

## Critical thinking and teaching strategies for professors of undergraduation nursing courses

*Pensamento crítico e as estratégias de ensino para docentes do curso de graduação em enfermagem*

*Pensamiento crítico y las estrategias de enseñanza para profesores del curso de graduación en enfermería*

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### ABSTRACT

**Objective:** to examine perceptions of undergraduate Nursing teachers of their students' development of critical thinking, based on the use of teaching strategies and their implications in the teaching-learning process. **Method:** sixteen professors from an undergraduate course in Nursing and Obstetrics participated in this exploratory, descriptive, qualitative study. Data were produced through interviews to a semi-structured script and categorized by the thematic analysis technique, The study was approved by the research ethics committee. **Results:** three categories were identified: critical thinking as subjective interpretation, teaching strategies the teachers used in the undergraduate Nursing course, and what hinders and helps the development critical thinking on the undergraduate Nursing course. **Conclusion:** teachers held positive opinions and pointed out that critical thinking is built over the course of life and is considered inherent to constructing professional skills and abilities. **Descriptors:** Faculty, Nursing; Education; Nursing; Thinking.

### RESUMO

**Objetivo:** analisar a percepção dos docentes do curso de Graduação em Enfermagem acerca do desenvolvimento do pensamento crítico dos alunos, a partir da utilização de estratégias de ensino e suas implicações no processo ensino aprendizagem. **Método:** estudo exploratório, descritivo, de cunho qualitativo. Participaram da pesquisa 16 docentes de um curso de graduação em Enfermagem e Obstetrícia. Os dados foram produzidos por meio de entrevistas com roteiro semiestruturado e categorizados pela técnica de análise temática, sendo aprovado por Comitê de Ética em Pesquisa. **Resultados:** evidenciaram-se três categorias: pensamento crítico como interpretação subjetiva, estratégias de ensino utilizadas pelos docentes no curso de graduação em enfermagem, e desafios e facilidades para o desenvolvimento do pensamento crítico no curso de graduação em enfermagem. **Conclusão:** os docentes mantiveram opiniões positivas e pontuaram que o pensamento crítico é construído ao longo da vida do ser humano, sendo considerado inerente à construção das suas habilidades e capacidades profissionais.

**Descritores:** Docentes de Enfermagem; Educação; Enfermagem; Pensamento Crítico.

### RESUMEN

**Objetivo:** analizar las percepciones de los docentes de enfermería de pregrado sobre el desarrollo del pensamiento crítico de sus alumnos, basándose en el uso de estrategias de enseñanza y sus implicaciones en el proceso de enseñanza-aprendizaje. **Método:** dieciséis profesores de un curso de pregrado en Enfermería y Obstetricia participaron en este estudio exploratorio, descriptivo y cualitativo. Los datos fueron producidos a través de entrevistas a un guion semiestructurado y clasificados por la técnica de análisis temático. El estudio fue aprobado por el comité de ética de investigación. **Resultados:** se identificaron tres categorías: pensamiento crítico como interpretación subjetiva, estrategias de enseñanza que los maestros utilizaron en el curso de pregrado en Enfermería, y lo que dificulta y ayuda al desarrollo del pensamiento crítico en el curso de pregrado en Enfermería. **Conclusión:** los maestros sostuvieron opiniones positivas y señalaron que el pensamiento crítico se construye a lo largo de la vida y se considera inherente a la construcción de habilidades y destrezas profesionales.

**Descritores:** Docentes de Enfermería; Educación; Enfermería; Pensamiento.

## INTRODUCTION

In the most diverse areas, the recent educational discourse is full of references to the value of critical thinking as a 21<sup>st</sup> century skill, one that is paramount in teaching/learning in Nursing courses, becoming an important aspect for the professional practice<sup>1</sup>.

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Since 2001, the National Curriculum Guidelines (*Diretrizes Curriculares Nacionais*, DCN) of the Nursing Graduation Course in Brazil recommend the profile of the graduating professionals as critical thinkers who must be able to develop health prevention, promotion, protection, and rehabilitation actions, both at the individual and at the collective levels. To do so, they must be able to think critically, to analyze society's problems and to seek solutions to them<sup>1-3</sup>.

