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ADHERENCE TO THE PRINCIPLES OF ACADEMIC INTEGRITY IN THE PROCESS OF TRAINING MEDICAL STUDENTS

Abstract

Academic integrity is a cornerstone of modern education, ensuring the quality of learning and shaping the ethical standards of future professionals. This is particularly crucial in medical education, where adherence to academic integrity directly impacts the safety and quality of future healthcare practices. This literature review examines contemporary approaches to promoting academic integrity in medical universities and explores factors that contribute to its violation among medical students. The findings highlight the multifactorial nature of academic dishonesty, driven by individual, institutional, social, cultural, and technological factors. Key challenges include the misuse of artificial intelligence tools, high academic stress, and a lack of awareness regarding the ethical and professional implications of academic misconduct. The study underscores the importance of implementing comprehensive strategies, such as promoting a culture of integrity, improving plagiarism detection systems, and enhancing ethics education, to mitigate academic dishonesty and foster a strong foundation for ethical medical practice.

Keywords: academic integrity, medical education, academic dishonesty, plagiarism, ethics, artificial intelligence, academic stress, ethical standards, medical students, professional development.

Introduction

Academic integrity is one of the main components of the modern educational system, which ensures not only the quality of education, but also forms the ethical standards of future specialists. This is especially important in medical educational institutions, where the correctness of the performance of scientific and practical tasks has a direct impact on the further professional activities of doctors. Future doctors, studying in higher educational institutions, must understand the importance of observing academic integrity, since this will determine not only their professional reputation, but also the level of safety and quality of medical care that they will provide in the future.

The principles of academic integrity include honesty, responsibility, transparency, fairness and respect for other people's intellectual property. Violation of these principles, such as plagiarism, falsification of scientific results or unfair assessment, can have not only legal but also ethical consequences, undermining trust in the profession and its representatives. In the conditions of high pressure experienced by medical university students due to heavy academic workloads and the need to achieve high results, the problem of maintaining academic integrity becomes even more urgent. This problem requires more detailed study, since failure to

comply with ethical standards can have serious consequences not only for academic activities, but also for future medical practice.

The purpose of this literature review is to study modern approaches to ensuring academic integrity in medical universities, as well as to analyze the factors influencing the violation of these principles among medical university students. The review aims to identify the main problems and challenges that arise in the process of ensuring academic integrity, as well as to study the most effective methods and practices aimed at reducing the number of violations among students.

Material and Methods

The methods of systematic analysis and synthesis of scientific articles, as well as comparative analysis of studies from different sources, were used to write the literature review. Articles and studies from international databases such as Google Scholar, PubMed, Scopus, as well as national sources, in particular works by Ukrainian authors, related to academic integrity in medical education were reviewed. Monographs, dissertation studies and reports on practical measures implemented in medical educational institutions to prevent violations of academic standards were also used. Analysis of the provided sources allowed us to identify gen-

eral trends and challenges in ensuring academic integrity in the educational process, as well as to develop recommendations for improving educational practices to prevent violations.

Results

Academic integrity is understood as adherence to basic principles and values – honesty, trust, fairness, respect and responsibility in the processes of learning, teaching and research, as well as the manifestation of courage in making ethical decisions [1].

Cheating and plagiarism remain common problems in higher education institutions around the world. Recently, these phenomena have become increasingly alarming, especially in connection with the unethical use of artificial intelligence (AI) tools. Such tools allow for the manipulation of the processes of taking exams, completing assignments, preparing reports, case studies, dissertations and scientific papers. Studies confirm that students can easily use technology and AI to perform written work in an unscrupulous manner [2].

In the future, artificial intelligence is likely to continue to improve, creating more personalized educational materials. This may negatively affect students' motivation to acquire knowledge and change the learning environment in higher education institutions. In addition, such developments may prevent students from developing new skills and abilities, as they will spend less effort and time on independent mastery of knowledge [3].

A review of the scientific literature indicates that academic misconduct in medical universities is also a serious problem, in particular due to the high levels of stress and academic workload that students face [4-6]. Some students use dishonest methods to perform laboratory work or participate in clinical practices, which undermines trust in the educational process.

