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THEORETICAL BASES OF CRITICAL THINKING IN IBERO-AMERICAN NURSING: INTEGRATIVE LITERATURE REVIEW

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ABSTRACT

Objective: to identify the theoretical bases that underpin the concepts of critical thinking in Ibero-American nursing in the last ten years.

Method: integrative literature review carried out in the PubMed, CUIDEN and SciELO databases, between 2006 and 2015, using the key words nursing and critical thinking.

Results: 32 studies were included, which revealed the presence of nine thinkers as theoretical bases for the concept of critical thinking. It was found that there is no uniformity for the definition of the concept; however, two conceptions of critical thinking differ between authors, which were organized into two groups. Group A, composed of Alfaro-Lefevre, Peter Facione, Scheffer and Rubinfeld, Richard Paul; authors who understand that critical thinking involves skills for clinical reasoning and diagnosis, essential to decision making, and group B, consisting of John Dewey, Donald Schön, Paulo Freire and Jürgen Habermas, who understand critical thinking as an active reflective process, focused on the development of critical consciousness. These thinkers were the basis for the proposal of thought evaluation tools, teaching strategies and a theoretical-methodological nursing framework.

Conclusion: the dynamic perspective of group B strengthens the dialectical character of knowledge construction, from which nursing has the potential to build itself as a social and practical science, committed to the transformation of realities.

DESCRIPTORS: Nursing. thinking. Nursing education. Concept formation. Review.

BASES TEÓRICAS DE PENSAMENTO CRÍTICO NA ENFERMAGEM IBERO-AMERICANA: REVISÃO INTEGRATIVA DA LITERATURA

RESUMO

Objetivo: identificar as bases teóricas que fundamentam os conceitos de pensamento crítico na enfermagem ibero-americana nos últimos dez anos.

Método: revisão integrativa de literatura realizada nas bases de dados PubMed, CUIDEN e SciELO, entre 2006 e 2015, com as palavras-chave enfermagem e pensamento crítico.

Resultados: foram incluídos 32 estudos, que revelaram a presença de nove pensadores como bases teóricas do conceito de pensamento crítico. Constatou-se que não há uniformidade para a definição do conceito; contudo, diferenciam-se duas concepções de pensamento crítico entre os autores, que foram organizadas em dois grupos. O grupo A, composto por Alfaro-Lefevre, Peter Facione, Scheffer e Rubinfeld, Richard Paul; autores que compreendem que o pensamento crítico envolve habilidades para raciocínio clínico e diagnóstico, essencial à tomada de decisões, e o grupo B, constituído por John Dewey, Donald Schön, Paulo Freire e Jürgen Habermas, que entendem o pensamento crítico como um processo ativo e reflexivo, voltado ao desenvolvimento da consciência crítica. Esses pensadores foram base para a proposta de instrumentos de avaliação do pensamento, estratégias de ensino e um referencial teórico-metodológico para a enfermagem.

Conclusão: a perspectiva dinâmica do grupo B fortalece o caráter dialético da construção do conhecimento, a partir do qual a enfermagem tem potencial de construir-se como uma ciência social e prática, comprometida com a transformação de realidades.

DESCRIPTORIOS: Enfermagem. Pensamento. Educação em enfermagem. Formação de conceito. Revisão

BASES TEÓRICAS DEL PENSAMIENTO CRÍTICO EN LA ENFERMERÍA IBEROAMERICANA: REVISIÓN INTEGRATIVA DE LA LITERATURA

RESUMEN

Objetivo: identificar las bases teóricas que fundamentan los conceptos de pensamiento crítico en la enfermería iberoamericana en los últimos diez años.

Método: revisión integrativa de literatura realizada en las bases de datos PubMed, CUIDEN y SciELO, entre 2006 y 2015, con las palabras clave enfermería y pensamiento crítico.

Resultados: se incluyeron 32 estudios, que revelaron la presencia de nueve pensadores como bases teóricas del concepto de pensamiento crítico. Se constató que no hay uniformidad para la definición del concepto. Sin embargo, se diferencian dos concepciones de pensamiento crítico entre los autores, que se organizaron en dos grupos. El grupo A, compuesto por Alfaro-Lefevre, Peter Facione, Scheffer y Rubinfeld, Richard Paul, que comprenden que el pensamiento crítico implica habilidades para el razonamiento clínico y el diagnóstico, esencial para la toma de decisiones, y el grupo B, constituido por John Dewey, Donald Schön, Paulo Freire y Jürgen Habermas, que entienden el pensamiento crítico como un proceso activo y reflexivo, orientado al desarrollo de la conciencia crítica. Estos pensadores fueron la base para la propuesta de instrumentos de evaluación del pensamiento, estrategias de enseñanza y un referencial teórico-metodológico para la enfermería.

Conclusión: la perspectiva dinámica del grupo B fortalece el carácter dialéctico de la construcción del conocimiento, a partir del cual la enfermería tiene potencial de construirse como una ciencia social y práctica, comprometida con la transformación de realidades.