Thus, it is necessary that the teachers of undergraduate Nursing understand critical thinking and its theoretical complexity, since there are authors who share a philosophical perspective, centered on the logical aspects of reasoning, while others defend the perspective of cognitive psychology, concerned in essence with the teaching of thinking skills. And finally, there are those who focus on the educational perspective, on teaching, and on the assessment of the critical thinking skills<sup>4-5</sup>.

Thus, this study is justified by the importance and need of teachers to develop within the academies the reasoning and decision-making capacity of students regarding the competence of critical thinking through strategies capable of subsidizing competences with regard to technical performance, scientific and political, but also ethical / moral and critical.

Therefore, the objective was to analyze the perception of the teachers of the Undergraduate Nursing course about the development of critical thinking in the students, based on the use of teaching strategies and their implications in the teaching-learning process.

## THEORETICAL FRAMEWORK

Critical thinking has been identified as one of the reasons for the difficulty in teaching critical thinking development skills in nursing students. Therefore, it is fundamental to the way it is taught and how students apply it in learning clinical reasoning skills<sup>6</sup>.

The theme is extremely relevant, because in Brazil there is still a need for greater emphasis on teaching critical thinking in nursing courses to account for the training of nurses in line with the DCN, since a search was carried out in the last five years about the thematic in the bases of Latin American and Caribbean Literature in Health Sciences (LILACS) and Scientific Electronic Library Online (SciELO), with the descriptors "thinking", "nursing" and "strategies".

Many studies deal with the development of critical thinking in students through favorable environments to stimulate their reflection, creativity and confidence, in addition to studies on innovative teaching strategies that enable the teaching-learning process of critical thinking and clinical reasoning<sup>7-12</sup>.

However, a gap was identified about the theme in the training of teachers, it being necessary to recognize the level of critical thinking found and what skills need to be qualified or developed, and thus, develop it and include it as a competence in professional training<sup>7-12</sup>.

## METHOD

A study with qualitative approach study conducted with 16 teachers of an Undergraduate Nursing Course from a federal higher education institution in the state of Rio de Janeiro, which started its teaching activities in 1923 and has a workload of 4,065 hours, divided into eight semesters. At present, the course consists of 82 permanent professors and 34 substitute professors, divided into five departments.

The participants were selected by means of the following inclusion criteria: being a teacher inserted in the Interdepartmental Curriculum Programs (*Programas Curriculares Interdepartamentais*, PCI), which are curricular activities with the collaboration of the various departments, even if from different units or centers, which include the areas of knowledge covered by the program according to the curriculum structure, given the perspectives on the theme that can be found in virtue of the specificities of the action fields of these professionals.

The following exclusion criteria were adopted: substitute teachers, as they are temporarily hired for the exclusive purpose of dedicating themselves to teaching activities and the respective pedagogical activities; those who teach in elective courses, as these do not integrate the PCIs, and those who took vacations and / or leave during the data collection period.

Data collection was carried out from February to August 2016 by the main researcher, using semi-structured interviews composed of two stages: the first, regarding the characterization of the teachers participating in the study; and the second, for specific open questions on the theme, namely: *What is Critical Thinking (CT) for you? What teaching strategies do you carry out in your professional practice as a teacher, for the development of critical thinking? What challenges and practicalities do you find in the development of the teaching strategies for the formation of critical*

*thinking in the students?* The interviews were recorded by a media device with prior authorization from each participant, and later transcribed by the main researcher.

The interviews were analyzed following the phases of thematic analysis: pre-analysis, with reading; treatment phase, and interpretation of results. For the criterion of closure of the fieldwork, the theoretical saturation of the data was used, which corresponds to the time of recurrence of the response patterns<sup>13</sup>.

To preserve anonymity, the excerpts from the interviewed teachers' statements are shown coded by the sequence of the word TEACHER, followed by a numerical algorithm to represent the order of participation, from 1 to 16, for example: Teacher 1. The research was submitted and approved by the Research Ethics Committee of the institution involved under opinion number 1,370,096, via *Plataforma Brasil*.

## RESULTS

The deponents' characterization was built from the script applied at the time of the interviews, with information corresponding to their professional training. Thus, 15 (92.9%) female teachers and 1 (7.1%) male teacher were interviewed, all aged 30 years old or older, with the majority being 50 or over (64%).

