

## ANALYSIS OF ACADEMIC KNOWLEDGE ABOUT THE CODE OF ETHICS FOR MEDICINE STUDENTS DEVELOPED BY THE FEDERAL MEDICINE COUNCIL OF BRAZIL

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**Abstract:** Introduction: In 2018, the Federal Council of Medicine (FCM), the regulatory body of the medical profession in Brazil, developed the Medical Student Code of Ethics (CEME), with the aim of positively influencing the conduct of future doctors through ethical and humanitarian training. Objective: The objective of this study was to identify whether medical students are aware and knowledgeable of the CEME. Materials and Methods: A field study was carried out with quantitative and cross-sectional approaches. Subjects were medical students in the 1st to the 12th semesters at a Brazilian university. Results: The survey results showed that most medical students (56%) did not know the CEME. Further, when examining individual classes, grouped as first years (M1 to M8) and last years (M9 to M12), only 30% of the students in the first group and 27% of the students in the last group were aware of the CEME. Conclusion: Most medical students, regardless of time in school, are unaware of the CEME.

Keywords: Code of ethics; Medical education; Medicine student; Bioethics; Medical ethics.

### **Análisis del conocimiento académico sobre el código de ética para estudiantes de medicina desarrollado por el Consejo Federal de Medicina de Brasil**

**Resumen:** Introducción: En 2018, el Consejo Federal de Medicina (FCM), el organismo regulador de la profesión médica en Brasil, desarrolló el Código de Ética del Estudiante de Medicina (CEME), con el objetivo de influir positivamente en la conducta de los futuros médicos a través de la formación ética y humanitaria. Objetivo: El objetivo de este estudio fue identificar si los estudiantes de medicina son conscientes y conocedores del CEME. Materiales y métodos: Se realizó un estudio de campo con enfoques cuantitativos y transversales. Los sujetos fueron estudiantes de medicina en los semestres 1° a 12 en una universidad brasileña. Resultados: Los resultados de la encuesta mostraron que la mayoría de los estudiantes de medicina (56%) no conocían el CEME. Además, al examinar las clases individuales, agrupadas como primeros años (M1 a M8) y últimos años (M9 a M12), solo el 30% de los estudiantes del primer grupo y el 27% de los estudiantes del último grupo conocían el CEME. Conclusión: La mayoría de los estudiantes de medicina, independientemente del tiempo en la escuela, desconocen el CEME.

Palabras clave: Código de ética; Educación médica; Estudiante de medicina; Bioética; Ética médica.

### **Análise do conhecimento acadêmico sobre o código de ética do estudante de medicina elaborado pelo Conselho Federal de Medicina do Brasil**

**Resumo:** Introdução: Em 2018, o Conselho Federal de Medicina (FCM), órgão regulador da profissão médica no Brasil, desenvolveu o Código de Ética do Estudante de Medicina (CEME), com o objetivo de influenciar positivamente a conduta dos futuros médicos por meio de treinamento ético e humanitário. Objetivo: O objetivo deste estudo foi identificar se os estudantes de medicina estão cientes e conhecedores do CEME. Materiais e Métodos: Foi realizado um estudo de campo com abordagens quantitativas e transversais. Os sujeitos foram estudantes de medicina do 1º ao 12º semestre de uma universidade brasileira. Resultados: Os resultados da pesquisa mostraram que a maioria dos estudantes de medicina (56%) não conheciam o CEME. Além disso, ao examinar as turmas individuais, agrupadas em primeiros anos (M1 a M8) e últimos anos (M9 a M12), apenas 30% dos alunos do primeiro grupo e 27% dos alunos do último grupo tinham conhecimento do CEME. Conclusão: A maioria dos estudantes de medicina, independentemente do tempo na escola, desconhece o CEME.

Palavras-chave: Código de ética; Educação médica; Estudante de Medicina; Bioética; Ética médica.

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## Introduction

Currently, medical training is dominated by the biomedical model(1), which is defined by rational, objective and scientific evidence. Medicine, which is intrinsically related to technological development, has reached the highest degree of scientific evidence. Medical education, which teaches these traditional aspects of medical practice, has an imperative need to keep up to date regardless of the high speed with which information presents itself in the digital world. Thus, medical students are exposed to a high level of demand on their cognitive(2) abilities as they manage and integrate the acquisition of knowledge in the time allotted for medical training.

Faced with this complex integration of skills and competencies, students and professors, as a rule, overvalue studies of clinical and surgical sciences, asymmetrically and disproportionately, limiting and minimizing the period for discussion and study of the ethical and humanitarian aspects of medical practice relationship—activities relevant to the development of reflective and critical thinking of the future physician(3).