DESCRIPTORES: Enfermería. Pensamiento. Educación en enfermería. Formación de concepto. Revisión.

INTRODUCTION

Nursing has been transforming its epistemological assumptions in the course of its history, in search of the definition of its object of study; which is a process marked by an essentially positivist and biomedical view of health care. The discomfort generated by this vision leads to the agglutination of the constructivist foundations of the social sciences. This movement was influenced by the diverse philosophical streams that attributed a more complex look to face the challenges in the area of health. A clear example of this is the Critical Theory, which defends critical thinking (CT) as a mechanism for the emancipation of the human being,¹ and consequently an emancipated care. There are several theoretical bases²⁻³ that guide the use of CT in nursing and other areas, such as education. Besides sustaining the concept, these bases direct their development, which can be in a dynamic and procedural way or in a punctual way, as a skill with clinical purposes. Since 1992, Brazilian and Ibero-American nursing, in tune with the Pan American Federation of Nursing Professionals (FEPPEN) and the Pan American Health Organization (PAHO), reiterates the need to incorporate critical and reflective thinking into the teaching of nursing. This demand emerges from the need to provide humanized and qualified care to the population. Alongside this, the importance of preparing teachers for teaching through interactive pedagogical strategies is emphasized. The purpose of these guidelines is to improve the quality of education and care and advance the discipline.⁴

As a result of these guidelines, several authors⁵⁻⁷ have investigated CT since the 1990s. In the last decade, in particular, there has been a remark-

able number of publications discussing the theme in nursing.⁸⁻¹¹ However, the literature indicates the need to clarify the concept of CT in nursing, as well as the theoretical bases that support it.⁸ This challenge led us to propose the identification of the theoretical bases that underpin the concepts of critical thinking in Ibero-American nursing in the last ten years, as the objective of this study.

METHOD

Integrative review was chosen as the method to reach the study objective, as it corresponds to a broad methodological strategy that allows the search, critical evaluation and synthesis of relevant evidence on a particular theme.¹²

The first stage consisted of the identification of the topic and the selection of the research question: "what are the theoretical bases of CT used by Ibero-American nursing in the last ten years?" In the second stage, criteria for inclusion and exclusion of studies were established. Inclusion criteria included: publications that were available online in full, with free access, in Portuguese, English or Spanish, with a qualitative approach, published between 2006 and 2015, by nursing authors from Ibero-American countries, which discussed or presented the concept of CT or its central concepts or support reflexive practice and critical conscience. Exclusion criteria was considered as: other publications (abstracts, book chapters, theses, dissertations, editorials), articles repeated or published by authors from other areas and by non-Ibero-American countries. Articles that did not meet the objective of the study were also excluded (publications that did not ad-

dress the topic CT and did not present the concepts mentioned above).

The research was performed in December of 2015 in the Public Medline (PubMed), Scientific Electronic Library Online (SciELO) and Bibliographic Database on Health Care in Latin America (CUIDEN) databases.

The descriptor "nursing" associated with the word "critical thinking" (with Boolean operator "and") was used for the article research, which were used in English for PubMed and, in Spanish, for SciELO and CUIDEN. The advanced form was used in PubMed and CUIDEN; The simple form was used

in the SciELO due to the limitation of publications in the first option.

1654 publications were located from the digital search in the period from 2006 to 2015, 1489 in PubMed, 122 in CUIDEN, 41 in SciELO and two identified by references. 1623 studies from this total were discarded that did not meet the inclusion or exclusion criteria previously established (Figure 1). In the present integrative review, 32 studies were analyzed (15 located in PubMed, 11 in CUIDEN and seven in SciELO), all of them being articles from periodicals. For this selection process, the recommendations from the *Preferred Reporting Items for Systematic Reviews and Meta-Analyses* (PRISMA) were used.¹³