Regarding the length of service at the institution, 13 (79%) of the participants have between 10 and 29 years of service, and in assistance, 11 (84%) participants had 9 years of assistance in nursing. As for the academic career, 12 (86%) participants have a *lato sensu* postgraduate course, 15 (93%) with a doctorate course, and 10 (67%) teachers with training for teaching, either undergraduate or pedagogical training.

After analyzing the interviewees' testimonies, the following categories emerged: *Critical thinking as a subjective interpretation*; Teaching strategies used by the teachers in the Nursing Undergraduate course; and Challenges and practicalities for the development of critical thinking in the undergraduate Nursing course, described below.

### Critical thinking as a subjective interpretation

The teachers state that conceptualizing critical thinking was a complex effort of intellectual understanding. However, they were able to develop a concept according to their own conceptions.

*It is a difficult question, to conceptualize. For me it is to present a position in the face of a reality. You access your life experience, the knowledge acquired. Possibly we access the favorable and non-favorable points in relation to what is being observed (Teacher 03).*

*I understand that it is a very complex question for me. We try to talk about critical thinking, but few teachers like us try to study about it. So, I want to say that I don't have a line, a theorist or a concept based on critical thinking, with theoretical bases. I reflect on what that is and try to put it in my practice (Teacher 13).*

They reflect on critical thinking from their experiences, that is, from the daily situations they have gone through, allowing them some knowledge about the subject. In this way, teachers thought that critical thinking is seen by its dispositions, skills and convictions.

*Critical thinking for me is always involved in my prior knowledge about what I am going to offer, my prior knowledge about the pathology or the diagnostic cause of hospitalization of that client [...] critical thinking is always very involved with my knowledge of the practical and assistance area (Teacher 02).*

*I am not going to talk about the definitions that we read in books, I am going to talk about my experience with students during graduation. Critical thinking is built throughout life. And especially when he begins to reflect on those constructs that he stores in his academic life (Teacher 09).*

Professor 6 mentioned that she was never approached on this subject at any time. However, she manages, based on his professional trajectory, based on the facts and reasons to speak about critical thinking. This is a teacher with extensive experience in higher education in nursing.

*These questions had never asked me. It is when you look at a problem or a situation, and make an analysis of that context [...], in a broader, more critical and contextualized way, bringing different views to that discussion (Teacher 06).*

### Teaching strategies used by the teachers in the Nursing Undergraduate course

The following statements demonstrate the main strategies that the teachers seek to apply in their daily routines and the possibilities of related learning according to reality.

*[...] I bring the experiences they are experiencing and from there I open a conversation circle and each one shares the experiences, I go on theorizing and saying, this can, this cannot, this is written, this is not is written. [...] it is a teaching strategy that dialogues a lot with the logic of problematization, not with problem-based learning. [...]. (Teacher 01)*

*[...] Several; first, the association of the theory developed with everyday life [...] does not give you a critical thinking reading that is apart from a situation like that, another tools that I use are sensitization, experimentation, and political discussion. (Teacher 12)*

The testimonies below reflect the strategies that refer to the simulations implemented by the professors of the Undergraduate Nursing Course. These can be diversified, and are based on real situations in order to acquire intellectual knowledge, attitudes and skills, in order to minimize risks for the subjects who will receive this care from the future nurse.

*[...] I do a lot of group work, case study. (Teacher 04)*

*Seminar, text interpretation, laboratory practice, even with simulations. How to act in the practice scenario effectively, performing activities of nursing technicians, basically in a dressing room. Theoretical, what theater could think, basically; [...] I have the opportunity to propose teaching strategies, each time I develop new teaching strategies, basically these are the ones I have listed. (Teacher 11)*

### **Challenges and practicalities for the development of critical thinking in the undergraduate Nursing course**

Regarding the challenges in the pedagogical practices, the teachers report characteristics related to the curricular structure of the Undergraduate Course, which enable the discontinuity of the teaching-learning process in which they are inserted. In the meantime, the importance is cited of an articulation between each curricular program, and mainly for the teaching issues, and the education policy. The following statements demonstrate this perception.

