



RESEARCH ARTICLE

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THEORETICAL REFLECTION REGARDING THE PROXIMITY OF BIOETHICS WITH ACTIVE METHODOLOGIES

^{1,*}Adaíse Passos Souza Amaral, ²Bruna Oliveira Trindade, ³Gilcleide Moura Correia Damasceno, ⁴Edite Lago da Silva Sena, ⁵Sérgio Donha Yarid and ⁶Rita Narriman Silva de Oliveira Boery

¹Specialist in Quality and Safety in Patient Care by the Institute of Education and Research of the Sírío Libanês Hospital (IEP/HSL), State University of the Southwest of Bahia (UESB), Graduate Program in Nursing and Health (PPGES)

²Graduate Candidate in Management in Family Health Programs at the Candido Mendes University and graduate candidate in Auditing in Nursing from the Pro Minas Institute, State University of the Southwest of Bahia (UESB), Graduate Program in Nursing and Health (PPGES)

³Psychologist by the Faculty of Technology and Sciences, State University of the Southwest of Bahia (UESB), Graduate Program in Nursing and Health (PPGES)

⁴PhD in Nursing from the Federal University of Santa Catarina, State University of Southwest of Bahia (UESB), Graduate Program in Nursing and Health (PPGES)

⁵PhD in Preventive and Social Dentistry, Faculty of Dentistry of Araçatuba- State University of São Paulo, State University of Bahia (UESB), Graduate Program in Nursing and Health (PPGES),

⁶Post-doctorate in Bioethics, Institute of Bioethics of the Católica Portuguesa University, State University of the Southwest of Bahia (UESB), Graduate Program in Nursing and Health (PPGES)

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*Corresponding author:
Adaíse Passos Souza Amaral

ABSTRACT

Objective: To discuss how Bioethics is presented in the teaching-learning process that uses active methodologies in higher education. **Method:** This is a theoretical reflection on the relationship between bioethics and active methodologies. **Results:** The theoretical reflection was divided into three main topics, these being: The student-teacher relationship considering bioethics and active methodologies, which discusses the use of bioethical aspects in the relationship between the participants in the teaching-learning process, the new role of the teacher and the student in this process, dealing with mutual respect, positive relationships, equality, the individual as a holistic concept, and the importance of dialogue as a safe alternative to eliminate the boundaries between teacher and student; Autonomy of the student in active methodologies, which emphasizes that these methodologies are based on the principle of autonomy, because teaching requires respect for the autonomy and dignity of each subject, emphasizing that the question is how to solidify the recognition of this autonomy, and the need for the teacher to recognize him/herself as an eternal learner; and Contributions of active methodologies for the teaching of bioethics, which discusses the articulation between these two knowledge areas in the teaching-learning process, and presents the different pedagogical resources of active methodologies that can be used for the teaching of Bioethics, such as cinema, portfolio, interdisciplinary debate, Problem-Based Learning, Team-Based Learning, and workshops. **Conclusion:** Bioethics has an important proximity with active methodologies, with teachers and students needing to take on new roles, influencing their relationship in the teaching-learning process, for a humanistic, critical and inclusive formation.

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INTRODUCTION

Bioethics training is extremely necessary for all healthcare providers, emphasizing the importance of some aspects, such as solidarity, acceptance, recognition of otherness and compassion in the construction of relationships with others (Cezar et al., 2011). The advance of science, new knowledge

and new technologies reflect new ethical issues, as the progress achieved by science also brings with it harmful effects, or causes an imbalance in the environment by privileging only a portion of the population. In addition, it is emphasized that new powers generate new duties or responsibilities. However, the integrity of individuals, the target of Bioethics, is always more important than the advance