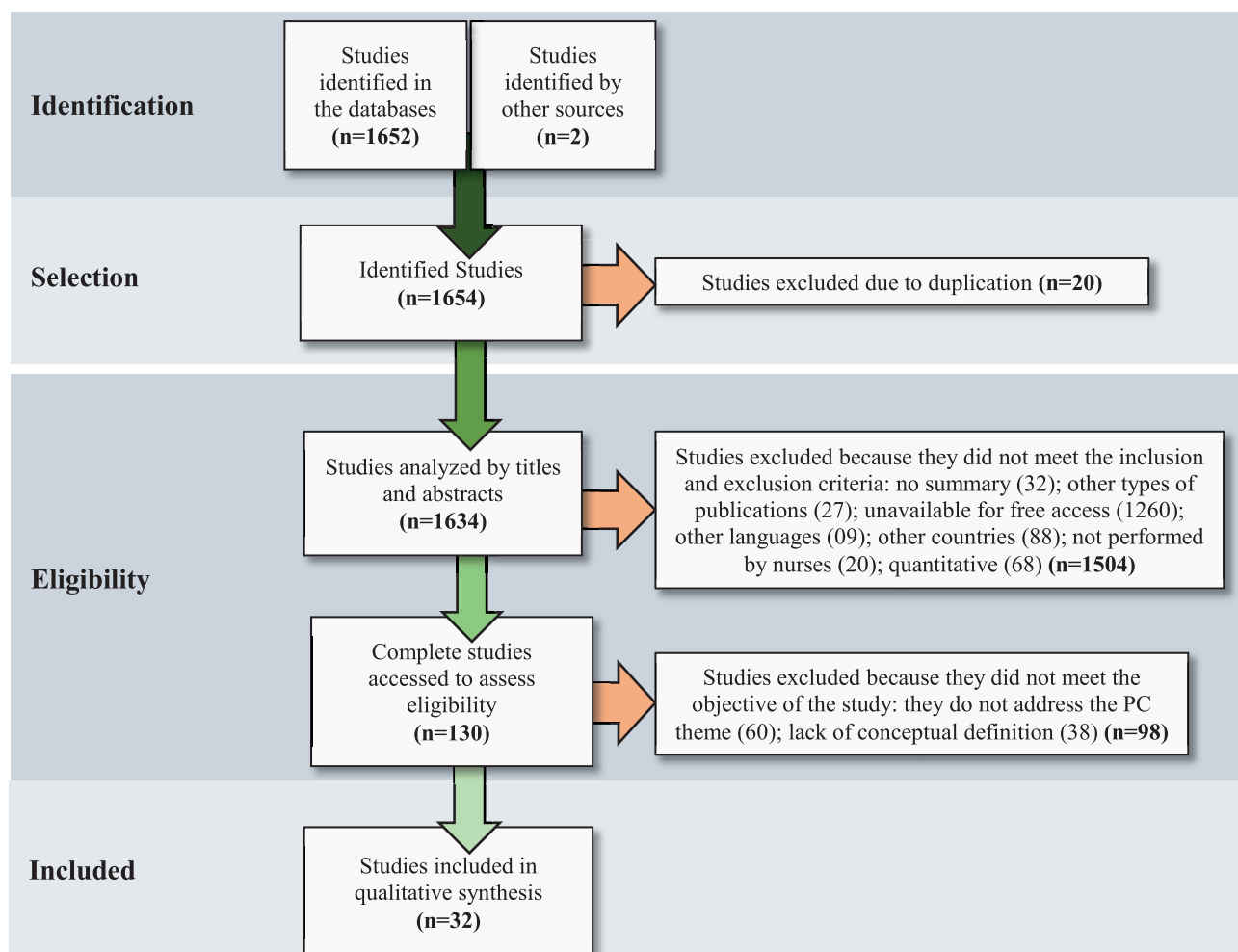


Figure 1 - Flowchart of selection of publications for the integrative review, based on the PRISMA model

The third step included defining the information to be extracted through the elaboration of an instrument, containing title, country and year of publication, objective, study type, concept, theoretical basis and main results.

The fourth stage was characterized by the filling out and the evaluation of the instrument with the data from the selected publications, which was carried out by two researchers. The fifth stage composed of the discussion and interpretation of the

obtained results, followed by the sixth stage, which included the presentation of the evidences found.

RESULTS

The majority of the 32 analyzed publications originated from Brazil (17), followed by Spain (6),

Mexico (4), Chile (3), Cuba (1) and Costa Rica (1) (Figure 2). As for the type of study, theoretical reflection predominated (15), followed by literature review (8), exploratory study (5) and experience report (4). In relation to the year of publication, there was no regularity, observing an average of three publications per year, ranging from one to six.

