

# Interdisciplinary debate in the teaching-learning process on bioethics: academic health experiences

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## Interdisciplinary debate in the teaching-learning process on bioethics: academic health experiences

**Objective.** The study aimed to understand the health of student experiences to participate in interdisciplinary discussions in bioethics and know the contributions of interdisciplinary methodological resource for the teaching-learning process at graduation. **Methods.** Descriptive study of qualitative approach in a public higher education institution of Divinópolis, Minas Gerais, Brazil. **Results.** Three categories of analysis were identified: “active methodologies in the training of a professional critic,” “interdisciplinary debate as facilitator reflection of bioethics” and “feelings and attitudes caused by the interdisciplinary debate.” **Discussion.** There was a lack of approach of

bioethical contents in the health curriculum, and the adoption of active methodologies provides a better reflection in bioethics, but that requires changing paradigms of teachers and educational institutions.

**Key words:** bioethics; interdisciplinary communication; teaching; education, higher.

## Debate interdisciplinario en el proceso de aprendizaje en la bioética: experiencias de los alumnos de las carreras del área de la salud

**Objetivo.** Comprender las experiencias de los alumnos, participantes en los debates interdisciplinarios en bioética, de las carreras

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del área de la salud y conocer las aportaciones de este recurso metodológico para el proceso de enseñanza-aprendizaje en el pregrado. **Métodos.** Estudio descriptivo de enfoque cualitativo de tipo análisis de contenido realizado en una institución de educación superior pública de Divinópolis, Minas Gerais, Brasil. Participaron 15 estudiantes (12 de enfermería y tres de medicina). **Resultados.** Se identificaron tres categorías de análisis: “metodologías activas en la formación de un profesional crítico”, “debate interdisciplinario como facilitador de la reflexión de la bioética”, y “sentimientos y actitudes provocadas por el debate interdisciplinario”. Se evidenció que existe una falta de enfoque de los contenidos bioéticos en el plan de estudios de la salud. **Conclusión.** La adopción de la metodología activa del debate interdisciplinario permitió una mejor reflexión de la bioética, contribuyendo a la formación del futuro profesional.

**Palabras clave:** bioética; comunicación interdisciplinaria; enseñanza; educación superior.

## Introduction

Although bioethics have emerged, somewhat recently, it has grown significantly and won admiration and respectability around the world.<sup>1</sup> This new area of knowledge presupposes the broad dialogue about the different cultural and religious currents to reach consensus and balance in decision-making involving bioethical problems today. Such decisions should be guided by a careful and prudent assessment of what should be promoted and what seems inadvisable or intolerable for the present and future health of the population.<sup>2</sup> In this context, the importance of bioethics in health education is highlighted, which has a double pedagogical challenge: to provide the student with resources for understanding the conceptual foundations and

## Debate interdisciplinar no processo ensino aprendizagem em bioética: experiências de acadêmicos da área da saúde

**Objetivo.** O estudo buscou compreender as experiências de acadêmicos de saúde ao participarem de debates interdisciplinares em bioética e conhecer as contribuições do recurso metodológico mesa interdisciplinar para o processo ensino-aprendizagem na graduação. **Métodos.** Estudo descritivo, de abordagem qualitativa, em uma instituição de ensino superior pública de Divinópolis, Minas Gerais, Brasil. Participaram 15 estudantes (12 de enfermagem e três de medicina). **Resultados.** Identificaram-se três categorias de análise: “metodologias ativas na formação de um profissional crítico”, “debate interdisciplinar como facilitador da reflexão da bioética” e “sentimentos e atitudes provocadas pelo debate interdisciplinar”. **Discussão** A adoção da metodologia ativa do debate interdisciplinar possibilitou uma melhor reflexão da bioética, contribuindo à formação do futuro profissional.

