

# Social Representations on Ethical and Bioethic Aspects in Research

ORIGINAL

Maísa Araujo Costa<sup>1</sup>, Ronay Lustosa de Carvalho Marques Silva<sup>1</sup>,  
Francisca Tereza Coelho Matos<sup>2</sup>, Luana Kelle Batista Moura<sup>3</sup>, Carlos Alberto Monteiro Falcão<sup>2</sup>,  
Thiago Lima Monte<sup>2</sup>, Maria Ângela de Arêa Leão Ferraz<sup>2</sup>, Eliana Campelo Lago<sup>3</sup>

## Abstract

**Objective:** The study aims to analyze the social representations on the ethical and bioethical aspects in the research elaborated by academics of the Dentistry Course.

**Methods:** It is a qualitative research based on the Theory of Social Representations carried out with 80 academics of the Dentistry course. The data were collected through a semi-structured interview script, processed in the IRaMuTeQ and analyzed by the Descending Hierarchical Classification. The study followed the ethical standards recommended by Resolution n. 466/2012, obtaining approval from the Ethics Committee of UNINOVAFAPI University Center.

**Results:** The corpus analyzed in the study is composed of 79 units of initial context (UCI) with use of 62%. The results are presented in four classes, namely: 4. The understanding of Ethics and Bioethics in research; 3. Researcher's social position; 1. Legal responsibilities of the researcher and 2. Normative aspects of research ethics - legal basis.

**Conclusion:** Scholars represent ethical and bioethical aspects in research as essential to respect human dignity and protect the lives of research participants, with a focus on normative aspects of research ethics through Research Committees. Their attitudes are guided by their conditions of life, their beliefs and cultures of different social contexts.

- 1 Graduating of the Dentistry Course of UNINOVAFAPI, Teresina, Piauí, Brazil.
- 2 Dentist surgeon. Doctor. Dentistry Course of UNINOVAFAPI, Teresina, Piauí, Brazil.
- 3 Dentist surgeon. Doctor. Professional Masters in Family Health, UNINOVAFAPI. Teresina, Piauí, Brazil.

## Contact information:

**Francisca Tereza Coelho Matos.**

**Address:** Rua Vitorino Orthiges  
Fernandes, 6123, Uruguai, Teresina, PI,  
64073-505.

**Tel:** +55 86 98161-5992.

 franciscaterezamatos@uninovafapi.edu.br

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## Introduction

Ethics, in its broadest definition, is understood as the knowledge of the human attitude toward the being and his/her fellows, including studies of the acceptance or disapproval of man's actions [1]. It is the knowledge of a detailed form of human conduct [2].

Ethics is associated with other sciences, on different optics, in which it researches human relations and attitudes in society, providing data and conclusions about the type of human behavior [2]. Currently all professions have a code of ethics in an attempt to guide their professionals [3].

The 'bioethics' word was first used in 1927 by Fritz Jahr who defined the term as the recognition of ethical responsibility to all living beings. Previously, the creation of the term was attributed to Van Rensselaer who, in 1970, characterized the word as survival science. At the same time, André Hellergrers used the term to refer to studies related to the field of human reproduction [4].

In the late 1980s, Potter emphasized the interdisciplinary and comprehensive nature of bioethics including relevant reflections to medicine and health. The definition of the term as deep bioethics came to emerge in the late 1990s and symbolized an ethical science that articulates humility, responsibility and an interdisciplinary power [4].

Critical risk and benefit analysis is crucial. To carry out any research project involving human beings, the researcher must, necessarily, reflect on the ethical aspects of his/her conduct. He/She is free to propose a research project to try to respond to a particular concern or demand, but he/she must also be concerned about the consequences of what he/she is proposing [5].

Resolution 466/2012 of the National Health Council defines research as the formal and systematic process aimed at the production, advancement of knowledge and/or obtaining answers to problems through the use of scientific method; defines research involving human beings as research that, in-

dividually or collectively, has the human being as a participant, in its entirety or parts, and directly or indirectly involves it, including the handling of its biological data, information or materials; and decides that all research involving human beings should be submitted to the CEP/CONEP System, which, when analyzing and deciding, becomes co-responsible for ensuring the protection of the participants [6].

Facing the problem of the use of ethics and bioethics in research, the study aims to analyze the social representations about the ethical and bioethical aspects in the research elaborated by academics of the Dentistry Course.