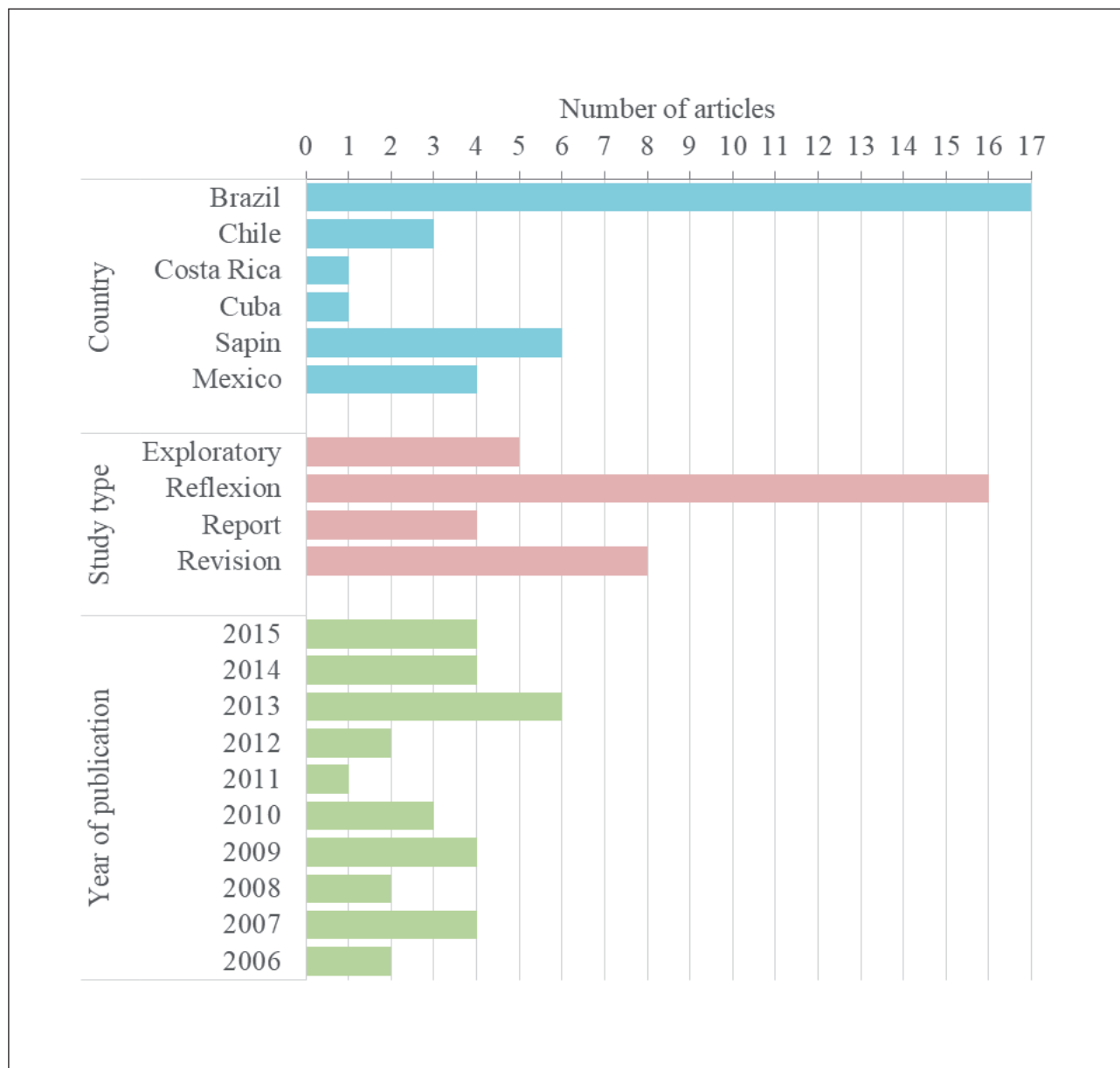


Figure 2 - Characterization of the publications regarding the country, study type and year of publication

The review of the studies indicates that there are several definitions, and there is no universally accepted theoretical and conceptual framework for CT in nursing. However, it was possible to identify the prevalence of nine thinkers as theoretical bases of this concept, which reveal two distinct concep-

tions of CT and, therefore, were organized into two groups, called "group A" and "group B" (Figure 3). Among the 32 publications included in this review, 17 used the thinkers from group A and 15 employed the thinkers from Group B in the construction of the definitions of CT (Figure 3).

