

Bioethics in the education of the future healthcare professionals

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Abstract

Background: Ensuring and maintaining the quality of higher medical education is of strategic importance to society, bearing in mind that is producing competent medical personnel who will conduct health care activities with a view any decision in medical practice to be based both on evidences and values. Bioethics case studies are intended to be a useful training tool to help medical students in their future daily practice as doctors and contribute to improving doctor-patient relationships and team work.

Methods: A questionnaire survey was distributed among the medical students of Medical University – Sofia, included 640 students in 4, 5 and 6 years of their study. It analyses the necessity of learning the Universal Declaration on Bioethics and Human Rights, approved on the 19th of October 2005 by the UNESCO General Assembly.

Results: About ½ of the participants in the empirical study, to varying degrees, were not familiar with the bioethical principles of UNESCO Universal Declaration on Bioethics and Human Rights. A large proportion of respondents gave affirmative responses about the importance of ethical knowledge in their future medical practice. According to the respondents, training in Bioethics and Human Rights will increase their ethical competence as medical professionals.

Conclusions: The results of the empirical study give us grounds to make recommendations to the responsible institutions to update and reorganize the undergraduate internship of medical students by including the discipline of Medical Ethics and the Universal Declaration on Bioethics and Human Rights.

Keywords

Bioethical principles, human rights, bioethical case studies

Introduction

A number of recent studies have found the great importance of the ethical dimensions of the professional career of healthcare professionals and the need for their harmonization with the standards of the European Union enshrined in the directives on the professional competence of healthcare professionals and the UNESCO Universal Declaration on Bioethics and Human Rights (UNESCO 2005; Engelberg 2021; Ministry of health – Republic of Bulgaria 2022). A particularly promising task is to increase the capacity for ethical analysis in medicine and healthcare. A priority issue of education policy is the refinement of ethical training of healthcare professionals, with a view any decision in medical practice to be based both on evidences and values (WHO 2019).

The **aim** of the survey is to propose the necessary recommendations for a training quality optimization for the undergraduate internship in Medical University – Sofia through researching and analyzing the medical students' personal assessment of the ethical knowledge included in the internship.

A questionnaire survey was distributed among the medical students of MU-Sofia. It studies and analyses the necessity of learning UNESCO Universal Declaration on Bioethics and Human Rights, which was approved on the 19th of October 2005 by the UNESCO General Assembly.

The following **tasks** were studied and analyzed:

- Medical student's knowledge of the bioethical principles included in UNESCO Universal Declaration on Bioethics and Human Rights;
- The importance of ethical knowledge for reasoning in decision making and its application in the future medical practice;
- The role and importance of learning bioethical principles from UNESCO Universal Declaration on Bioethics and Human Rights for the students' ethical competence as medical professionals;
- The opportunity for the graduating students to study Bioethics and Human Rights in the undergraduate internship;
- The function and importance for the graduating students to study Bioethics and Human Rights during their undergraduate internship to improve their teamwork (with other medical professionals);
- The function and significance for the participants' receiving Bioethics and Human Rights training during the undergraduate internship, focused on improving and enhancing their collaboration with their patients.

Methods

The object of the study is the graduating students in medicine. The technical unit of observation is Medical University – Sofia. A questionnaire survey was distributed

among the medical students of MU-Sofia in 4, 5 and 6 years of their study.

The study was conducted during the May 2022 – October 2022 period in the city of Sofia and included 640 students, whereby the percentage ratio of male to female participants was 40.60% to 59.40% respectively and the average age of the respondents was 24.80 years.

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

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

Results

We asked the first question of the survey in order to explore the respondents' knowledge of the bioethical principles included in UNESCO Universal Declaration on Bioethics and Human Rights. The results show that only 17% of the respondents are fully aware of the bioethical principles included in the UNESCO Declaration (answering "yes-completely"), partial knowledge of the principles is declared by 36% of the respondents answering "yes-partially". About 1/2 of the respondents (47%) answered "No" and "Can't assess", meaning they do not know the bioethical principles of UNESCO Universal Declaration on Bioethics and Human Rights at all (Fig. 1).

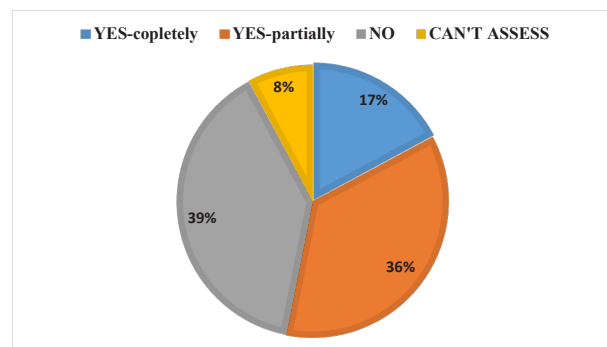


Figure 1. Are you familiar with the bioethical principles included in UNESCO Universal Declaration on Bioethics and Human Rights?