The concept of “academic integrity” was first officially enshrined in the Law of Ukraine “On Education” of 2017. In Article 42 of this law, academic integrity is defined as a set of ethical principles and legally established rules that must be followed by participants in the educational process during training, teaching, and conducting scientific or creative activities. The purpose of adhering to these principles is to ensure trust in learning outcomes and scientific achievements [7]. The law also defines the structure of the education quality assurance system, which consists of three levels: the internal quality assurance system in educational institutions, the external quality assurance systems and quality assurance systems of management bodies and institutions responsible for external quality assessment. The principles of academic integrity apply to all participants in the educational process, including teaching, research and teaching staff, as well as students.

Research has shown that students have different views on what constitutes plagiarism and the relative seriousness of different cheating practices depending on their cultural background [8].

Several factors have been identified that influence students' participation in academic dishonesty. These include: deontology, where students are unaware of academic rules and do not understand what academic integrity is, and justify their actions based on personal,

cultural or religious beliefs without considering the consequences; utilitarianism, where dishonest actions are justified by focusing on results rather than on the process itself; rational fair exchange, where dishonesty is justified by the fact that it simply transfers someone else's work; Machiavellianism; cultural relativism; and situational factors such as family pressure or unforeseen circumstances [9].

Other factors that contribute to academic dishonesty include poor time management skills, increased demands on assignment submission, and easy access to information databases and communication technologies [10].

Research has shown that cheating and plagiarism among students are multifactorial in nature, driven by individual, institutional, social, cultural, and technological factors. At the individual level, low motivation, self-doubt, and impulsiveness and stress responses lead to violations. Institutional factors include the atmosphere in the group, insufficient attention to the learning environment, and weak control mechanisms. Social pressure, competition for high grades, the influence of societal norms, and peer expectations also exacerbate the problem. Cultural aspects, such as parental pressure to achieve high results, create conditions for justifying dishonesty. Technological factors, including the availability of artificial intelligence and the imperfection of plagiarism detection software, create additional opportunities for violations of academic integrity. Together, these factors underscore the need for a holistic approach to building a culture of integrity in higher education [2].

On the other hand, personality traits such as conscientiousness and integrity significantly reduce the likelihood of violating academic integrity [11].

An important factor is the lack of awareness among students about the importance of academic integrity and its impact on their future professional activities. In particular, many students do not fully realize that violating academic standards not only undermines scientific integrity, but can also lead to serious ethical and legal consequences in medical practice.

According to researchers, students who commit academic dishonesty at their educational institutions are likely to continue to engage in similar unethical acts in their professional lives [12].

However, alongside these challenges, a number of studies have shown positive results from implementing measures to raise awareness of academic integrity [13].

Higher education institutions are required to adopt comprehensive strategies to combat fraud and plagiarism, as these phenomena undermine their reputation, ethical principles and moral stability. First of all, it is necessary to reform the academic honor code, ensure its regular review and inform students about the importance of academic integrity. Particular attention should be paid to the implementation of courses for new students on the basics of integrity, the development of a culture of ethical behavior among teachers and students, as well as the implementation of awareness-raising programs. Universities should improve software for detecting plagiarism, in particular for identifying texts

created by artificial intelligence, and provide consulting services to develop an understanding of the consequences of violations. The synergy of such measures, including policy, technical and educational initiatives, will contribute to strengthening academic integrity and creating an ethical environment in higher education [2].

According to most authors, higher education institutions should implement effective tools for detecting plagiarism, secure platforms for conducting online exams and clear academic integrity policies. At the same time, it is important to promote the formation of a culture of ethical use of artificial intelligence and increase digital literacy of students [14].

As evidenced by the literature, many universities have introduced courses and trainings for students, which address issues of ethics, academic integrity, as well as the consequences of violations. This allows students to better understand the importance of adhering to ethical norms in scientific and practical activities [2].

Thus, violations of academic integrity are a serious problem for medical universities, however there is a range of measures that can help address this problem. The most effective methods include the introduction of automated plagiarism checking systems, strengthening ethics education among students, and the active participation of teachers in shaping a culture of academic integrity. Equally important is working with university administrations, which should ensure clear rules and procedures for checking academic violations and apply appropriate sanctions if they are detected.