| Authors and Publication year | Group A | | | | Group B | | | | Sub-total |
|---|----------------|---------------|----------------------|--------------|------------|--------------|--------------|-----------------|-----------|
| | Alfaro-Lefevre | Peter Facione | Scheffer e Rubenfeld | Richard Paul | John Dewey | Donald Schön | Paulo Freire | Jürgen Habermas | |
| Alvim, et al. (2007) ⁴⁴ | | | | | | | | | 1 |
| Barrios, et al. (2012) ³⁸ | | | | | | | | | 1 |
| Becerril, et al. (2015) ³² | | | | | | | | | 1 |
| Bertachini, et al. (2015) ⁹ | | | | | | | | | 1 |
| Bittencourt, et al. (2011) ²⁹ | | | | | | | | | 1 |
| Bittencourt, et al. (2013) ²⁸ | | | | | | | | | 3 |
| Bittencourt, et al. (2013) ²² | | | | | | | | | 3 |
| Burgatti, et al. (2013) ⁴⁰ | | | | | | | | | 1 |
| Cerullo, et al. (2010) ³⁰ | | | | | | | | | 1 |
| Crossetti, et al. (2014) ¹⁹ | | | | | | | | | 4 |
| Crossetti, et al. (2009) ²⁰ | | | | | | | | | 1 |
| Díaz, et al. (2010) ²³ | | | | | | | | | 1 |
| Elizondo, et al. (2013) ⁴⁵ | | | | | | | | | 1 |
| Fandos (2008) ⁴¹ | | | | | | | | | 1 |
| Ferreira, et al. (2013) ³⁴ | | | | | | | | | 2 |
| Isaacs (2010) ³¹ | | | | | | | | | 1 |
| Lima, et al. (2007) ²⁷ | | | | | | | | | 1 |
| Martins, et al. (2012) ⁴³ | | | | | | | | | 1 |
| Mínguez, et al. (2014) ¹¹ | | | | | | | | | 1 |
| Mitre, et al. (2008) ³⁷ | | | | | | | | | 2 |
| Morán-Peña (2007) ²⁵ | | | | | | | | | 1 |
| Mosqueda-Díaz et al. (2014) ¹ | | | | | | | | | 1 |
| Moya, et al (2006) ⁴² | | | | | | | | | 1 |
| Oliveira, et al. (2015) | | | | | | | | | 1 |
| Pegueroles (2009) ²⁴ | | | | | | | | | 1 |
| Pina-Jiménez, et al. (2015) ³³ | | | | | | | | | 2 |
| Serrano (2006) ²⁶ | | | | | | | | | 1 |
| Solano, et al. (2013) ³⁹ | | | | | | | | | 2 |
| Vacek (2009) ¹⁰ | | | | | | | | | 1 |
| Valente, et al. (2007) ³⁵ | | | | | | | | | 2 |
| Valente, et al. (2009) ³⁶ | | | | | | | | | 2 |
| Zuriguél Pérez, et al. (2014) ²¹ | | | | | | | | | 1 |
| Number of times theoretical base was used | 9 | 5 | 6 | 4 | 6 | 8 | 3 | 4 | 45 |
| Number of times the theoretical data base group was used | 24 | | | | 21 | | | | 45 |
| Total number of publications per theoretical base group | 17 (53%) | | | | 15 (47%) | | | | 32 |

Figure 3 - Authors, year of publication and theoretical bases used in the 32 studies included in the qualitative synthesis of the present study

Group A consists of five thinkers: 1) Rosalinda Alfaro-Lefevre, a studious critical thinking nurse, with clinical reasoning and clinical judgment in the nursing process, mentioned in nine articles;⁷ 2) Peter A. Facione, editor of the Critical Thinking

Report for the American Philosophical Association, quoted in five studies;⁵ 3) Scheffer and Rubenfeld, who constituted an international panel of specialist nurses using the Delphi technique, quoted by six publications;¹⁴ 4) Richard Paul, president of the

American National Council of Excellence in Critical Thinking, which follows the same line of reasoning, was referenced by four articles.⁶

The Group B consists of four thinkers: John Dewey, philosopher, psychologist, and educator of the United States of the first half of the twentieth century, considered to be the forerunner in the reflexive thought movement in education, quoted in six publications;¹⁵ Donald Schön, American philosopher, who constructed the so-called epistemology of practice, mentioned by eight articles; philosopher Paulo Freire, a very influential Brazilian educator in Ibero-American nursing, was referred to in three studies;¹⁷ Jürgen Habermas, a German philosopher and sociologist, considered one of the advocates of Critical Theory, was quoted in four publications.¹⁸

As can be seen in figure 4, the five thinkers of Group A, who represent 53% of the publications,

relate the CT to the notion of skills, competencies and evaluation of nursing care performance. The focus of most of the studies guided by these authors was related to the evaluation of the abilities of the academic / nurse in developing and applying the clinical reasoning. Group B, cited by 47% of the publications, follows another line of reasoning, and is also formed by four thinkers. In a more dynamic approach, these references point to fundamental factors for the construction of the CT, such as subjectivity, uniqueness and reciprocity of dialogic relations, as well as the stimulus for reflection, which allow the gradual revelation of reality and empowerment to take decisions. These authors exhibited the concept of CT or other central concepts in their construction, such as reflective thinking, reflective practice, critical awareness, autonomy, and communicative action.

