

**RESEARCH**

Teaching Bioethics in medical Schools in Latin America

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Abstract

The proper exercise of medicine requires that the medical professional recognizes the patient as a biopsychosocial being and, for that, it becomes indispensable to improve the professional's training in ethics and bioethics. This research was based on a comparative analysis of the ethics and bioethics discipline offered in medical schools in Brazil, Latin America and the Caribbean, considering the following variables: total hours of study, hours allocated to subjects, thematic content and if the discipline is offered as an isolated discipline, or transversally throughout the course. In summary, we obtained as a result that the workload assigned to ethics and bioethics teaching, when compared to the total course workload, was very small and presented a clear tendency to be offered in a single discipline preferably allocated in the pre-clinical training period of academic education.

Keywords: Ethics. Education medical. Brazil. Bioethics.

Resumo**Ensino de bioética nas escolas de medicina da América Latina**

O adequado exercício da medicina impõe que o profissional reconheça o paciente como ser biopsicossocial e, para tanto, torna-se indispensável aperfeiçoar sua formação em ética e bioética. Esta pesquisa teve como base análise comparativa sobre a oferta da disciplina de ética e bioética em faculdades de medicina do Brasil e da América Latina e Caribe, considerando as seguintes variáveis: carga horária total dos cursos, carga horária destinada às disciplinas, conteúdos temáticos e momento em que são oferecidos, se pontualmente em disciplina isolada, ou transversalmente ao longo de todo o curso. Em síntese, obtivemos como resultado que a carga horária destinada ao ensino de ética e bioética, quando comparada com a carga horária total do curso, foi muito exígua e com nítida tendência de ser oferecida em disciplina isolada alocada preferencialmente no período pré-clínico de formação acadêmica.

Palavras-chave: Ética. Educação médica. Brasil. Bioética.

Resumen**Enseñanza de bioética en las facultades de medicina de América Latina**

El adecuado ejercicio de la medicina impone que el profesional reconozca al paciente como ser biopsicosocial y, para ello, es indispensable el perfeccionamiento de su formación en ética y bioética. Esta investigación tuvo como base un análisis comparativo sobre el dictado de la disciplina de ética y bioética en facultades de medicina de Brasil y de América Latina y el Caribe, considerando las siguientes variables: carga horaria total de las carreras, carga horaria destinada a las disciplinas, contenidos temáticos y momento(s) en que se ofrecen, si de manera puntual en una disciplina aislada, o transversalmente a lo largo de toda la carrera. En síntesis, obtuvimos como resultado que la carga horaria destinada a la enseñanza de ética y bioética, en comparación con la carga horaria total de la carrera, fue muy exígua y con una nítida tendencia a ser brindada en una disciplina aislada, asignada preferencialmente en el período preclínico de formación académica.

Palabras clave: Ética. Educación médica. Brasil. Bioética.

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Declararam não haver conflito de interesse.

The United Nations Educational, Scientific and Cultural Organisation (Unesco) proposes that the humanistic training of health professionals should be a priority in the university educational environment in the 21st century¹. Taking a leading role in achieving this goal, courses of medicine have, among others, disciplines of ethics and bioethics, offered in such a way that all graduates of these institutions are prepared to attend patients in their biopsychosocial and spiritual dimensions.

Bioethics is therefore an area of applied ethics, and some authors defend as a priority the principle of protection as the guiding element in clinical decisions² - this understanding is supported by the *Universal Declaration on Bioethics and Human Rights*³.

To discuss bioethics and humanisation or to contribute to the development of moral and ethical competencies of health professionals is no simple task. The ethics applied in medical schools imposes the commitment to prioritise the deliberative process as an element of dialogue with sick people⁴, an indispensable factor for a good doctor-patient relationship.

On the other hand, bioethics represents an important instrument for the search for reasonable and prudent solutions⁵ in clinical cases that present moral conflicts between health professionals, patient and family members. Moral transformations present in contemporary society have made humanisation a central element of medical education^{6,7}.

In a globalised context, where information has a rapid diffusion in the different social media, the physician must master new competences, as well as facts strictly related to technical knowledge. Other variables related to the patient's personal values and beliefs must be considered as well. However, national and international literature shows a significant prevalence of technical content in medical training, to the detriment of humanistic content⁹. The institution of the technical-scientific model in the teaching-learning process, indelibly marked by the positivist-rationalist model, which reserves second place to courses such as social sciences, is the common denominator of most medical schools in the Western world¹⁰.

This fact influences the way the doctor, most of the time, sees the patient as a simple carrier of physical or physiological changes, that is, devoid of psychosocial dimension. The overestimation of the technicist model allows us to understand students' increasingly early search for medical

subspecialties¹⁰. This process contributes to limit the professional's view of the sick person, since the professional is unable to understand the patient as a biographical being and recognises the patient only as a carrier of disease¹¹.