One of the biggest challenges is that some students do not realize the seriousness of violations of academic integrity. Given that medical studies require deep theoretical and practical knowledge, dishonest performance of tasks can cause not only academic problems, but also significantly reduce the quality of medical care in the future.

Conclusions

Academic integrity is an important component not only of the educational process, but also of the professional development of future doctors, since ethical standards formed during training significantly affect medical practice. Violations of academic integrity are common among medical students, but with the help of effective control methods and education, the level of these violations can be significantly reduced. Ensuring academic integrity requires the implementation of comprehensive approaches, including the use of modern technologies for checking plagiarism, regular training of students in ethics, and a clear definition of policies in medical schools.

References:

1. International Center for Academic Integrity. The Fundamental Values of Academic Integrity. In ICAI. 2021. Available from: https://academicintegrity.org/images/pdfs/20019_ICAI-Fundamental-Values_R12.pdf
2. Sozon M, Mohammad Alkharabsheh OH, Fong PW, Chuan SB. Cheating and plagiarism in higher education institutions (HEIs): A literature review. *F1000Res*. 2024 Sep 26;13:788. doi: 10.12688/f1000research.147140.
3. Tomlinson B, Torrance AW, Black RW: Chatgpt and works scholarly: Best practices and legal pitfalls in writing with ai. *SMU L. Rev.* 2023;76:108. doi: 10.25172/slr.76.1.5
4. LaDuke RD. Academic Dishonesty Today, Unethical Practices Tomorrow? *Journal of Professional Nursing*. 2013;29(6):402–406. doi: 10.1016/j.profnurs.2012.10.009.
5. Ip EJ, Nguyen K, Shah BM, Doroudgar S, Bidwal MK. Motivations and Predictors of Cheating in Pharmacy School. *Am J Pharm Educ*. 2016 Oct 25;80(8):133. doi: 10.5688/ajpe808133.
6. Azam M, Naeem SB. Academic integrity among medical students and postgraduate trainees in the teaching hospitals of South Punjab Pakistan. *Health Info Libr J*. 2022 Dec;39(4):377–384. doi: 10.1111/hir.12458.
7. Закон України № 38-39 від 05.09.2017. Про освіту [Internet]. [Law of Ukraine No. 38-39 dated 05.09.2017. On Education] [Internet]. Access mode: <https://zakon.rada.gov.ua/laws/show/2145-19#Text>.
8. Ewing H, Mathieson K, Anast A, Roehling T. Student and faculty perceptions of plagiarism in health sciences education. *Journal of Further and Higher Education*. 2019;43(1):79–88.
9. Okoroafor AU, Henning MA, Chibuike OM, Rajput V. Disclosing Academic Dishonesty Perspectives From Nigerian and New Zealand Health Professional Students. *Ethics and Behavior*. 2016;26(5):431–447. doi:10.1080/10508422.2015.1055494.
10. Comas-Forgas R, Sureda-Negre J. Academic Plagiarism: Explanatory Factors from Students' Perspective. *Journal of Academic Ethics*. 2010;8:217–232. doi:10.1007/s10805-010-9121-0.
11. Harvey HL, Parahoo SK, Mumtaz S, Badran D, BaniHani K. Investigating individual and situational factors influencing academic integrity: an empirical study among medical students. *Educational Alternatives*. 2020;18(1):30–44..
12. Ozcan CC, Gerceker M, Ozmen I, et al. : The effect of globalization, income and tourism on environment: An empirical analysis. *European Journal of Tourism Research*. 2022;32:3210–3210. doi:10.54055/ejtr.v32i.2489.
13. Loban G, Faustova M, Chumak Y. Academic integrity as an important element of the system of improving the quality of education. Current problems of modern medicine: Bulletin of the Ukrainian Medical Stomatological Academy. 2023;23(2.2):91–95. doi:10.31718/2077-1096.23.2.2.91.
14. Jenkins BD, Golding JM, Le Grand AM, et al. : When opportunity knocks: College students' cheating amid the COVID-19 pandemic. *Teach. Psychol*. 2022;50(4):407–419. doi:10.1177/00986283211059067.

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