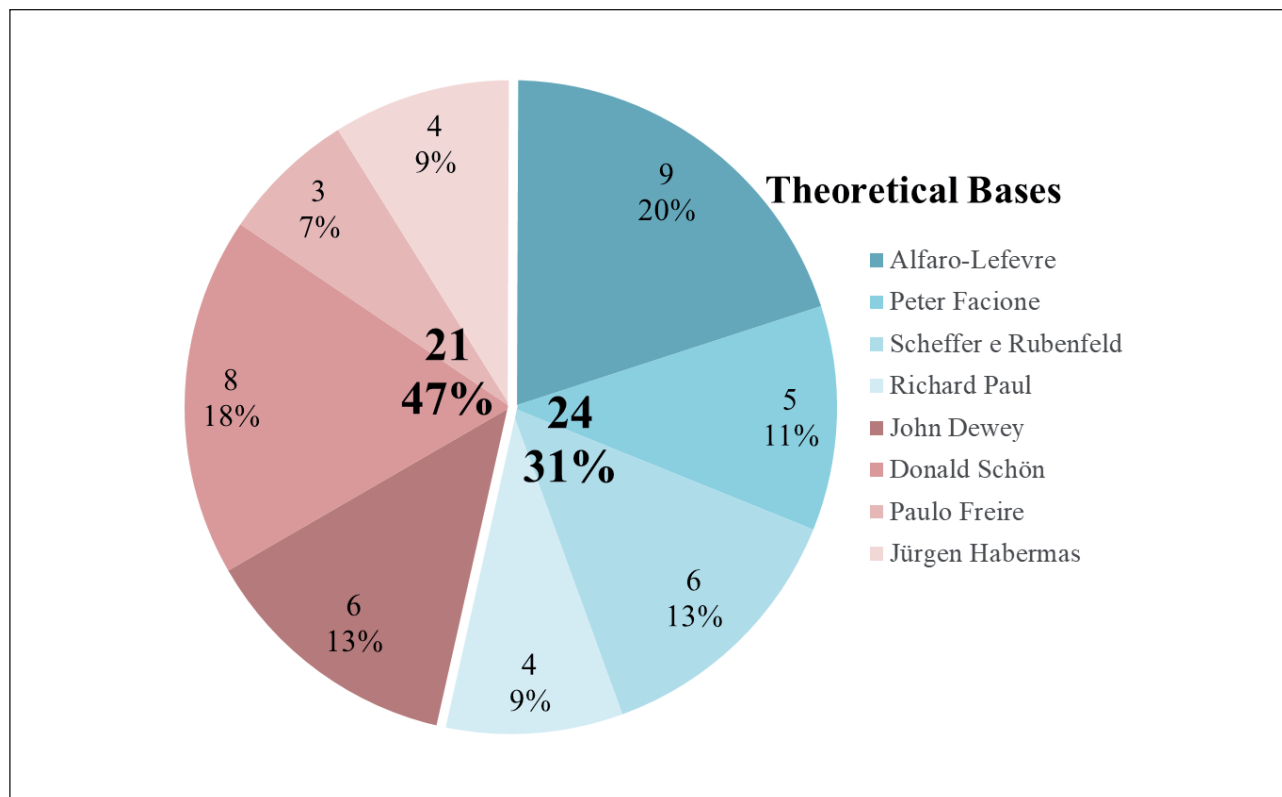


Figure 4 - Distribution of publications according to the theoretical bases of the critical thinking concept

Many used more than one theoretical basis (see Figure 2) and so the number of cases in figure 4 is greater than the number of articles evaluated (n>32).

21 out of the 32 papers used only one theoretical basis, seven used two, three referenced two bases and only one paper was based on four theoretical

bases, therefore, thinkers are cited 45 times in the articles (Figures 3 and 4). Besides this theoretical-conceptual framework, the studies highlighted instruments for measuring CT, and several teaching strategies, such as conceptual mapping, case study, reflection diaries and simulation.

Table 1 presents the synthesis of the theoretical bases, concepts, publications and applications of critical thinking in Ibero-American nursing.

Table 1 - Theoretical bases, concepts, publications and applications of critical thinking in Ibero-American nursing, 2006-2015

| Group | Theoretical bases and concepts | Publications | Applications of concepts in nursing |
|-------|--|---|--|
| A | Alfaro-Lefevre Critical Thinking | Crosseti et al., 2014; ¹⁹ Crossetti et al., 2009; ²⁰ Zuriguel Pérez et al., 2014; ²¹ Bittencourt et al., 2013; ²² Díaz, et al., 2010; ²³ Pegueroles, 2009; ²⁴ Morán-Peña, 2007; ²⁵ Serrano et al., 2006; ²⁶ Lima et al., 2007 ²⁷ | 1) Tools for measuring CT skills (California Critical Thinking Disposition Inventory, California Critical Thinking Skills Test, Ennis Weir Critical Thinking Essa Test, Watson-Glaser Critical Thinking Assessment Handbook 2) Teaching strategies (nursing process, conceptual maps, case study, clinical case, model for the teaching of integrated critical thinking in nursing (EPCIE), evidence-based nursing) |
| | Peter Facione Critical Thinking | Bertacchini et al., 2015; ⁹ Vacek, 2009; ¹⁰ Crosseti et al., 2014; ¹⁹ Bittencourt et al., 2013; ²² Morán-Peña, 2007; ²⁵ Bittencourt et al., 2013 ²⁸ | |
| | Scheffer e Rubenfeld Critical Thinking | Crosseti et al., 2014; ¹⁹ Bittencourt et al., 2013; ²² Bittencourt et al 2013; ²⁸ Bittencourt et al., 2011; ²⁹ Cerullo et al., 2010; ³⁰ Isaacs, 2010 ³¹ | |
| | Richard Paul Critical Thinking | Crosseti et al., 2014; ¹⁹ Bittencourt et al., 2013; ²⁸ Becerril et al., 2015 ³² | |
| B | John Dewey Reflective Thinking | Piña-Jiménez et al., 2015; ³³ Ferreira et al., 2013; ³⁴ Valente et al., 2007; ³⁵ Valente et al., 2009; ³⁶ Mitre et al., 2008; ³⁷ Barrios et al., 2012 ³⁸ | 1) Methodological theoretical reference (dialectical structural model of care). 2) Conceptual framework (socio-critical nursing, care, health, health education). 3) Teaching strategies (problem-based learning, problem-solving, portfolio, reflective diary, simulation, in-service learning). |
| | Donald Schön Prática reflexiva Reflective Practise | Piña-Jiménez et al., 2015; ³³ Ferreira et al., 2013, ³⁴ Valente et al., 2007; ³⁵ Valente et al., 2009; ³⁶ Solano et al., 2013; ³⁹ Burgatti et al., 2013; ⁴⁰ Fandos, 2008; ⁴¹ Moya et al., 2006 ⁴² | |
| | Paulo Freire Critical Awareness Autonomy | Mitre et al., 2008; ³⁷ Martins et al., 2012; ⁴³ Alvim et al., 2007 ⁴⁴ | |
| | Jürgen Habermas Critical Thinking Communicative action | Mosqueda-Díaz et al., 2014; ¹ Minguez et al., 2014; ¹¹ Solano et al., 2013; ³⁹ Elizondo et al., 2013 ⁴⁵ | |