The Theory of Social Representations (TRS) occupies an important space in social psychology and in different areas of knowledge. In the area of health, and more specifically in dentistry, TRS has been an important theoretical reference for analyzing the psychosocial issues involved in bioethics and ethics in research, in human health care, in the understanding of knowledge and in the adoption of everyday care practices.

Social Representations are symbolic, practical and dynamic ensembles, whose status is linked to production and not to reproduction or reaction, and to external stimuli, based on the use and selection of information, from an existing and circulating repertoire in society. It is not simply "opinions about", or "images of," but true collective sui generis theories, intended for the interpretation and elaboration of the reality. Thus, to represent an object, person, or thing is not only to unfold it, to repeat it or to reproduce it, but to reconstruct it and to modify it [7].

In its relationship with nature, man, based on the sociohistorical context, has his actions and attitudes constantly permeated by the social relations established in the context in which they are inserted.

Considering that dental undergraduates develop scientific initiation research as a strategy to improve teaching and learning, it is essential to analyze the

representations of these social actors involved to investigate the psycho-sociological aspects that influence the attitudes of students during the performance of a research, regarding ethical and bioethical aspects.

## Methods

It is an exploratory research, with a qualitative approach, based on the Theory of Social Representations.

The study was carried out with 80 undergraduate students from a Higher Education Institution, being 40 from the first period and 40 from the tenth period of the course. The data were collected through a semi-structured interview script, applied by the researchers in an enclosed environment, preserving the secrecy and anonymity of the information.

The inclusion criteria for the study participants were those who were 18 years old or older and who were attending the first and tenth period of the Dentistry course.

For the processing and analysis of the data, the IRaMuTeQ (acronym of *Interface de R pour les Analyses Multidimensionnelles de Textes et de*

*Questionnaires*) software was used [8]. The data were analyzed by means of the Hierarchical Descending Classification, according to which the texts are classified by their respective vocabularies and the set of them is divided by the frequency of the reduced forms. From matrices that intersected segments of texts and words (repeated  $X^2$  tests), the Descending Hierarchical Classification method was applied and a stable and definitive classification was obtained. This classification allowed obtaining classes of segments of text with vocabulary similar to each other but, at the same time, different from the segments of text of the other classes.

The study followed the ethical standards recommended by Resolution n. 466/2012, obtaining approval from the Ethics Committee of UNINOVAFAP University Center [6].

## Results

In the data obtained from the set of interviews (*corpus*), there are four semantic classes (categories) in the material. The *corpus* analyzed in the study is composed of 79 units of initial context (UCI), being 49 classified, which represents 62% of the *corpus*.

**Figure 1:** Thematic structure of the Social Representations of Dentistry Academics about the ethical and bioethical aspects in the research

Class 4		Class 3		Class 1		Class 2	
15 UCEs 30.61%		15 UCEs 30.61%		10 UCEs 20.41%		09 UCEs 18,37%	
The understanding of Ethics and Bioethics in research		Researcher's social position		Legal responsibilities of the researcher		Regulatory aspects of ethics in research - legal basis	
Word	$X^2$	Word	$X^2$	Word	$X^2$	Word	$X^2$
Understanding	9.8	Behavior	7.2	Commitment	7.9	Ethics	24.7
Science	9.8	Citizenship	7.2	Attention	7.9	Right	19.2
Healthcare	8.8	Life	5.9	Secrecy	7.2	Knowledge	14.2
Bioethics	7.2	Consciousness	4.0	Responsibilities	4.3	Code	14.2
Morals	6.3	Safety	2.7	Care	2.3	Compliance with	14.2
Respect	5.5	Commitment	2.7	Commitment	2.2		
Education	4.2	Society	2.7				
Value	4.2	Respect	2.7				
Society	4.2	Education	2.7				

From the material analyzed, we obtained the descending hierarchical analysis represented in the following distribution of thematic classes or contexts, with different contents in the social representations of the Ethical and Bioethical aspects in the research, contemplated below in **Figure 1**.

### The classes and their descriptions

#### Class 4. The understanding of Ethics and Bioethics in research

Class 4, consisting of 15 UCEs, concentrates 30.61% of the classified UCEs, highlighting these words: understanding, science, health, bioethics, moral, respect, education, value and society, drawn predominantly from interviews of academics from the first period of Dentistry.