**Palavras chave:** bioética; comunicação interdisciplinar; ensino; educação superior.

bioethics fundamentals and at the same time, to promote the practice of critical reflection about moral conflicts that probably will come across in their role as a professional.<sup>1</sup>

Such teaching can still be distinguished in two approaches: the pedagogical and Socratic approach. The first is the most common and focuses on the transmission of knowledge, focusing on the teaching process from the elaboration, implementation, and evaluation of a pre-established program. The second approach is challenging because, without neglecting the accuracy of the contents, it prioritizes the transformation of being, that was what the Athenian philosophers sought in dialogues with their disciples.<sup>2</sup> Thus, through the current challenges in bioethics education, it

is worth mentioning the importance of adopting complementary strategies to traditional dialogued lectures, among them we can mention the practical activities with the effective participation of the student in his organization and performance.<sup>3</sup> This participation provides that each one is an agent of their transformation and modifications of their practice, enabling them to detect the ethical problems that arise from everyday reality and to pursue original, creative, responsible and prudent solutions. This type of approach requires small, interactive and participatory groups with more practical than theoretical approaches, including case discussions to analyze problematic situations of everyday activity in health and not only extreme and exceptional dilemmas that can be rare in professional practice.<sup>2</sup> Therefore, educators must understand that there were changes in the teaching-learning process and that what was unilateral and centered on the figure of the educator, became dynamic, leaving the student to seek the solution of the problems and the teacher, guide him and help him overcome difficulties and limitations.<sup>4</sup>

Ethical awareness training cannot be seen to occur spontaneously. This ability depends on the stimulus promoted by family and instruments of social inclusion, in particular, the school. In this sense, students should have contact early on with philosophical reflections on ethics.<sup>5</sup> This study sought to understand the academic health experiences to participate in interdisciplinary discussions in bioethics and know the contributions of methodological resource for interdisciplinary in the bioethics teaching-learning process at graduation.

## Methods

This is a descriptive study, carried out from a qualitative approach, of content analysis in the Thematic Analysis Modality. Content analysis is a group of methods of analysis of communications, which are systematic and concrete used to display the text of messages.<sup>6</sup>

The Pedagogy of Questioning of Paulo Freire was used as a theoretical reference, as the genuinely reflective problem-based education, used in multidisciplinary debates core bioethics, allowed scholars are appropriating reality. Critical thinking captures reality as a dynamic process in constant motion, as opposed to thinking naive in that time is static and standardized and the subject sleeps in his convictions.<sup>7</sup> It was conducted in a federal public higher education university, in the municipality of Divinópolis, Minas Gerais, Brazil, which has four courses in the health area: medicine, pharmacy, nursing and biochemistry as well as post-graduation courses.

The universe of study covered all the health academic of the interdisciplinary debate and meeting tables of a teaching center in Bioethics. This core adopts active teaching methods, based on the ideas of liberating pedagogy, which proposes the emancipation and autonomy of the subject and who perceives education as a process that involves action-reflection-action, empowering people to learn.<sup>8</sup> This core is constituted by three university faculty members and twenty students of undergraduate courses in nursing, medicine, pharmacy, and biochemistry. The tables are held fortnightly, being arranged from the choice of current discussion topics in bioethics, such as abortion, euthanasia, GM, euthanasia, predictive tests for health, among others. Each table consists of four to five participants, with different professions according to the subject to be addressed, including nurses, doctors, psychologists, lawyers, theologians, and pharmacists. The core students participated as listeners of the tables and could, in the end, ask questions or express their opinions at the table and other participants.

Thus, the selection criteria were the students enrolled in the core for more than six months and at least 75% attendance in the discussions held. The interviews were conducted from November 2013 to February 2014, and they were identified by A1 acronyms for “academic 1” and so on. For data collection, the semi-structured interview technique was used to the following guiding questions: What is your perception of the

contribution of interdisciplinary methodological resource table for the teaching and learning of bioethics at the graduation process? How the interdisciplinary debate contributed to your bioethical reflection and positioning in bioethical issues discussed at the table? What feelings did you experience during the discussions held in the interdisciplinary debate table? The reports of the interviews were recorded using an MP4 player and later fully transcribed.