DISCUSSION

In 1988 and 1989, the Committee on Pre-College Philosophy of the American Philosophical Association (APA) formed a group of 46 experts regarding the evaluation and teaching of CT, Facione, who wrote the

Delphi Report was among these experts. In this report, consensus were reached regarding skills, aptitudes, evaluation and implementation of CT programs in education, as well as the definition of the term itself and a consensus on the ideal critical thinker.⁵

For Facione, the CT is an intentional and self-regulating judgment, resulting from interpretation, analysis, evaluation and inference, as well as explanation of the evidence, conceptual, methodological, and contextual or criteria considerations on which the judgment was based

From the Delphi Report, evaluation methods such as the California Critical Thinking Disposition Inventory and the California Critical Thinking Skills Test were created whose main purposes are to measure a student's tendency to think critically (considering elements such as openness of thought, analytical spirit, systematization, self-confidence, curiosity and maturity in judgment) and to measure CT skills (based on questions such as analysis, evaluation, inference and reasoning).

Several studies from this review^{9,21,30} recommend the use of several CT measurement instruments (Table 1). Despite being validated and used by educational institutions, their adequacy is questioned in order to reach an understanding of the dialectic nature of nursing care, which requires a broad interpretation of the health-disease process and of the human being in its entirety.

In 1987, based on discussions at the International Conference on Critical Thinking and Education Reform, Paul and a group of thinkers formulated a concept of CT as an intellectually disciplined, agile and competent process of conceptualizing, applying, analyzing, synthesizing, and evaluate the information collected or generated by observation, experience, reflection, reasoning or communication.⁶

Some CT scholars, including Paul, were a reference for conducting research,¹⁹ developed with emergency nurses, who applied a case study in order to analyze the structural elements of the CT of these professionals. The results revealed that the priority elements for clinical decision making are technical-scientific knowledge, patient assessment, clinical experience, clinical reasoning and ethics. The study emphasizes that CT is an essential skill to enhance clinical reasoning, which can be developed and improved by students and nursing professionals in order to evaluate behaviors and implement accurate and safe care.

With the conceptual contribution of Paul, Facione, Scheffer and Rubenfeld, a study²⁸ applied a validated case study to nursing students aiming at the identification of a priority nursing diagnosis (based on Nanda-I Taxonomy) and CT skills in the diagnostic nursing process. The analysis revealed technical-scientific knowledge, logical reasoning, clinical experience, knowledge about the patient, ap-

plication of standards, discernment and contextual perspective as CT skills in the diagnostic process in nursing analysis.

In order to define CT in nursing, Scheffer and Rubenfeld coordinated a Delphi study in the 1990s which composed of 95 professionals. The consensus of these scholars identified several elements that critical thinkers in nursing practice do, such as mental habits (affective component) of trust, contextual perspective, creativity, flexibility, curiosity, intellectual integrity, intuition, understanding, perseverance and analysis reflection; (cognitive component), application of standards, discernment, search for information, logical reasoning, prediction and transformation of knowledge.

The theoretical support of Scheffer and Rubenfeld sustained the construction of a model for the *Ensino do Pensamento Crítico Integrado a Enfermagem / Teaching of Integrated Critical Thinking in Nursing (EPCIE)*, which has been incorporated into teaching since 1990. The investigation of this teaching experience found that the model assists in the development of CT patterns, such as argument analysis, evaluation of information sources, identification of hypotheses, clinical judgment, diagnostic reasoning and decision making.³¹

The conceptual map is another didactic strategy suggested by some authors^{10,20,22,28} to aid in decision making. It is a diagram that seeks to classify concepts, to relate and hierarchize them. This tool instigates the ability to analyze, synthesize, have flexibility, curiosity, and participation.²⁰

A study²² evaluated conceptual maps developed by students for the understanding of research projects. The constructed maps were evidenced as a strategy for knowledge organization, which established coherence between concepts, significant relationships, clarity of ideas and logical relation between the stages of a research project.