The second question of the survey analyzed the importance of ethical knowledge when it comes to the reasoning behind decision making and its application in respondents' future medical practice. A very large proportion of respon-

dents, 85%, answered in the affirmative to varying degrees (“Yes-completely” – 37% and “Yes-partially” – 48%). The opposite opinion was held by 13% of the respondents who answered “No” and only 2% answered “I can’t assess”.

The following two questions from the questionnaire survey were asked in order to ascertain the respondents’ views on the role and importance of training in the bioethical principles of UNESCO Universal Declaration on Bioethics and Human Rights for their ethical competence as medical professionals, and the possibility of such training in their pre-graduate internship. The results of the data analysis show that 72% of the respondents believe that such training will increase their ethical competence as medical professionals (“Yes-completely” – 39% and “Yes-partially” – 33%), and only 22% of them give a negative answer “No” (Fig. 2).

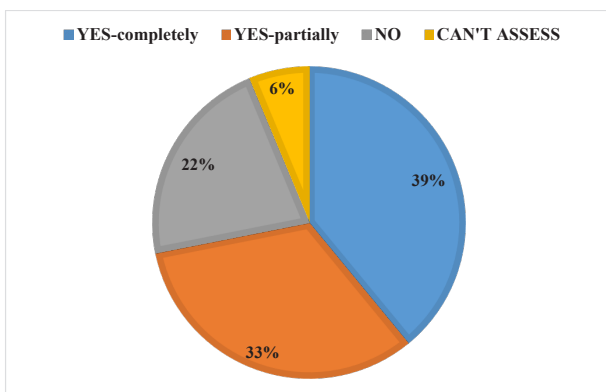


Figure 2. Do you believe that learning the bioethical principles from UNESCO Universal Declaration on Bioethics and Human Rights will improve your ethical competency as a medical professional?

An even higher percentage of respondents, about 80% of them, to varying degrees, believe that training in Bioethics and Human Rights should be included in their undergraduate internship (“Yes-completely” – 41% and “Yes-partially” – 37%), with only 14% of respondents answering “No” and 8% giving the answer “I can’t assess” (Fig. 3). The overwhelmingly positive responses to both

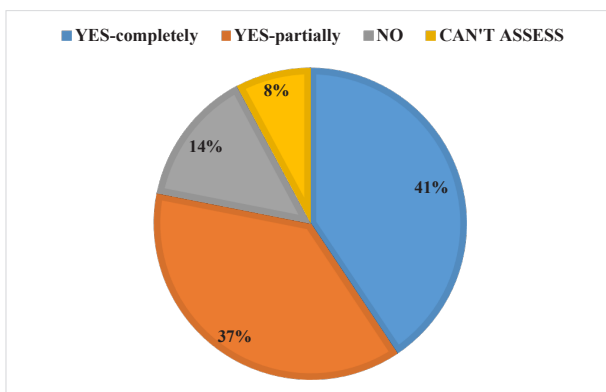


Figure 3. If Yes, would you like the Bioethics and Human Rights training to be included in your undergraduate internship?

questions, which made up about and over $\frac{3}{4}$ of the responses received from the participants, necessitate consideration of the need to include this training in medical students’ undergraduate internship.

In order to investigate the respondents’ views on the function and importance of Bioethics and Human Rights training during the undergraduate internship for improving their teamwork (with other medical professionals), we analyzed the results of the survey and found, that about $\frac{3}{4}$ of the respondents answered positively to varying degrees (“Yes-completely” – 34%, and “Yes-partially” – 38%), while the opposite answers of “No” and “Can’t assess” were given by 22% and 6% of the respondents respectively (Fig. 4).

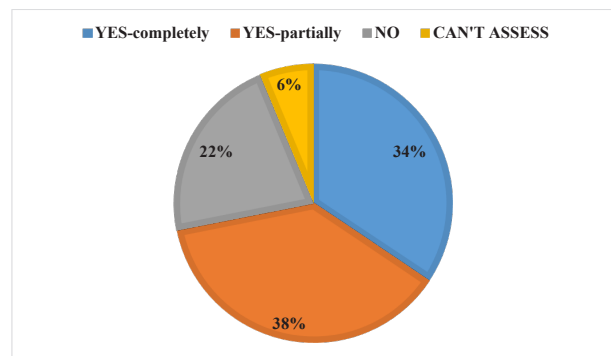


Figure 4. Do you believe that Bioethics and Human Rights training during the undergraduate internship will improve your teamwork (with other medical professionals)?

The next question asked in the questionnaire was designed to analyze the function and significance of the participants’ receiving Bioethics and Human Rights training during the undergraduate internship, focused on improving and enhancing their collaboration with their patients. The results of the data analysis show that a very large majority of the respondents, namely 79% of the participants (“Yes-completely” – 39%, and “Yes-partially” – 40%), believe that the training cited above will contribute to a better and more effective partnership between them and their patients. The negative trend is seen only in 16% of the respondents who answered “No”.