The following statements show how Dentistry students understand Ethics and Bioethics in research.

*Respect, understanding and professionalism.*

Dept. 04.

*Ethics and Bioethics as respect, civilization, education and society.*

Dept. 37.

*Responsibility, moral and ethics.*

Dept. 05.

*Science, behavior, life and respect.*

Dept. 10.

*Ethics, Bioethics and society.*

Dept. 37.

*Responsibility, moral, respect and ethics.*

Dept. 78.

Dental academics represent Ethics and Bioethics in research as something that deserves appreciation through professional commitment.

The understanding of Ethics and Bioethics in research involving human beings must be worked in the Institutions of Higher Education both at undergraduate and postgraduate levels in all areas of knowledge and in society.

The failures in the research protocols may be related to structural problems initiated in the graduation phase due to the lack of disciplines that approach the ethical conducts in conducting research involving human beings. The implementation of targeted disciplines for the ethical conduct of researchers is of extreme relevance for the conduct and ethical construction of scientific knowledge [9].

Due to the evolution of scientific knowledge and new demands for the academic-scientific environment, educational institutions, especially in the context of health graduations, need to adapt to the new scientific and social context, in order to offer theoretical and practical support for the training of researchers committed to research ethics [10].

The ethical responsibility in conducting research involving human beings is the responsibility of the researcher, however, studies show that the researchers' knowledge about the Resolution of the CNS is superficial and the failures are observed already at the beginning of the process, when they construct the research protocols [9].

Social representations as "modalities of practical knowledge oriented towards communication and understanding of the social context" contribute to the construction of a common reality, which enables communication. Thus, representations are social phenomena understood from their context of production, the symbolic and ideological functions they serve and the forms of communication in which they circulate [11].

#### Class 3. Researcher's social position

Class 3, consisting of 15 UCEs, concentrates 30.61% of the classified UCEs, highlighting these words:

behavior, citizenship, life, consciousness, security, commitment, society, respect and education, drawn predominantly from interviews of academics from the first and tenth period of Dentistry.

In the following testimonies, it can be seen that students of Dentistry have an ethical stance in research, with the understanding that scientific investigations must be carried out preserving the principles of Bioethics, with emphasis on Beneficence, to the detriment of Maleficence.

*Behavior, citizenship, attitude and respect.*

Dept. 2.

*Commitment and respect for life.*

Dept. 16.

*Respect, education and commitment to the environment.*

Dept. 21.

*Education, secrecy and commitment.*

Dept. 47.

The representation of Ethics and Bioethics in research as a social posture of the researcher in front of a research involving human beings, aggregates a set of values inherent to the researcher, built throughout his/her personal and professional development. Understanding man as a socio-historical being and that his relation with nature is permeated by social relations and socially legitimized conceptions, his attitudes are oriented by his life conditions, beliefs and cultures of different social contexts.

Social Representations - RS, are defined as a form of "common sense" knowledge, and are related to the way in which people understand and apprehend the information according to the references they have, "having as function the elaboration of behaviors and communication between individuals" [7].

In this context, the role of educational institutions in the training of professionals, attentive to their responsibilities and duties towards human dignity, stands out.

Research on the teaching of bioethics in medical schools in Brazil indicates that there is an increase in bioethical discipline in Brazilian undergraduate courses, as well as other disciplines that complement bioethical contents. However, the thematic approaches in discussions during graduation continue to be linked to the content of traditional subjects, and there is a need to increase content and break the traditional teaching model of bioethics [10].

One relevant point to be highlighted in relation to the researcher's social position is conflict of interest. The current society based on the capitalist model can influence the researcher's position. In research involving humans, what should be prioritized is the actual demand in the context of health, with an emphasis on the most immediate needs. These two factors must overlap the financial interests of companies, educational institutions or researchers [12].

In this perspective, one of the researcher's commitments is to provide reliable results that can be used by the scientific community to improve the health of the population. For this, the research must be conducted by professionals who have ethical conduct, based on principles of the protection of human dignity that can be observed in Resolution n. 466/12. In addition, researchers need to be aware of the frequent transformations that occur in the field of bioethics to act in line with ethical precepts [9].