In Brazil, the Federal Council of Medicine (Conselho Federal de Medicina - CFM), making use of its regulatory powers conferred by the federal constitution, oversees and regulates professional practice, and this body drafted and disseminated the current Code of Medical Ethics(4), which, in turn, guides the “medical act”. In practice, the medical act is the decision-making of the professional, one of the most important moments in the doctor–patient relationship. According to this code, this process should be performed based on respect for the fundamental rights and needs of patients(3-5). Ethical process protects the patient and maintains the integrity of the profession, in addition to acting without deviating from the moral precepts of the community, thus contributing to the development and strengthening of the credibility of the relationship and minimizing human suffering.

The study of the code of professional medical ethics is part of the curriculum of most medical schools, and(6) by definition are rules of conduct, with a vision based on mission, principles

and moral values, interposed to the legislation in force in the country. Therefore, it is a set of inflexible “right” and “wrong”, who thus participate in the process of the best decision during the “medical act” and will be subject to punishments for infractions(7). There is support in the literature and consensus among researchers in the teaching area, regarding the need to go beyond the study of the code of professional ethics and in this context, several authors defend the thesis that the medical student needs to develop a critical and reflective thinking that enables the development of future doctors with capacity for ethical judgment in the face of the current obstacles in the day to day of the professional. Therefore, the involvement of academics and medicine with humanities themes is necessary(8-12). The National Curricular Guidelines/DCN for undergraduate medical courses (BRASIL, 2001)(13) are in agreement with the national and international literature, when they stimulate the awakening of responsibilities in academics, with the introduction of social and humanistic values. And this agreement of the DCN continues with a commitment to ethics, culture, and the exercise of citizenship through the promotion of interaction between teaching and the community(14).

Every initiative to make the doctor-patient relationship more humanized contributes to the reduction of frequent conflicts in the health sectors and consequently of men’s suffering(15,16). And with this aspect, teaching also favors the development of eticity in research, with the view of new researchers from these courses where there was space for discussion about integrity and responsibility in the execution of scientific projects, from the initial questioning to publication(17-20).

The socioeconomic and cultural transformations caused by globalization have stimulated in the timeline, many controversial debates and currently reached consensus among the authors as to the need to introduce humanities themes in the medical course(21), including in a transversal way(22), involving academics from the first years of the course, thus contemplating all grades, as transformative measures, bringing the medical future closer to these social, cultural and ethical values. And this was the gap to introduce and practice the bioethical precepts that meet

these needs to arouse greater interest in human relations and their care. Thus, bioethics emerges as an instrument that goes beyond the limits of deontology and current laws because it relies on moralities and transposes the plural needs of individuals and society(23,24) qualifying the physician for ethical responses to emerging dilemmas.

In response to the needs evidenced in the last years of medical training, the CFM, in 2018, implemented a specific Code of Ethics for the Medical Student (CEEM)(25,26) to guide the conduct and training of medical students(3,25,27). Due to the scope of the CFM in the entire Brazilian territory, it is assumed that CEEM would be widely known and dispersed in the academic environment. CEEM covers the entire universe of medical students' experiences, such as their relationship with the educational institution, the handling of cadavers, the care of patients, and their relationships with society and their teams, in addition to interpersonal relationship skills and responsibility for their own medical training(3,25,27,28). Therefore, CEEM has a national reach and is organized into six axes that guide the study of medicine, with fundamental principles that regulate the role of medical students, aiming to improve their behavior(3,25,28). The aforementioned guiding structure in the ethical molds of CEEM provides students with a compilation of principles and norms, guided by broad respect for individuals and their rights.

A search in the Virtual Health Library (BVS) showed that beginning in 2018, when the CEEM was published, only one study addressed this code of ethics; however, it does not reference students' knowledge about CEEM and its content. In previous years, before this CFM initiative, some authors(3,29) discussed the need for and importance of producing a code of ethics for medical students. In the national literature, we observed that in addition to a lack of information on the existence of the CEEM, there are no studies about the knowledge of medical students regarding this code.

Motivated by this lack of knowledge observed in the literature, we developed this study to identify, quantify and analyze the knowledge of medical students attending a Brazilian university about

the CEEM(25). We conducted a field study involving the medical students.

Despite the importance of the subject, there is no requirement for the study of CEEM in the medical curriculum in Brazil, which in part probably justifies the lack of CEEM knowledge among the students. However, the teachings on ethics and bioethics contained in the CEEM apply to the practice of medical students, as already described, can also contribute to the more humanized development of the future physician, as they emphasize respect for the dignity of those around him or her. While the code is designated for students, its principles also have application for professors and managers of medical courses, who teach about the confrontation of contemporary ethical dilemmas.