of scientific knowledge. In this context, Bioethics is a new area of knowledge, which seeks to reach a consensus and balance in decision-making involving present day problems, having the broad dialogue of the various cultural and religious currents as a presupposition (Campos *et al.*, 2016). Bioethics arises, as an interdisciplinary challenge - regarding science and technology, and as a daily challenge - regarding interpersonal relationships. Faced with technical developments, ethical dilemmas become inevitable. Therefore, the need to study bioethics in the curriculum of the healthcare provider cannot be denied (Moreto *et al.*, 2010). However, in addition to the need to study bioethics during the undergraduate course, the presence of bioethical aspects in the teaching-learning processes should also be considered, especially in those that use active methodologies, which constitutes a contemporary challenge. The term active methodologies is being more used today, however, students and even faculty members in educational institutions have little clarity on the subject. Active methodologies are based on epistemological principles that put forward the idea of an active student, who constructs knowledge in challenging situations (Lopes, 2015). Active methodologies then emerge as an alternative to the traditional model of education, which has the teacher as the center of the process and the holder of knowledge. In the traditional model, the teacher determines the content and transmits it in the disciplines, leaving the student with the role of passively absorbing that knowledge (Cabral and Almeida, 2014). Historically, the training of healthcare providers was based on these types of methodologies, conservative or traditional, characterized by being fragmented and reductionist, under the influence of Cartesian-Newtonian mechanism. Thus, it became necessary to think of a methodology for a practice of liberating education, to train active professionals that want to learn to learn, facing a reality in which knowledge and skills are transformed quickly. The concept of active methodology was conceived in the 1930s and goes back to the movement of the new school and the Manifesto of 32 (Lopes, 2015). Active methodologies use problem-posing as a teaching-learning strategy, seeking to reach and motivate the student, based on the liberating pedagogy of Paulo Freire, on the principles of dialectical and historical materialism and on Piaget's constructivism (Mitre *et al.*, 2008).

Problem-Based Learning (PBL) appears in the scenario of active methodologies, which does not only correspond to an active methodological proposal that uses problem-posing, but also has a much broader view, by including a curricular proposal. The integrated curriculum that uses problem-posing as a method provides opportunities for critical reflection on the professional practice, services and health system, questioning whether legal and administrative norms respond ethically to the population's health problems (Burgatti *et al.*, 2013). It also questions the disciplinary curriculum that fragments content in disciplines. Thus, the teachings of Bioethics, like other themes, should not be restricted to the content of a single discipline, since this fractionation of subjects is not capable of producing a critical-reflexive reflection on the part of the students; a reflection that is sought by active methodologies through problem-posing. In order to understand the relationship between bioethics and active methodologies in higher education, through the keywords Bioethics, Active Methodologies, Teaching-Learning Process and Higher Education, the literature deals with the teaching of Bioethics through the use of active methodologies, however, the presence of bioethical aspects in the teaching-learning process

that uses active methodologies in higher education is not directly discussed. By identifying this gap, the present study sought to answer the research question: what is the proximity of Bioethics to the teaching-learning process that uses active methodologies in higher education? In this way, a theoretical reflection was carried out on this theme, with the present study constituting an article of reflection. The present article aims to discuss how Bioethics is presented in the teaching-learning process that uses active methodologies in higher education and, thus, provoke a necessary reflection on the relationship between Bioethics and active methodologies.