### **Class 1. Legal responsibilities of the researcher**

Class 1, consisting of 10 UCEs, concentrates 20.41% of the classified UCEs, highlighting these words: commitment, attention, secrecy, responsibility, care and compromise, drawn predominantly from interviews of academics from the tenth period of Dentistry.

The following testimonies show how Dentistry students treat the research participants with respect to human dignity, confidentiality, risk protection and contribution to the development of research within ethical standards.

*Responsibility and commitment.*

Dept. 15.

*Commitment, seriousness and responsibility.*

Dept. 17.

*Respect, confidentiality and humanized care.*

Dept. 24.

*Responsibility, commitment and confidentiality.*

Dept. 67.

*Responsibility, care and dedication.*

Dept. 56.

The construction of a social character as a characteristic of the researcher is built through social interaction in the academic environment where there is sharing of ideas about the responsibilities that the researcher has with the conduct of research as well as with the handling of information.

Ideas socially constructed and shared by a particular social group lead to the construction of reality and are transformed according to the change of ideas of the group [13].

The legal responsibilities of the researcher relate directly to the research participant, whether isolated or inserted in the context of the community. Being responsible for research, results and participants are ethical precepts present in the legal instruments that standardize research involving human beings in the Brazilian context [6].

In this sense, guaranteeing the participant's autonomy and privacy, besides being a responsibility of the researcher, is part of the commitment made to the submission of the research protocol to the Ethics

Research Committee. Participant autonomy was extensively discussed in the Universal Declaration on Bioethics and Human Rights (DUBDH) in 2005 and has been improved through the legal instruments that involve bioethics [14].

The principles of autonomy of the participant start from the idea of valuing the human person and must be observed by the researchers. These principles should be taken into account and respected by researchers from the construction of the research protocols.

The responsibilities of the researcher also involve the clarifications about the research for the participants, and the researcher must give sufficient information to the participants [15].

## **Class 2. Regulatory aspects of ethics in research, legal basis**

Class 2, consisting of 9 UCEs, concentrates 18,37% of the classified UCEs, highlighting these words: ethics, law, knowledge, code, compliance, secrecy, safety and study, drawn predominantly from interviews of academics from the first and tenth period of Dentistry, as the most significant class.

Regarding bioethics in the Brazilian context, the legislation in force is Resolution n. 466/12 of the National Council of Health/Ministry of Health, which deals with the ethical conduct of research protocols involving human beings. Resolution 466/12 replaced the former Resolution 196 which remained in force for nearly 20 years [6].

In the following testimonies, Dentistry students demonstrate knowledge of the legislation, with emphasis on the rights and duties of researchers and research participants, the code of ethics and justice, however, without referring to Resolution 466/12, as the most important document, considering the respect for human dignity and the special protection due to participants in scientific research involving human beings.

*Conscience, rights and duties.*

Dept. 40.

*Security, rights, statute, code of ethics and compliance with rules.*

Dept. 46.

*Right, knowledge and ethical commitment.*

Dept. 52.

*Justice, knowledge and respect.*

Dept. 65.

*Code of ethics, confidentiality and compliance with rules.*

Dept. 75.

## Conclusion

The academics of Dentistry, as socio-historical beings, have their relationship with nature permeated by social relations and their conceptions socially legitimized. Thus, their attitudes are oriented by their living conditions, their beliefs and cultures of the different social contexts.

They represent Ethics and Bioethics in research such as respect for education and science for the enhancement of knowledge and social development. This understanding is determined by the behavior of the researcher, which with conscience and commitment, respects and preserves the life of the researched person. The normative aspects of research ethics determine the responsibility of the researcher to follow Resolution n. 466/2012 as a normative instrument for the development of research involving human beings, defined by the National Health Council.

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With respect to the legal basis of research involving human beings in the Brazilian context, it is considered that the norms that lead the thematic are recent.

In the international context, the theme was highlighted when the term "bioethics" was constructed by an American professor, already attentive to the ethical issues involving human beings. This term has undergone transformations, based on scientific discussions and has been incorporated in research with the objective of protecting human dignity. It has been reported by experts that bioethics has been so embedded in the scientific and professional environment that it is an important topic in discussions on clinical decision-making, as well as being present in the construction of research protocols [16].

In general terms, researchers should be aware of human dignity in research with the responsibility of protecting and preserving it.

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