For the treatment of the data, content analysis in the thematic analysis mode was used. To this end, the following steps were followed: pre-analysis, material exploration, and treatment of results (inference and interpretation). In the first stage, we proceeded to a floating reading all the material transcribed. Then, the choice of indices or categories was held that emerged from the guiding questions and the organization of these subjects. The themes that were repeated too often were cut from the text in comparable units of categorization for thematic analysis. In the second stage, the coding units were chosen, adopting the following coding procedures: semantic classification (themes) and categorization. With the chosen encoding unit, the next stage was the classification in block expressing the themes. Next, themes were grouped into defined categories and having the syntheses categories elaborated, the construction of the definition of each category was performed. In the third stage, the inference was guided by induction instrument (interview script) attempt to investigate the causes (inferred variables) from effects (inference of variables or indicators). The interpretations that lead inferences helped to uncover the meanings of speeches set out in depth, considering the objectives proposed in the study.<sup>6</sup>

The research was approved by the Ethics Committee in Research of the Federal University of São João del Rei (UFSJ), Campus Center West Dona Lindu (CCO), receiving the approval number: 415 211. The interviews were conducted after the consent and informed of the participants, given the assumptions of the National Council of Health (CNS) 196/96, in force at the time of project approval.

## Results

There were 15 academic participants interviewed of the interdisciplinary debate table. Out of the 15 academic participants, 12 were from the nursing course and three were medical students. From the nursing undergraduates, 10 were female, and two were male, aged between 19 to 23 years old. Of medical students, all were male, and the age group was between 21 to 22 years old. The interviews were transcribed and the material was subjected to content analysis, which allowed the identification of three categories of thematic analysis that reflect the experience of students to participate in the debates, which are: 'active methodologies in the formation of a critical professional' 'interdisciplinary debate as a facilitator of bioethical reflection' and 'feelings and attitudes caused by interdisciplinary debate'.

### Category 1. Active methodologies in the formation of a professional critic

This category was defined from 11 students' speeches that reported deficiencies in bioethics education at undergraduate, both concerning contents and the methodological resources. Students in this category emphasized that participation in debating tables led learning from issues involving real situations of professional practice, overcoming in this way the traditional model based on theoretical. It can be observed that, through two excerpts taken from the interviews: *[...] it is very interesting the interdisciplinary discussion of methodology in the case of bioethics, because it is a subject that in my course is underexplored... the debate also gives us know and explore more of that matter and not be closed to theoretical questions, literature reviews, getting a grueling thing (A2); I find it very interesting, and it is... If you do it in the classroom [Graduation] is... I think that many students do not return home with doubts (A11).*

Other reports show that the interdisciplinary debate feature enriches the teaching-learning process in bioethics and the formation of ethical academic position: *[...] it gives opportunity for*

*us to observe a debate between those people and from there be able to build our own opinion, our own position, since we have to use it in professional life (A10); [...] To the debate, we could realize the various points of view in relation to the dilemma, and how we can find better position (A12); It is .. through the discussions I might have an opinion, to form my opinion, right? (A6).*

Other lines indicate that the debate provides experiences about real situations that the students may come across in professional practice: *[...] we kinda experienced what one day we may have a doubt, having the opportunity to grow in certain subjects through experience of professionals who have worked in the area (A14); Well, I think it helps to be noticed, even when.. when you have a conflict in the middle of your work, to people already have an idea of what .. which side I'll stay (A5).*