Teacher student relationship considering bioethics and active methodologies: Active methodologies use problem-posing as a teaching learning strategy, which is able to reach the critical, reflective and integrative dimension of the student, being based on the Liberating Pedagogy proposed by Paulo Freire. In Paulo Freire's liberating education, the teacher-student relationship is horizontal and not imposed. For this, it is necessary that the educator becomes the educated and the educated, the educator. When this relationship is not effective, there is no education. From this perspective, dialogue is developed, favoring the cooperation, union, organization and common solution of problems, with students participating in the process together with the teacher. It is necessary to make university education accessible and, most importantly, attractive to the student, in a longitudinal, continuous and practical way. In order to do so, it is important to reflect on the content and teaching methodology, that is, what and how to teach (Moreto *et al.*, 2010). The establishment of potentially significant content that takes into account interdisciplinarity and that is based on modules that seek certain skills and competencies in students is not an easy task and runs through the concept of the integrated curriculum. How to teach relies on the use of active methodologies in the teaching-learning process. Therefore, it is clear that the formation of teachers is extremely relevant in the construction of a transformative society, since these teachers are the mediators of a teaching capable of allowing human beings to develop as reflective and conscious people (Oliveira and Brito, 2013). From here, it is understood that teachers must have the preparation to act with active methodologies included in their training processes, which almost always does not occur. Problem-Based Learning (PBL) promotes the affective disposition and motivation of students, which are essential conditions for obtaining meaningful learning. Problem-Based Learning achieves lasting and meaningful knowledge because it causes cognitive conflicts, which become the emotional mechanism essential for meaningful learning, since the body is always in search of a state of balance. In this relationship, the task of the teacher is to ensure sufficient affective and volitional mobilization of the student so that s/he is willing to learn (Diaz *et al.*, 2015). There is, therefore, a social responsibility and respect in intersubjective relationships in the production of healthcare and in the teaching and learning process (Burgatti *et al.*, 2013), which must be added to higher education through positive relationships between the teacher and student. After all, the act of teaching-learning must be an articulated set of activities, capable of overcoming the humiliation and intimidation of students by teachers, since the teacher and student share responsibilities and the commitment, to achieve mutual respect (Mitre *et al.*, 2008). Accordingly, the discussion of the bioethics theme in active methodologies contributes to the concept of teachers capable of recognizing the students in their biopsychosocial and spiritual dimensions, not just seeking the

transmission of contents of isolated disciplines. This view can be comprehended from the understanding that the student is not a blank canvas and, therefore, has previous knowledge and experience that contribute to his/her learning. Active methodology presupposes a teaching-learning process that is characterized by the respect for the cultural baggage of the student and the knowledge that comes from community practice. Therefore, in this relationship, the teacher needs to develop new skills and a new posture that promote respect, listening with empathy and belief in the potential capacity of the student to develop and learn (Miter *et al.*, 2008). In this process, the student should be the author responsible for his/her own teaching-learning process, and the teacher, a mediator, who aims to stimulate the participation and the students' search for knowledge, always considering their previous experience for the production and appropriation of the knowledge (Leal *et al.*, 2018). In this way, active methodologies are able to favor the presence of bioethical aspects in the teacher-student relationship. Miter *et al.* (2008) stated that through these methodologies one can reach new pathways and reconstruct meaningful values such as care, solidarity, friendship, tolerance and fraternity, since the liberating/democratic pedagogical practice is founded on the principles of freedom/autonomy, equality/equity and fraternity/compassion. However, it is perceived that there are challenges to achieve this change of characteristics of the teacher and for the student to meet the new needs arising from active methodologies. After all, establishing how this process of change will be conducted and how to determine the limits in this relationship are not easy tasks. In order to overcome this challenge, Miter *et al.* (2008) claimed, according to Paulo Freire's thoughts, that dialogue is a safe alternative to eliminate the boundaries between the teacher and the student, since it functions as a potentiator of the elaboration of conflict, in a way that favors collective work.

Dialogue does not exist where there is no real and critical thinking, because critical thinking leads to the permanent transformation of the reality and humanization. Therefore, the critical thinking of the educator should not oppose the student's ability to think critically, favoring a teacher-student dialogic relationship (Silva *et al.*, 2010). This balance must be understood in the teaching-learning process to make the learner active. In the study of Rios and Schraiber (Rios *et al.*, 2011), on the intersubjective relationships of teachers and students, there were polar modes of interactivity: relationships of bonding and trust, disqualification and omnipotence, and violence. Distant attitudes of the teacher in the vertical transmission of content, authoritarian power over students and violence in the form of disqualification of people were identified (Rios *et al.*, 2011). Showing that even in the present day there are power relations, characterized by disqualification, omnipotence and violence, which marked traditional teaching for a long time. On the other hand, some studies provide examples of aspects related to the teacher and student relationship, which have given rise to several considerations about students' negative aspects, such as students' lack of commitment and honesty, and cases of plagiarism in their work (Burgatti *et al.*, 2013). Faced with situations such as these, debates on the bioethical aspects should be raised, since such debates should not be restricted to the field of a single discipline of Bioethics study. When dealing with mutual respect, positive relationships, equality, the individual as a holistic concept and autonomy of the actors, the daily use of the bioethical aspects in the relationship

between the actors involved in the teaching-learning process is being discussed. The following reflects on the autonomy of the students in active methodologies, not forgetting that autonomy is one of the principles of the Bioethics principlist model.

