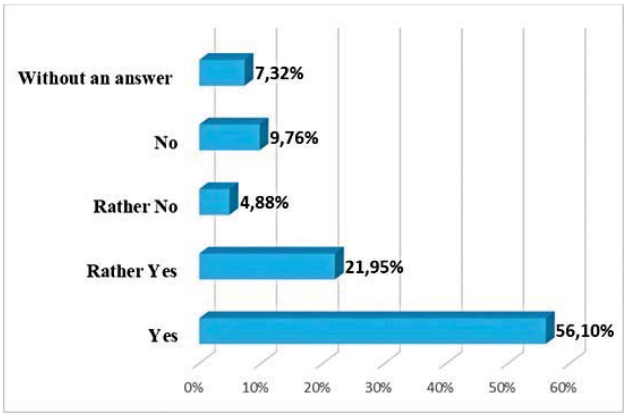


Fig. 4. The role of practical training in the assimilation of learning material

The next two questions from the survey aimed to establish the opinion of medical students about the existence of consistency between the material taught and the requirements for the exam as well as whether they were aware of the assessment criteria (had they been disclosed in advance). The results of the analysis of the data showed that according to 78.05% of responders there was a correlation between the material taught and the requirements for the exam (YES – 48.78%, rather YES – 29.27%) (Figure 5). The assessment criteria were pre-announced according to 46.34% of the respondents, while 19.51% answered “rather YES” (Figure 6). Alarming is the fact that according to 31.70% of the students the assessment criteria had not been disclosed in advance (NO – 12.20%, rather NO 19.50%).

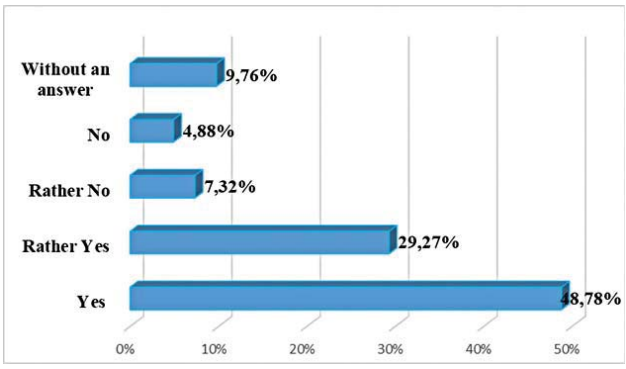


Fig. 5. Existence of consistency between the material taught and the requirements for the exam

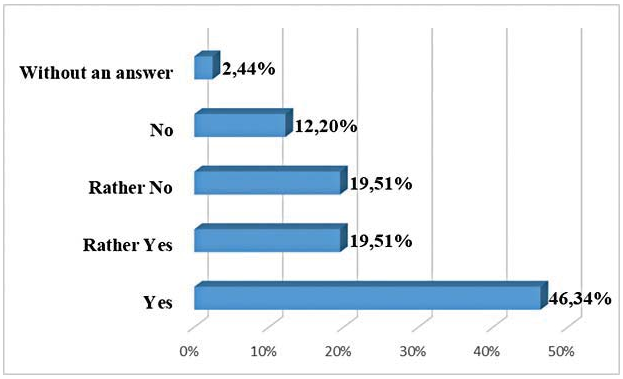


Fig. 6. Preliminary knowledge of the assessment criteria

DISCUSSION

Ensuring good health care is related to conducting quality training in medical schools. This fact is also recognized by all interested parties – doctors, patients, state, society [8].

The quality of healthcare strongly depends on the professional, moral and ethical training of medical students [32]. Regular feedback on the course and teaching is considered an essential and integral part of quality assurance [33]. Students are the most objective evaluators of the quality and effectiveness of education.

In 1984, L. Aleamoni presented the following arguments in support of student evaluation of teaching effectiveness and the educational process: students are the main source of information, the most logical evaluators of quality, efficiency and satisfaction; student ratings promote communication between students and their professors and can be used by other students to select courses and lecturers [34]. In the field of medical education, quality can be considered both from the point of view of production – creating the next generation of medical graduates, and from that of perception – preserving the values and principles of medical educational institutions [7,11]. Achieving quality in higher education at both the macro and micro levels must be consistent with the understanding that the quality of education is a systemic, integral concept, which in no case can be reduced to a mechanical summation of its elements [35]. With this in mind, we looked at the opinion of UNESCO collaborators [19], regarding some elements of quality in higher education focused on quality of the teaching staff. To an increasingly greater extent it depends on two types of profound changes that are taking place in society and are correspondingly reflected in the work of higher education institutions. The first of these changes is related to the development of

information and communication technologies and their implementation in education. Teachers have to use innovative concepts and innovative pedagogical methods that are increasingly interactive. The other radical change is related to the development of multidisciplinary and interdisciplinary research in science [2]. There are a number of factors that influence the quality of educational programs and that can lead to a decrease: the sharp increase in the volume of knowledge and the emergence of new disciplines; the tendency towards the predominance of interdisciplinary and multidisciplinary approaches and explanations of observed phenomena; the diversification and regionalization of forms and ways of obtaining education; the increase in the number of short-term courses (qualification improvement, retraining, etc.) and in connection with this the need to ensure compatibility, "continuity" between the various short-term and long-term courses, the need for greater social adequacy in the rapidly changing world.

In regard to the quality of the objects of the educational activity, students are the "raw material" for the higher education system. It is logical to raise the question of closer cooperation with secondary schools and organizations involved in the process of transition from the secondary to the higher education system. It is also important that the objects of the educational activity actively involve themselves in the management of educational institutions, to cooperate with the structures providing them with social, psychological and pedagogical assistance [5]. Quality of infrastructure, internal and external environment are to a significant extent related to the development of information and communication technologies in higher education institutions [19].

CONCLUSION

Quality of medical education includes good theoretical training on the basis of which medical students can enrich their practical knowledge and skills, acquired in the course of study. They will need all this theoretical and practical knowledge in the immediate work activity as future doctors in the self-sufficient solving of organizational, promotional, prophylactic, medical, diagnostic and therapeutic activities. The results of the survey, conducted among medical graduates about their assessment of the organization and quality of training in the undergraduate internship showed that the practical training of medical graduates is generally at a very high level, according to the indicators, examined in our study.

Respecting the results from the survey, measures should be taken to improve the planning and duration of the internship, given that around 1/4 of responders replied that they were not satisfied to varying degrees. Another important remark is to improve the availability of systematic and logical consistency of the learning material from practical training and to underline the role of practical training in the learning of the material, as about 1/5 of the responders were not satisfied to varying degrees from these two indicators.

Higher medical schools, such as educational institutions that provide medical education, should periodically examine the opinion of their graduates – they are the most valuable assessors of the quality, and effectiveness of their training, in order to prepare competitive health professionals to meet the current and future health needs of the Bulgarian citizens.

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