## **Category 2. Interdisciplinary debate as a facilitator of reflection of bioethics**

In some situations reported in the interviews, it was found that the methodological approach of interdisciplinary debate enabled the academic one bioethical reflection space, enabling them to gain a better understanding of the complexity of the issues discussed, realizing that such questions involve different aspects and divide opinions. Therefore, this category refers to the eight academic speeches that contemplated the importance of interdisciplinary debate for understanding and critical analysis of today's bioethical issues. We can see this through the speeches: *[...] that enabled us to think, thinking they are well controversial issues discussed at the table and helped me think that I will not be able to stay on the fence, I'll have to have a point of view (A14); So it is ... I think the debate methodology is important, ... present ... differences in the way of seeing the same subject (A7); What makes you think more about certain subjects I think that is what happens, it is essential (A15).*

Another speech demonstrates the concern of academics with the conflicts that pervade the professional behavior code with their own beliefs and values and those of others involved *[...] I had many questions about the ethical position, because I have a code that has the standards, just that I'm dealing with people, and also I have my values, I have my beliefs ... the core I could see the contribution of work to a team for you be able to discuss and position, and reach a conclusion on the dilemmas (A8).*

From the reports, it can be said that the interdisciplinary debate contributed to bioethical reflection of the academic as future health professionals, as emphasize the following reports: *[...] interdisciplinary debate helped me as a professional future, because these dilemmas we experience we will begin to experience this and put me in a room to wonder how I would position, what would my decision (A4); [...] We learn the dilemmas, how to deal with each of them, in the situation that we can have, experience, in our ... in our profession (A9).*

## **Category 3. Feelings and attitudes caused by interdisciplinary debate**

Participation in discussions of interdisciplinary discussion tables allowed the awakening of feelings and attitudes in academics related to living experiences. Therefore, this category covers 10 academic reports on these feelings and the impact of these experiences in changing attitudes towards the teaching-learning process. Participation in the tables provided emotions and new feelings in academic, as they said they had not experienced such practical experiences in no time at graduation, as described in the reports below: *[...] I experienced many feelings ... however, I always I went there with a good feeling, that I learned (A8); Anxiety, euphoria ... gives a sense more so (pause) ... to think that is it, anxiety, euphoria. I think that is ... (A13); [...] Is a new experience, graduation does not take any other matter (A2).*

The tables also aroused in academic curiosity about the various themes and it enabled better interaction with professional participants of the tables, stimulating questioning at the end of the debates. Such curiosities also caused changes in attitudes related to the learning process, where academics reported the desire to seek more knowledge on the subject, as the two academic speeches: [...] *I was very curious to know the position of each on a particular topic, I think it made me understand more about bioethics and get more knowledge about that particular subject (A1); Apprehension, nervousness, tension, relief ... I was anxious to see what each member would argue ... I loved every day, and acquire new knowledge (A3).*

## Discussion

The Category 1 reports point out to deficiencies in bioethics education at undergraduate, mainly because it is, in most cases, traditional educational models, guided by the transmission of knowledge between the teacher and the student, through theoretical disciplines. The scholars stressed the importance of adopting models based on dialogue between theory and practice and that problematize real situations of professional practice. The approach of theory with practice, whether in the form of supervised training, whether in the form of practical activities performed by all units is an important pedagogical strategy. Just as important as the incorporation of a discipline of bioethics in the curricula of the courses, the rescue of ethical reflection for all those who dedicate themselves to the task of teaching is essential, since the ethical attitudes should be exercised as a habit that will become much easier as is more practiced.<sup>9</sup> In this context, it is highlighted the relevance of the curricula lay hold of questioning as a method for teaching-learning process as the core of bioethics which was the field of this study, by providing opportunities for reflection criticism of professional practice, the services and the health system, allowing question whether the legal and administrative rules respond ethically to the population health problems.<sup>10</sup>