Student autonomy in active methodologies: "Active methodologies are based on a significant theoretical principle: autonomy". (Miter *et al.*, 2008). Teaching therefore requires respect for the autonomy and dignity of each subject, especially in the approach to an education that considers the individuals as beings that construct their own histories. This respect emerges from the dialectical relationship between teacher and student, from the mutual recognition of these two actors, since there is not one without the other and the two explain each other (Miter *et al.*, 2008). Regarding the transition from traditional methodologies to active methodologies, it is considered that this represents passing from obedience to autonomy. The traditional methodologies seek an obedient student, who uses the process of memorization to explain what was learned, characterizing the student's submission to the figure that holds the knowledge, the teacher. Problem-Based Learning, on the other hand, develops minds that are free, reflexive, tolerant, and critical about themselves and their environment (Díaz *et al.*, 2015). In this way, it can be seen that the use of active methods in the mediation of the formative processes favors the strengthening of students' autonomy, making them subjects of their own action (Leal *et al.*, 2018). The question is how to solidify the recognition of this autonomy (Miter *et al.*, 2008). For Miter *et al.* (2008) in the scenario of active methodologies, it is necessary for the teacher to recognize him/herself as an eternal learner, that is, someone who recognizes the limits of his/her knowledge, the gains from the interaction with the student, developing the process consciously, responsibly, critically and, above all, that s/he exercises "love - especially directed toward the student and the process of teaching, from the adoption of an attitude of compassion". In this passage, it can be perceived that in order to allow the student's autonomy, the teacher, too, needs a change of posture. With regard to the evaluation of the process by the learner, in Freirean education, the evaluation in the process consists of the self evaluation and of the mutual and permanent evaluation of the educational practice by teacher and students. In this process, both students and teachers will be aware of their difficulties and progress. Thus, in the teacher-student relationship that permeates active methodology, the teacher ceases to be the center of the process and becomes the one that facilitates the learning (Lopes, 2015). This requires knowledge, skills and competences on the part of this facilitator to promote the collective construction of the students' knowledge, to understand their role in this new process and to be able to favor the students' autonomy and recognition of their limitations.

Contributions of active methodologies for the teaching of bioethics: Active methodologies contribute to the teaching of Bioethics, since they use the diverse ethical foundations discussed here, such as autonomy, mutual respect, fraternity, and equality, among others. This allows a link between these two knowledge areas in the teaching-learning process. In this way, active methodologies also contribute to the significant learning of bioethics, since the different pedagogical resources of these methodologies can be used in the teaching-learning process for the teaching of bioethics. Furthermore, it should not be forgotten that this knowledge must be developed in an interdisciplinary way. On this, Diaz and Zárate (2015) believe

that the teaching of bioethics must transverse the entire curriculum and not be loose or elective disciplines in certain semesters. The effective participation of the student, provided by active methodologies, allows the students to be agents of their own transformation and modification of their practice, in order to enable them to detect the ethical problems of everyday reality and to seek original, creative, responsible and prudent solutions (Campos *et al.*, 2015). Traditionally, the teaching of ethics in Brazilian nursing schools has been characterized by a deontological view, determined by prescriptive guidelines and based only on conceptual discussions. However, this ethical education is not sufficient to train the professionals that the current moment demands, with the need for change in the training methodologies of health healthcare providers being discussed (Gerbel *et al.*, 2013). Considering the complexity of bioethical education, the ideal is to use multiple methods in the teaching-learning process, in order to expand the possibilities of decision-making faced with bioethical problems and dilemmas, and the teacher should know the advantages and limitations of each method (Cezar *et al.*, 2011). In this way, it becomes important to identify the possible methodological strategies that emerge for the teaching-learning of bioethics in undergraduate courses. The portfolio system applied to bioethics consists of a simple methodology that can be applied throughout the undergraduate course, as it allows the observation of how students grasp the ethical issues in their daily life and begin to study and reflect on them, to construct their own knowledge. This strategy offers the possibility of discussing the ethical questions that the student faces daily and is used for both the learning and evaluation of the student (Moreto *et al.*, 2010). Film projection emerges as an effective alternative because it recreates situations close to reality. Thus, the pedagogical use of films, chosen in such a way as to articulate them with the curricular items that need to be approached, allows the reflection on moral questions and, thus, allows the formation of judgments, habituating the learner to use practice-theory-practice in solving problems (Cezar *et al.*, 2011). By engaging emotions and feelings, the frames of the films enable reflection on the student's own actions, changing reality.