Undeniably, there is a universal need to modernize the teaching tools of ethics and bioethics in the modern classroom(12,30) for a generation that has grown up with digital immediacy and progressive globalization through use of the internet and other technological tools(31).

Thus, this study aims to contribute to the development or improvement of the Code of Ethics for Medical Students and to provide a reference for countries other than Brazil that may be interested in adapting such a code according to their cultures and senses of morality.

## Methods

Regarding the methodology, They were carried out in two stages: a bibliographic review, researching the existence and number of publications on the Code of Ethics of the Medical Student of the CFM (2018) and a characterized research as a field study conducted in the medical school of a Brazilian university. It was based, as a research question and in the verified reality, whether the students of this course knew the Code of Ethics of the Medical Student of the Federal Council of Medicine / CEEM-CFM. all those involved in the research were questioned at the same time.

The subjects are students in 12 classes, divided by semesters, ranging from the 1st to the 12th and last period of the course. Each class contained approximately 30 students, and after dropouts,

failures and transfers, there were 300 regularly enrolled students in February 2020 at the time of data collection. Invitations to participate in the study were issued to the students. Of these, 203 students met the exclusion and inclusion criteria and signed the informed consent forms. Therefore, the sample of this study comprised a total of 203 participants, whose ages ranged from 17 to 36 (mean 25 years).

In the quantitative approach, the inclusion criteria were (a) being duly enrolled in the medical program; (b) being in the classroom at the time the questionnaire would be administered and agreeing to participate; and (c) not knowing the project in question. The exclusion criteria were as follows: (a) members of the Academic League of Bioethics and (b) students who did not agree to participate or who declined to participate after the clarifications, which included guarantees of privacy and confidentiality. All participants were guaranteed the right to withdraw from participating in the study at any time of its development, without any kind of prejudice.

The study was cross-sectional, with a single data collection, concomitant for all classes, through a structured, closed questionnaire, with the following and only predefined question: "There is a code of ethics for medical students of the CFM? ( ) Yes ( ) No".

The questionnaires were administered by a team of 12 students from the Academic League of Bioethics, with the permission of the professors responsible for the classes and coordinated by the authors. The team was previously instructed about how to administer the questionnaire in the 12 classes. They did so on the same day, determined in advance by the authors, when the study participants were together and available for questioning.

Team members went to the classrooms and explained the research to the medical students, the guiding question, its objectives and the guarantees of research ethics (Resolution no. 446 of December 2012 of the CNS of the Ministry of Health(32) that governs research on human beings in Brazil) and subsequently obtained agreements to participate and collected signatures of participants on

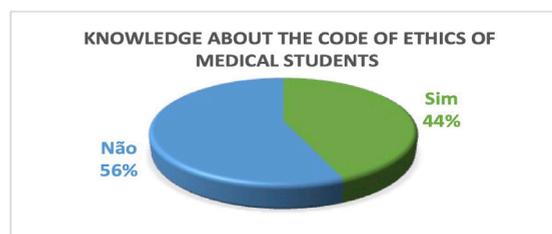
the Free and Informed Consent Form (ICF).

For the presentation of the results, the classes were assigned according to semesters, ranging from M1 to M8 for the first four years of medical school and from M9 to M12 for the last years of medical.

## Results

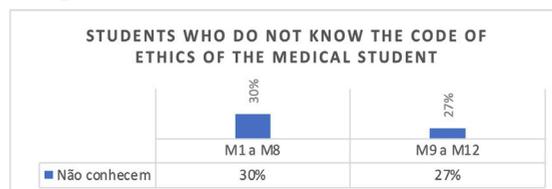
Of the three hundred (300) students enrolled regularly in the medical program, from the 1st to the 12th semester, 68% (n = 203) met the inclusion and exclusion methodological criteria necessary to participate in the study. The results obtained with the responses of the applied questionnaire are presented below by means of graphs.

The results of the questionnaires showed that of the 203 (100%) students who participated in the study, 44% (n = 89) confirmed knowledge of the existence of the CEEM, and 56% (n = 114) reported no knowledge of the code (Graph 1).



Graph 1: Students who know CEEM (Yes); They do not know the CEEM (No).

Considering the results by class, dividing them between students in the first four years of medical school (M1, M2, M3, M4, M5, M6, M7 and M8) and the last years of medical school (M9, M10, M11 and M12), it was observed that 30% (n = 60) of students enrolled in the first years (M1 to M8) and 27% (n = 54) of students in the last years (M9 to M12) were unaware of the CEEM (Graph 2).



Graph 2: Students unaware of the CEEM

When comparing students in the first four years (M1 to M8) with students in the last years (M9 to M12), there was no significant difference in knowledge of the CEEM.