*[...] the faculty needs to believe in this power, it needs to believe that it develops a pedagogical approach that promotes critical thinking of the most varied types, such as problem-based learning [...] when you look at the curriculum of this pedagogical project, you assume that it is done. (Teacher 05)*

*These are the rules, some rules that cannot be circumvented, some rules that cannot be forgotten. So, I think that limits it a little until the performance of the teacher, so follow that particular stage of that procedure. [...] the scientific principles incorporated so that it does not hurt any principle, but adapting to its reality. (Teacher 07)*

Teachers reveal, through their testimonies, challenges that are linked to the physical and institutional structure, and that make it impossible to use teaching strategies that promote critical thinking. The following statements show these nuances.

*[...] Classes of 60 students, I already had a class of 82. Staying in an internship with a large number of students is not easy, how will I be able to offer the evaluation of this critical thinking in the same way? How am I going to get this leveled for everyone? (Teacher 02)*

*The challenges are institutional. There is unfair competition. You can have strategies that can help, institutional and political issues as well, we have no political representation either in the area of teaching or in the area of assistance. (Teacher 09)*

However, from the teachers' testimonies, it is clear that some find facilities in the pedagogical nuances originated in the academic routine, as well as in the use of technologies that can contribute to the improvement of teaching. The following statements show these aspects.

*[...] They have a study behavior, a study routine that facilitates, so he is a student student in its entirety, he is a student who seeks information beforehand, and that helps a lot. [...] (Teacher 02)*

*[...] The facilitator for me today is to consult technology (internet), national and international magazines, because when I graduated I only had printed books, study groups. [...], but at the same time that they are facilitators, we have to be careful not to take the information that is there as true, unique and closed, so have a critical look at what is there. (Teacher 06)*

### **DISCUSSION**

Critical thinking has been presented by scholars as one of the most important concepts for the 21<sup>st</sup> century. There are different ideas about it, because it is a complex concept and includes complex activities and mental processes that are not easy to describe and measure<sup>14</sup>. It is an intentional and self-regulating judgment, which results from interpretation, analysis, evaluation and inference, as well as from the explanation of the evidence, conceptual, methodological, and contextual considerations, or from criteria according to which the judgment was based on<sup>15-16</sup>.

Over the years, different authors have presented the concept of critical thinking in a specific way, but all of them report on the importance and exercise and on its construction through critical reflection. Having its conceptualization as "reasonable reflective thinking focused on deciding what to believe or do", critical thinking is one of the higher orders for the reasoning capacity that means a reflective practical activity, whose goal is a belief or a sensible action<sup>17-18</sup>.

Before the speech of esplanades teachers in the first category, one can understand, then, that some of the teachers participating in this study links the concept of critical thinking to their acquired knowledge in their professional practice, which allow them the concept of reach through effective articulation between theory and practice in the learning process.

This aspect is consistent with the apprehension of critical thinking as a construction carried out in everyday life, since any behavior depends on what is believed and every human action depends, in some way, on what one decides to do. In this sense, critical thinking is a way of thinking with considerable value for each person to know themselves and the world, to use their own knowledge in order to make sensible choices and to dialog with the others<sup>18</sup>.

A study carried out with the objective of understanding the conceptions that university professors had about critical thinking, in order to obtain a broader understanding of how it was conceived in relation to its concept, found that it is significant to incorporate dimensions such as argumentation, motivations, affections in a perspective that integrates the contributions of different fields of knowledge such as psychology, philosophy, pedagogy, didactics and constructivism<sup>19</sup>.

This shows that the objective of teaching critical thinking is not merely teaching the students to think critically about their university themes. It is also teaching to think critically in daily life, including situations that are often not discussed in the classroom, but that involve subject matters like political choice, in order to understand the complicated rules and changes of a contemporary society<sup>20</sup>.

Within this panorama, nursing is found, since it is a profession that is predominantly based on practice, and it is necessary that the process of training nurses is built from a strong practical element added to the technical-scientific character required in the course<sup>21</sup>.

The organization and classification of the teaching strategies can be conducted with attention to the teaching and learning models, where the professor can ask the student to observe and analyze the examples, to conclude a concept that is at stake; or where the teacher presents a generalized concept and normally asks the students to clarify the terms used to define a new concept, asking them to provide other examples<sup>18</sup>.