Based on this reality it is necessary to identify strategies that can improve the moral and ethical competence of the health professional^{12,13}. Therefore, it is important not only to institute active teaching methodologies, but also to prioritise the curricular insertion of disciplines related to ethics and bioethics, in accordance with the National Curricular Guidelines of the medicine course, which proposes to train health professionals to be more critical and to have more social responsibility, in other words, citizens who work at different levels in health care and who are sensitive to the moral values of patients¹⁴. For this reason, the collaboration of the teaching staff responsible for the training of students is essential¹⁵ in order to facilitate the incorporation of disciplines related to ethics and bioethics in medical school graduation courses¹⁶.

The lack of interest about this type of content was relevant in this study, which only confirms data already verified in the literature of the area. It surfaces, once again, the insufficient qualification of medical courses graduates to make clinical decisions that consider ethical support and respect moral values and the autonomous manifestation of patients' will^{9,17}.

Historically, the credit hours for ethics and bioethics courses range from 0.6% to 1.5% of the total number of credit hours for medical courses¹⁸. The manner in which these disciplines are offered must also be questioned, not only because of the small workload and the fact that they are included in the pre-clinical period, but also because in some institutions they are included in legal medicine¹⁹.

There are several guidelines of the Associação Brasileira de Educação Médica - Abem (Brazilian Association of Medical Education) and of the Comissão Institucional de Avaliação do Ensino Médico - Cineaem (Institutional Commission for the Evaluation of Medical Education) in order to establish more adequate parameters for the ethical training of medical students²⁰; however, little has been done to accommodate these recommendations. There is a great resistance from professors of medicine faculties to comply with these recommendations, although these guidelines seek to improve the humanistic training of medical students^{18,21}.

Faced with the prevalence of curricula that underestimate humanistic themes, many professionals, despite their mastery of technical skills may feel insecure to make clinical decisions in cases where there are complex moral conflicts and the professional's perceptions of value differ from those advocated by the patient and his or her relatives^{21,22}.

In a world that is individualised and full of inequalities, it is essential to create mechanisms to bring more medical students closer to the patients' social reality, since they will be submitted to the interventions of health professionals²³. The intense legal activity of Medical councils shows that most of the ethical court cases brought up against physicians result from an unsatisfactory physician-patient relationship, as well as the disproportionate protagonism exercised by professionals in their daily tasks²⁴. The same can be said of the research done on human beings, a fact also reported in publications on the subject²⁵.

The reduced academic production on aspects related to credit hours and the offer of ethics and bioethics academic disciplines in the medical courses of most Latin American countries motivated the realisation of the present study, which aims to encourage a more appropriate inclusion of those disciplines to Health courses.

Method

The researchers involved in this research were committed to maintaining the anonymity of the studied institutions regarding the results obtained. The research used a cross-sectional, descriptive and observational methodology through active search websites of Latin America and Caribbean universities, focusing on data referring to the course structure of medical schools, total credit hours and credit hours for ethics and bioethics, as well as teaching-learning plans. The variables were analysed and compared to each other. As for the Brazilian medical schools, we compare the academic disciplines in public and private institutions.

We opted for the sampling technique for all the data analysed, including 198 of the 266 medical schools in Latin America and the Caribbean, universities with public and complete information regarding the workload of their courses, which is the main criterion for inclusion in the research. Of these schools, 121 (61.1%) were Brazilian and 77 (38.9%) were international.

Regarding the inclusion of the disciplines in the curriculum, 276 of the 517 medical schools in Latin America and the Caribbean were included, of which 118 were Brazilian and 158 were international. Regarding the credit hours in the medical schools studied, it was observed that of the total of 517 schools, 319 presented incomplete data in their websites or the course was structured in modules, without specification. In addition, 68 schools do not inform if ethics and bioethics disciplines are present in the curriculum. Thus, we included in this study the complete data of 198 institutions - 121 Brazilian and 77 international (Latin America and the Caribbean).

After identifying these preliminary data, a comparative analysis was performed considering public and private schools. The data collected were tabulated in the Statistical Package for Social Sciences 18.0 software. A 95% confidence interval and 5% significance level were established for all tests.

Initially, the Shapiro-Wilk test was used to verify if the data presented a normal distribution. The Mann-Whitney test was applied to compare the study variables (total credit hours and credit hours for disciplines) in relation to public or private schools after the finding of an atypical distribution. In addition, we used the Kruskal-Wallis test (post-test: Dunn) in order to compare the same variables in different regions of Brazil, as well as to compare the information obtained from national and international medical schools.