Discussion

In view of the empirical results obtained, taking into account the specificity of the training in the individual disciplines included in the undergraduate internship, and taking into account the dynamic nature of the public health processes as a medical and socio-economic category, there is reason for proposals to optimize the Undergraduate Internship in Medical University of Sofia (Zlatanova et al. 2015; Dobrilova et al. 2018).

The practice of medicine is and will continue to be increasingly complex, which is why health professionals must have sufficient knowledge of bioethics in order to approach and resolve ethical problems accordingly. Bioethics

case studies are intended to be a useful training tool to help medical students in their future daily practice as doctors and contribute to improving doctor-patient relationships and team work (Bioethics Core Curriculum 2008; Holmboe et al. 2011; UNESCO 2011; Engelberg 2021).

The length of the undergraduate internship dedicated to the Hygiene, Epidemiology, Social Medicine and Infectious Diseases discipline adds up to 35 calendar days in total, which are distributed in the following manner: Hygiene – 15 days, Epidemiology – 8 days, Social Medicine – 5 days, and Infectious Diseases – 7 days.

The total length of training in this discipline we propose to be increased to 50 calendar days, whereby the 15-day increase should be in favor of the Social Medicine internship training. Social Medicine, being an integrative science is the only one, which focuses on the health and health care on the population level. It incorporates two basic areas of study – the fundamental and theoretical area and the practical and applied area.

The recommendation to increase the teaching hours in Social Medicine, which is one of the compulsory disciplines in the unified state requirements for the Undergraduate Internship is a function of the analysis of the empirical results of the survey, which show that over $\frac{3}{4}$ of the respondents express a desire to receive training in the bioethical principles described in UNESCO Universal Declaration on Bioethics and Human Rights. The training in Medical Ethics for the specialty “Medicine” in Bulgaria is 30 teaching hours, related to the first area of study and it includes learning Universal Declaration on Bioethics and Human Rights. Medical ethics and bioethics training is increasingly widespread, globally, in the curricula of higher medical institutions, with an average of 47.5 hours for the European Union member states (Mijaljica 2013).

On the other hand, the proposed increase in Social Medicine training is a function of a need to increase the competence and knowledge of graduating medical students of the organization of the health system and the health service, to further develop the concept of the health determinants, namely the impact personal, social, economic and environmental factors have on the health of the individual and the population (Ministry of health – Republic of Bulgaria 2022). The study of the health systems’ operation, the measures, which are taken to improve public health, the satisfaction of the population’s health needs, and the efficient management of resources are all related to the practical and applied area of study.

Conclusion

Health is the foundation for sustainable, equal and just societies actions based on the universal values of human rights, justice, solidarity and cooperation. We will act on a new and impactful global health strategy as part of the Global Gateway: we need to improve health systems so that they can more effectively prevent and respond to global health threats, as well as tackle all infectious and

non-communicable diseases (Sixty-sixth World Health Assembly 2013; EU 2022; Kluge 2022).

Ensuring and maintaining the quality of higher medical education is of strategic importance to society, bearing in mind that is producing competent medical personnel who will conduct health care activities based on the models of good medical practice by complying with ethical principles and norms and relying on scientific evidence.

Based on the results of the empirical research and analyses, the study identifies the context and main quality and organization functions of the learning process and proposes Medical University of Sofia to reorganize the undergraduate internship by increasing the training in Social Medicine from the united cycle – Hygiene, Epidemiology, Social Medicine and Infectious Diseases, as a compulsory subject according to the Unified State Requirements, by 15 calendar days and with additional training in Bioethics and Human Rights in order to improve the practical knowledge and skills acquired during the study, which are crucial to developing the working and theoretical groundwork needed for the independent solving of organizational, prophylactic, diagnostic, therapeutic and other professional problems, which graduating medical students may face.

The results of the empirical study give us grounds to make recommendations to the Ministry of Health and the Ministry of Education and Science to update the Unified State Requirements for the Acquisition of the Master’s Degree in Medicine and to submit them for adoption by the Council of Ministers of the Republic of Bulgaria by including the discipline of Medical Ethics, which includes the study of the ethical principles of UNESCO Universal Declaration on Bioethics and Human Rights in them, as an independent course of study in the undergraduate internship of graduating medical students.

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Conflicts of interest

None declared.

Author notes

This study was approved and supported by the authorities of the Medical University in Sofia. Medical University as a higher education institution is a subject to regular external quality assurance by an agency, which has successfully demonstrated that it meets the standards and guidelines for quality assurance in the European Higher Education Area (EHEA) through a registration in the European Association for Quality Assurance in Higher Education (EQAR).

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with the requirement for training in accordance with the principles in the UNESCO Universal Declaration on Bioethics and Human Rights.

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