However, it is necessary that in the implementation of teaching strategies, the teacher establishes a mediating action between the education of the student and their culture, in order to provide a critical posture and transform social practice<sup>22</sup>. In the speech of the participants, they report that they use innumerable strategies, but they value the lived experience of the student and their own professional experiences that stimulate reflection through dialogue, questioning and experiences lived in the internships, classroom and social-family life.

At the same time, success in the use of teaching strategies requires the participation and involvement of teachers and students. Thus, in view of the implementation of changes in the teaching methods, retreat or indecision are initially common, either by teachers or students, since the adoption of new practices requires individual and collective mobilizations and changes. It is also important to consider the time available for the professors to carry out participatory pedagogical practices since, in addition to teaching, the teaching work contemplates research, extension, and guidance activities in a post-graduate program<sup>23</sup>.

From this point of view, as it is fundamentally reflective, it is necessary to take into account the way that the meeting between the teacher and the student has its due value in the teaching routine, aiming to recognize how the problems are framed, and thus the professional values considered, in order to seek the quality of the evidence, the adequacy of the methods, the reasonableness of the criteria, the applicability of theories and principles. In this way, the student will learn to react to clinical situations in a reflexive way, since the nurse with strong critical thinking will consider a variety of factors, including clinical data, the patient's life and family situation<sup>24</sup>.

In this sense, it is necessary to demonstrate the importance of thinking critically, that is, including the holistic dimension of care in the reflection of teachers, students and nurses, rethinking the dominant paradigms in the areas of health and education<sup>25</sup>.

Thinking holistically contributes to the development of critical thinking. However, it is necessary to be willing to proceed with an open mind and intellectual honesty in identifying reasons and evidence for making objective

decisions and solving complex, high-risk or poorly structured problems, anticipating possible consequences and being prudent<sup>26</sup>.

Thus, the teaching strategies used by teachers based on dialogue, allow questions that insert the student as a protagonist in their teaching - learning process and allow the construction of necessary skills, in order to socialize the practices experienced and the perspectives of attitude change focused on health care, training and educational practices.

As a result, a variety of methods have been employed in Nursing education to facilitate the acquisition of critical thinking skills. The use of simulation with high-fidelity mannequins has been shown to be an effective teaching strategy for Nursing students. Other strategies used in Nursing education include problem-based learning with case studies, discussion of incidences, reflective writing, and conceptual mapping<sup>27</sup>.

A study points out that the practical simulating activities offer opportunities for the student to develop the confidence to communicate, and points out that just sharing the theories is not enough for learning, being essential the physical application of the theory. Furthermore, the performance of procedures and scenarios for patient care in a simulated environment by students instigates learning, and which are well accepted by students, who feel valued, motivated and active in the teaching-learning process<sup>28</sup>.

It should be understood that regardless of the strategy to be used, the primary objective must be the progress that these means provide during the training of professionals. Studies prove that they are fundamental measures in the development and improvement of higher mental functions, since they encompass cognitive and metacognitive abilities, which, together, improve the capacity for analysis, evaluation, inference, rationality, interpretation and self-regulation<sup>29-30</sup>.

Thus, the quality of nursing practice is dependent on the educational preparation of nurses to think critically, making it fundamental, therefore, a strongly structured teaching system, with learning methodologies, and also focusing on critical thinking competence with a view to accurate decision-making<sup>30</sup>.

## CONCLUSION

The study analyzed the perceptions that are intertwined in the daily routines of teachers of the undergraduate Nursing course regarding critical thinking, who maintained positive opinions and pointed out that critical thinking is built throughout the life of human beings, being considered inherent to the construction of their professional skills and abilities.

It was also found that the difficulty of conceptualization by the teaching participants is related to the lack of a theoretical concept that dialogs with the nurse's praxis, considering that there is still a gap in the results of scientific nursing productions in achieving the goals of the nursing staff National Curricular Guidelines in Nursing, which aims at training for the health system.

Some limitations of the study that may hinder its generalization of results, such as the limited number of participants and the possibility of socio-cultural variables that may influence the study, should be considered.

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