The problem-based education denies the act of transferring, narrating or transmitting knowledge to students and imposes an organization around the world these students view. Thus, it is urgent work that contents not as a package that is given to students, but as a deliberate activity, which seeks solutions to contextualized and relevant problems in the lives of students.<sup>7</sup> This belief that knowledge is driven by the imbalance of certainties and the active invention of solutions.<sup>11</sup> An important aspect to consider in the context of problem-based education applied to health is the fact does not, in most cases, immediate action to change behavior. These changes will happen in continuous processes, the intermediation of knowledge that will not be the professional knowledge and knowledge of the client, but the construction of a new knowledge.<sup>12</sup>

Therefore, the action of educational institutions needs to be directed to improve social, and health of the population changes since the school should be a critical space that provides a holistic view and dialectic of health problems.<sup>13</sup> Teachers must take ownership of reality involvement, shared intentionality with other teachers and trainees to analyze it and question it critically in the light of available theories.<sup>10</sup> When these aspects of learning are neglected, new moral and ethical challenges emerge. This is especially true in the current cultural context of our society, in which the moral and cultural challenges are discernable.<sup>14</sup> It was also observed from reports that the use of active teaching methods, enrich the teaching-learning process and the formation of ethical position of academics, because if the pedagogical strategies to restrict the transmission of information and training skills, critical thinking is not fully developed. The teaching of bioethics at graduation should enable the reflection of scholars on various topics that relate to the impact of new technologies on the life and must start from the exposure values and principles that serve as 'instruments' to think critically, to understand and making decisions on ethical challenges.<sup>10</sup>

The present reports in Category 2 reveal that this type of methodology enables a better understanding

of bioethical content for academics to implement the same for situations involving bioethical issues of professional practice, thereby strengthening their critical as training health. The genuinely reflective problem-based education, used by the interdisciplinary debates core bioethics, allowed scholars are appropriating reality. Encouraging creativity and the questioning of reality is the great challenge of the teacher. The more successful in this task, the more understanding of academics become critical and will not be alienated. Critical thinking captures reality as a dynamic process in constant motion, as opposed to thinking naive in that time is static and standardized, and subject sleep in his convictions.<sup>7</sup> The reports also show that the debate helped them to understand and respect the values and beliefs of people. It is important that the students understand and incorporate the thought that the harmony of the relationship between the professional and the patient is founded primarily on mutual trust and that is the result of a relationship guided by ethical principles and respect for the beliefs and values.<sup>10</sup>

It should be borne in mind that the 'morality' of beliefs and cognitive principles will become formal and legal commands. The creation of a basic moral and cognitive beliefs should be considered as a complementary gesture; what should be kept in mind from the beginning of any learning process.<sup>14</sup> The goal of integrating science and ethics in an educational setting, allows students to begin to develop critical thinking skills and knowledge needed to identify and address the bioethical challenges to their chosen professions.<sup>15</sup> In this context, it is important to reflect on the content and teaching methodology, that is 'what' and 'how' to teach. Masterly and theoretical bioethics classes clearly show insufficient. It is essential to show the student that training in bioethics is a spinal component in their future profession. Discussions about the bioethical problems should consider the challenges and complexity of the real world.<sup>16</sup>

Depending on the social changes that have occurred in recent years, it is necessary to review the training process in Bioethics, since currently it

requires the inclusion of pedagogical models more contextualized to the new characteristics of the structure and social dynamics. In this sense, the teaching of ethics must abandon the traditional model based on an ethical vision, prescriptive, rules and focused on teaching to a more creative and flexible model that encourages autonomy and student reflection, attributes that are still scarce to the structure of some universities.<sup>1</sup> It is also considered, moreover, in this process of social change, the new requirements of the Unified Health System (SUS) of Brazil, which imply substantial differences in the training process, emphasizing the need to enable the student to understand the importance of ethical principles for strengthening and legitimizing the system in society.<sup>4</sup>