Therefore, the lack of knowledge of the code does not predominate in the first four years of medical school.

### Discussion

The results of the study showed that more than half of the medical students studied (56%) were unaware of the CEEM. Further, when classified by time in school, as first years (M1 to M8) and last years (M9 to M12), only 30% of the students in the early years of medical school and 27% of the students in their last years of medical school were familiar with the CEEM.

These findings demonstrate ignorance about the CEEM, unlike the Code of Medical Ethics for professionals, whose teaching is part of the curriculum throughout the Brazilian territory

It is important to note that the lack of scientific publications on the medical students; code of ethics does not occur only at the national level, where only four studies(3,28,32) addressed the topic in the past 10 years but also at the international level where studies(4,27) involve only the importance of medical students learning about ethics, bioethics and the Code of Medical Ethics, meanwhile without addressing a specific code of ethics for students.

The study by Liu et al.(5). showed that medical students, when participating in a program on bioethics, perceived positive learning experiences that allowed them to appreciate the relevance of bioethics, ethics and humanities in clinical practice. Although this study did not reference a specific code of ethics for academics, the conclusions by Liu et al. highlighted the importance of a reference to present ethical standards for the daily clinical practice of medical students(5,27). Other studies(3,33,34,28) also highlighted the importance of teaching ethics and bioethics(5,35) in medical programs, as well as the importance of a

code of ethics for medical students(3,28,34).

National authors evaluated in a question similar to our study, about the knowledge of medical students about the moral and mandatory importance of medical secrecy in the doctor-patient relationship and also verified the lack of knowledge of most medical students on the subject in question(28). And in another group of studies, in another Brazilian university, the same result was obtained when they evaluated the knowledge of 263 medical and dental students regarding the patient's image rights, where the authors observed that 44% of the students at some point recorded photos, videos or medical records of patients without informed consent and 77% of the students were unaware of the existence of the ethical-legal aspects that involve the patient's right to image(36).

### Conclusion

The Medical Professional's Code of Medical Ethics is integrating with other topics involving bioethics taught during medical school, so the student is given the theoretical foundations necessary for professional life, but these lessons lack practical application 27 that could be introduced, in part, through CEEM.

This study showed that the majority (56%) of our subjects did not know the Code of Ethics for the Medical Student. When comparing students in the initial years (30%) of medical school and students in the final years (27%), no significant difference in knowledge of the code was observed. In response to the question presented in the introduction, it is concluded that most medical students do not know about the CEEM, regardless of where they were in their course of study.

Thus, the present study contributes to broadening the bibliographic framework on the subject, highlighting the need to broaden the debate on the code of ethics of medical students and its dissemination among students and professors. For this purpose, it is suggested that the CEEM be presented to students beginning in the first year of medical school and addressed and discussed for the duration of their training to fill this gap in the curricula about CEEM and its importance as an

tool for teaching bioethics.

In conclusion, this study, in addition to collaborating with the dissemination of CEEM among academics and professors, also contributed to demonstrate the importance of the need for an interdisciplinary and transversal approach to CEEM so that all students, from the first to the last semester, adopt an ethical stance in clinical practice. Through the discussion of the contents of the EMSF, its application in daily practice and acting as a trigger for the study of bioethical themes and dilemmas, we will observe the ethical growth, simultaneous to the technical, thus valuing the human aspect of medical education. The CEEM study is of fundamental importance as a reference for an ethical stance from the beginning of clinical practice from the university, taking this behavior to their professional life, resulting in the well-being of patients.

Regarding the limitations of the present study, it was conducted in only one university. Thus, for future studies, it is suggested to increase the number of universities and the number of study participants.

### **Future prospects**

The introduction of the regular study of the Code of Ethics of Medical Students /CEME should be encouraged in medical courses from the earliest years, so that it acts as a facilitator in the approach and practical implementation of topics such as bioethical principles, as well as those of medical ethics such as privacy and medical confidentiality, creating a connection of knowledge with the thought and ethical attitudes of the future conducting it beyond diagnostic and therapeutic purposes in addition to familiarizing it with coping with ethical obstacles arising from development, including technologies. The academic training will be reflected in the ethical attitudes of the physician, that is, graduates capable of defending, practicing and respecting the pillar principles of the doctor-patient relationship and in parallel, medical scientists, coming from these schools with more humanized training, will develop integrated and responsible conduct in research, from its genesis and development to publication.

This whole context will result in the well-being of the patient, the family and society.

And these recommendations extend to other courses in the area of health that deal closely with man in his moment of greatest fragility, human suffering.

### **Declarations**

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Conflict of interest statement -the authors have nothing to disclose.

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