Results

The analysis of the allocation of ethics and bioethics disciplines in medical schools in Latin America and the Caribbean showed that 241 out of 517 presented incomplete data on their websites or the course was structured in modules, without information on the offer of these disciplines. Moreover, 68 schools do not inform if these disciplines are part of their curriculum. In fact, this study included the complete data of 276 medical schools, of which 118 are from Brazil and 158 are foreign schools (Latin America and the Caribbean).

There were no differences between public and private schools in Brazil (chi-square test, $p > 0.05$) regarding the period when the disciplines are offered. They are offered mainly in the pre-clinical section of the course.

Regarding teaching methodology, it can be observed that most universities include these disciplines in only one semester of the course.

However, in a global analysis, it can be observed that in the private universities, it is more common to teach the disciplines in more than a semester (Fisher's exact test, $p = 0.002$).

There was no difference between public and private universities regarding the offer period or teaching methodology of ethics and bioethics (Fisher's exact test, $p > 0.05$) in Latin America Caribbean Countries excluding Brazil. However, there was a significant difference in the disciplines offer when we compare data from Brazil with data from other schools in Latin America and the Caribbean (Fisher's exact test, $p < 0.05$, tables 1 and 2), evidencing gaps in the formation of the Brazilian physician.

Table 1. Comparison of the distribution of offer period for Ethics / Bioethics contents in the curriculum of medical schools in Brazil and Latin America-Caribbean

Medical Schools*	Ethics/Bioethics Teaching		Total
	Pre clinical section	Clinical section or residence	
Brazil	83	35	118
	70.3%	29.7%	100.0%
Latin America/Caribbean	50	108	158
	31.6%	68.4%	100.0%
Total	133	143	276
	48.2%	51.8%	100.0%

* Statistically significant, Fisher's exact test, $p = 0.0001$

Table 2. Comparison of the teaching of Ethics / Bioethics contents in Medical schools from Brazil and Latin America-Caribbean

Medical Schools*	Ethics/Bioethics Teaching		Total
	One semester	More than one semester	
Brazil	90	28	118
	76,3%	23,7%	100,0%
Latin America/Caribbean	48	110	158
	30,4%	69,6%	100,0%
Total	138	138	276
	50,0%	50,0%	100,0%

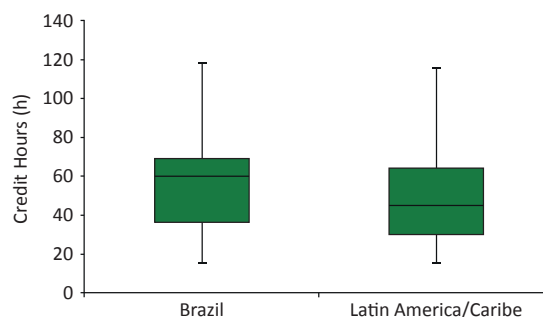
* Statistically significant, Fisher's exact test, $p = 0.0001$

No difference in the total number of credit hours was observed between public and private Brazilian schools (Mann-Whitney test, $p = 0.13$). However, it has been verified that private schools

present a higher workload of ethics and bioethics teaching (Mann-Whitney test, $p = 0.003$). Now, 249 medical schools in Latin America and the Caribbean, excluding Brazil, were analysed and 28 (11.2%) of them did not offer ethics and bioethics as academic disciplines.

As for the total number of credit hours, it was found that Brazilian schools have a higher total workload (median: 8.520 versus median: 3.675 hours), according to the Mann-Whitney test. However, although there is a trend of higher hours for these subjects in Brazil, the data were not statistically significant (Mann-Whitney test, $p = 0.10$, Figure 1).

Figure 1. Distribution of the credit hours of ethics and bioethics disciplines in medical courses of Brazilian universities and other universities in Latin America and the Caribbean



Statistically non-significant, Mann-Whitney test, $p > 0.05$

Discussion

The importance of the inclusion of ethical values in the training of health professionals is the main instrument to be valued in order to reach a level of healthy coexistence between doctor, patient and family in a society characterised by moral pluralism²⁶. The offer of these academic disciplines during graduation is, therefore, essential for students to develop skills that will enable them to establish a human relationship of mutual respect with the patient.

Today's society no longer accepts the asymmetrical relationship between health professional and patient, a condition that was once prevalent but it is now recognised as medical paternalism. Today, people want to express their autonomous desires and no longer see themselves as passive beings in face of the professionals' technical knowledge, especially seeing that there is ample access to medical information on the internet²⁶.