We note the impact that issues such as abortion, euthanasia, right to decide, right to choose, among others, cause in the academics, eager for the practices and disciplines stages. That fake universe of omnipotence that culturally settled in the minds of many students begins to crumble, leading them to realize how much they are weakened at the prospect of having to decide for someone else, sick, vulnerable and often cannot scale the risks aggregates to his disease.<sup>4</sup> The experience helped to confirm that the current model the teacher's roles to be a mediator that promotes actions that arouse new look and interest in the collective construction of knowledge. The teacher is also seen as a model, generating stimulatory behavior patterns in the student.<sup>17</sup> Therefore, this category pointed to the need to implement teaching methods that problematize bioethical conflicts of professional practice, comparing the academic with the different systems values and beliefs, encouraging reflection and self-criticism of the same in the formation of an ethical position. The learning methodology based on problems (PBL) has been highlighted as a facilitator in the development of skills and attitudes to ethical issues, facilitating ethical reasoning and decision-making to the student. Learning based on real cases is a way to capture the attention of students to the teaching and reflection on bioethical issues of great relevance to the clinical practice.<sup>17</sup>

The experiences described in Category 3, shows a certain fascination of students as they approach the bioethics issues. This feeling is characteristic of this new area of knowledge, which is characterized by trigger mixed feelings in people who approach. However, triggered mixed feelings, such as fascination and repulsion, they are paradigmatic to understand the discipline. The social and academic fascination with bioethics points to the understanding that bioethics is legitimate mediation mechanism in moral conflicts can provide the solution to such conflicts in health. However, the feeling of disgust could be explained to some extent by the denial by the impossibility of discipline become the definitive answer to such conflicts, reaffirming its uncertain or arbitrary character. That is, the sense of fascination identified from the speech of academics is a challenge on the effectiveness of bioethical discourse in taking forward the decision bioethical health conflicts.<sup>18</sup> A study pointed out the importance of emotions in moral judgments of students against bioethical questions today, pointing out that the emotions linked to moral reasoning are important markers for the moral trial.<sup>19</sup> This type of methodology can contribute to the self-assessment system for students, who can measure their learning, recognizing them as constructed knowledge and incorporates more easily, being a model that encourages students on attitudes to the search for their ethical answers.<sup>16</sup>

Attitudes can be taught through reflective practice, which includes four steps: detailing a situation; indicate the relevant virtues; determine the principles, values, and ethical frameworks, and finally, the range of acceptable courses of action. This method also teaches the student to solve ethical problems and promote the professionalism.<sup>20</sup> Thus, to recover the sense of human relationships, it is necessary to discuss the new bioethical challenges that arise in society and to future professionals or given the opportunity and encouragement so they cannot only experience the contact with the patient but also exercise critical judgment about these experiences.

Although bioethics have emerged recently, it is growing and demanding specific teaching

practices and, therefore, it is clear the need to open its horizons to the academic spaces, promoting attitudes that contribute to the teaching-learning process in the undergraduate courses in the health area. In this study, we emphasized the importance of using active methodologies for teaching learning process, which will enable the students to learn and reflect on the bioethical issues in health. It was highlighted the methodology of questioning as stimulating the autonomy of the student, teaching him to transform the reality and seek solutions to the bioethical problems that will come across in professional practice. From the academic report of Nursing and Medicine courses, participants interdisciplinary debates found that such methods provide the formation of a critical and aware of their professional beliefs and values. Moreover, to allow the academic examination of self and their values and principles, it was contributed to the formation of the ethical position of the professional future. Also, we saw the complexity of bioethical problems and the need for academic seek more knowledge on these issues to a conscious and reasoned position.

However, we know that the adoption of this type of methodology requires paradigm shifts of teachers and educational institutions, requiring greater investment in technology, space and dialogues with the various health sectors. To this end, it is necessary to abandon the traditional model of bioethics education, focused on normative and prescriptive aspects, focusing mainly on the teacher. We must understand the importance of active student participation in the learning process, glimpsing methodologies that put in touch with professional practice and which enables the exercise of reflection and self-criticism by the bioethical problems today.

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