The use of the interdisciplinary debate resource, adopted as an active teaching methodology, contributes to the bioethical reflection of the academic. This resource enriches the bioethics teaching-learning process and the formation of the ethical position of the student, since it facilitates learning from questions involving real situations of the professional practice and enables the awakening of feelings and attitudes in the academics related to the experiences, as well as arousing the desire to seek more knowledge about the subject (Campos *et al.*, 2016). The Problem-Based Learning method can be used for Ethical-clinical learning. For this, it is suggested that clinical learning is combined with ethical learning in small tutorial groups, in which the clinical resolution of the case is complemented with the resolution of the ethical-clinical problems that arise. Another suggestion is the use of diverse audiovisual methods that present real problems of society to the students, as well as the use of news or press reports, and real cases that have been analyzed by bioethics committees (Novaes *et al.*, 2010). These methodologies provide the students with moments of critical reflection on the moral issues inherent to the professional context, given that an education based only on normative and deontological discussions does not prove sufficient for the training of professionals, considering the contemporary educational and

social demands and the Brazilian healthcare scenario (Mascarenhas *et al.*, 2010). Due to the complexity of health problems in Brazil, higher education institutions have increasingly been constructing a pedagogical model that considers the social, economic and cultural dimensions of the population (Santos *et al.*, 2018). Gerbel and Zagonel (2013) highlighted Workshops, small-group discussions (Team-Based Learning) and Problem-Based Learning as effective means of teaching ethics, however, they have not deepened this discussion. In addition to these methods, there is the Arch of Maguerez, however no studies were found that used this method for the teaching of bioethics. Finally, it is understood that bioethics and active methodology are related and complement each other in a strengthening way in the teaching-learning process, since the concept of ethics surpasses the idea of a set of norms, presupposing reflection and decision (Carneiro *et al.*, 2010), possessing, therefore, the same assumption as active methodologies, that seek to train professionals with critical-reflexive capacity.

Conclusion

It is concluded that bioethics has an important proximity with active methodologies, since the possibility of implementing this promising methodology that uses the problem as a guiding axis requires changes of paradigms, until now supported by traditional methodologies. Teachers and students need to assume new roles, influencing their relationship in the teaching-learning process. The teacher-student relationships in higher education need to be studied and given attention, with a clear definition of an institutional ethical standard for all, in order to establish mutual respect, autonomy and fraternity, aiming to achieve the goal of a humanistic, critical and inclusive formation. The autonomy of the student has a prominent place, because as the active methodology foresees an active student, this characteristic needs to be met in order to achieve meaningful learning and for the student to be able to learn to learn, to continue a continuous process of seeking knowledge that is not limited to the period of the undergraduate and graduate courses. Active methodologies contribute to the teaching of bioethics, since they use diverse ethical foundations, such as autonomy, mutual respect, fraternity, equality and also through the use of their resources for the teaching of bioethics such as the portfolio, cinema, interdisciplinary debate, and Problem-Based Learning, among others. This, therefore, allows a link between these two knowledge areas in the teaching-learning process. One limitation of the study was the low number of publications that relate bioethics to active methodologies, emphasizing the need for new studies on this subject, since these two knowledge approaches have many common characteristics, being able to be combined for the formation of critical, reflective and human professionals.

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