Faced with a better informed society which is also more interested in seeing its autonomous decisions being respected, it is imperative to recognise the relevance of introductory academic disciplines such as ethics and bioethics in the curriculum of medical courses. The Ministério da Educação - MEC (Ministry of Education) even includes this guidance in its Diretrizes Curriculares Nacionais (National Curricular Guidelines) for medical courses¹⁴. This thinking is also part of Unesco's four pillars of university education in the 21st century^{1,3}.

This study revealed that, although Brazilian universities are committed to complying with the recommendations of the MEC, it still appears that the credit hours for ethics and bioethics is insufficient. This situation results in the inability of professionals to receive patients as biopsychosocial beings¹¹, and in the substantial increase of cases against physicians in medical councils, where the main claim is the non satisfaction with doctor-patient relationship²⁷. Even when they are present in the curriculum, these disciplines are offered in the preclinical period and structured as isolated disciplines.

As for the total credit hours of medical courses in Brazilian public or private institutions, which corresponds to the sum of hours for all disciplines, no significant differences are observed. However, regarding the teaching of ethics and bioethics, a discrepancy was observed: in the private sector, a greater workload was allocated to the subject.

The results obtained by the study also showed that the approach to themes related to ethics and bioethics is also discordant, considering that the discipline were offered as an isolated subject in 91.5% of public Medical schools, while the percentage falls to 66.2% in private institutions. These numbers show that there is a greater tendency in private schools to distribute the topics of ethics and bioethics in a more transversal way throughout the course.

However, both public and private institutions offer the discipline in the first years of graduation, that is, in the pre-clinical phase, when the student has little contact with patients. Aware that the clinical phase and medical residency are the times when there is a closer contact with patients, it is clear that efforts must be made towards a more transversal teaching model throughout the course, including the residency workload, in order to create more space to clinical discussions about real cases that will be part of the day to day practice.

The comparison established between the medical schools of Latin America and the Caribbean with the Brazilian ones showed that the total workload of the national universities is higher, including the one related to the teaching of ethics and bioethics. Although the data collected are not statistically significant, we intuit that they are might be related to the stronger pressure of Brazilian entities responsible for medical education, such as Abem, Cinaem, MEC and the Conselho Federal de Medicina - CFM (Federal Medical Council).

In short, the data resulting from this research point to the need for additional studies on ethics and bioethics teaching in Brazilian and other Latin American medicine courses, although one can not forget the effort, however timid, to incorporate humanist studies in the curriculum of the courses as recommended by the MEC and by supranational entities such as Unesco^{18,21}. It seems sensible, in the 21st century, to train health professionals with social responsibility and enable them to make clinical decisions that respect the values and beliefs of their patients¹⁶.

The chapter I of the Brazilian Código de Ética Médica (Brazilian Code of Medical Ethics)²⁸, which deals with fundamental principles of the exercise of the profession, establishes in its article 4 that it is up to the physician to watch over and work for a better ethical performance in medicine. Therefore, the commitment of medical schools to overcome any resistance to the adequate inclusion of disciplines that contemplate humanistic subjects should be a priority, considering that these disciplines will enable professionals to better attend the patient, not only as a patient with a specific disease²⁹, but also as a biopsychosocial being.

Final considerations

Although the understanding of the need for ethical and bioethical training is consensual - as recommended by several ordinances such as the Code of Medical Ethics, the guidelines for medical courses of the MEC, or even international documents such as the *Trans disciplinary Evolution of the University and the Universal Declaration on Bioethics and Human Rights* - it is noted that most Brazilian and Latin American medical schools are still focused on a more technical rather than humanistic formation. This is the condition of professionals that Edgar Morin calls the "head well filled" to the

detriment of those with a “head well done” as the contemporary society asks³⁰.

The initiative to disseminate the results of this research aims to stimulate the debate about the formation of health professionals³¹, besides emphasising the need for curricular changes in medical courses in order to meet the challenging social reality that requires professionals trained in ethics and bioethics.

It is imperative to recognise that contemporary medicine requires multiple skills from the professional, such as those related to the rational use of scientific advances, and at the same time requires that the professional acquires new skills in order to maintain a respectful dialogue with the patients

and make the most prudent and reasonable clinical decisions possible. On the other hand, the patient ceased to be a passive element and assumed an autonomous condition, which qualifies the patient to eventually disagree with therapeutic treatments recommended by health professionals.

Finally, all these variables impose on the physician the need to work diligently on the deliberative process to make clinical decisions that meet the expectations of the people involved in real cases that will be part of their professional life. Although the results presented here are modest, we believe that they may stimulate the interest of other scholars in carrying out more extensive studies on the importance of teaching ethics and bioethics in health courses.

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Participation of the authors

All authors had an equal participation in the methodological design of the research. Aline Garcia Ferrari and Carolina Marqui da Silva were responsible for collecting the data and, together with José Eduardo de Siqueira, analysed the results and wrote the final article.