Along the same lines, Alfaro-Lefevre, president of Teaching Smart/Learning Easy (Florida), defines CT as a careful, deliberate and results-focused reasoning motivated by patient needs. Understood as a problem-solving method that guides decision-making, CT provides the basis for accurate and disciplined judgment in work situations, essential for the nursing process.⁷

A study of this review²⁵ raised the importance of CT in the implementation of the nursing process, emphasizing that all its phases require diverse CT skills, such as diagnostic reasoning, clinical inferences and decision making. Another research²³ related CT with evidence-based nursing (EBN),

a method that leads to evidence-based decision-making emanating from research, systematized clinical experience, and user needs. The authors support EBE as a didactic strategy that allows them to train professionals with critical and reflexive thinking skills.

The theoretical bases of CT described so far, present in 17 publications, explicitly or implicitly refer to the need to acquire habits, skills and competences, which can be improved through teaching strategies and evaluated by measurement instruments, for the purpose to qualify clinical reasoning and clinical judgment in nursing. This evidence raises questions about the limitation of these strategies and instruments to develop and evaluate social and political skills and competences, such as ethics, autonomy, reflection and criticism.

A minor portion of the publications of this review (15 studies) adopted the foundations of John Dewey, Donald A. Schön, Paulo Freire, and Jürgen Habermas as the theoretical basis of CT, which follow a chain of thought distinct from previous authors, as they incorporate elements inherent in complexity of the human being in the formulation of their theories.

John Dewey advocates democracy and freedom of thought as tools for people's emotional and intellectual evolution. He has a broad conception of man in his environment and proposes a new type of teaching, centered on the student and practical experience, with the "learning by doing" approach.¹⁵

For Dewey, reflective thinking requires quitting inertia and experiencing a state of restlessness and mental disturbance. It is a systematic dialogue of the subject with himself, in an exercise that involves the confrontation with a difficulty, the formulation of the problem, making a hypothesis and the elaborated reasoning.¹⁵

Dewey was the theoretical basis of a study³⁸ that emphasized service learning as a methodology that favors the construction of CT. The author defends the benefits of this methodology for teaching activities (reflection, critical thinking, problem solving) and personal development (self-knowledge).

Another teaching strategy reported was simulation, a tool that supports the training process, focusing on practical activity and reflection, considering the students' experience. By these characteristics, the simulation can result in a significant process in the life of the learner.³³

John Dewey's contributions to learning by doing were later taken up by Schön, who incorpo-

rated the idea of reflective professional training and reincorporated the idea of practical knowledge and service learning. Schön explains that reflexive practice, developed through the processes of knowledge in action and reflection in action, leads to the use of knowledge to describe, analyze and evaluate previous interventions, which lead to future solutions and actions.¹⁶

Several authors^{33-36,39-42} based themselves on Schön to defend a formation in which the teacher needs to create practical situations of learning, to manage the heterogeneity and to foment the reflexive practice and CT. These authors cite some teaching strategies that can enhance practical knowledge and learning in action, such as: portfolio, field diary, written narratives⁴⁰ and reflective daily.⁴¹

The resurgence of reflexive practice in American teacher education based on Schön, inspired the thinking of other intellectuals in the world, such as Freire's in Brazil and Habermas's in Europe.

Paulo Freire is considered a theoretical and pedagogical basis for teaching. His thinking sees education as a practice of freedom, that is to say, a democratic exercise, critical, reflexive and dialogic, nurtured by social interaction.⁴⁶ Freire does not define CT, but weaves a reference that justifies it. The author assumes that critical consciousness is not constituted at the intellectualist level, but in praxis, which continually demands action accompanied by reflection on reality.⁴⁶ Thus, critical consciousness is instigated through problematization, a process in which the person experiences and instigates their curiosity, realizing their potentiality and creating conditions to discover themselves as subjects of their own knowledge.¹⁷

The purpose of this process is awareness, a dialectical process in which there is articulation between action and reflection for the emancipation of the subjects, that is to say, for the individual to be able to assume their ontological and social condition in order to contribute to the transformation of reality. Autonomy, as a consequence of this process, is the evolution of the being and the instrument of struggle for a more humanized world.¹⁷

Some researchers of this revision^{37,43-44} defend the construction of critical and problematizing health education based on Freirian ideas, which is born and nourished in the dialogue between educators and students. It is in this conception of education that the use of innovative methods, inscribed in the dialectic of action-reflection-action, grows. A study³⁷ discussed the main methodological changes in the training process of health

professionals, emphasizing the potential of active methodologies, which are based on the principle of autonomy and use the problematization as a teaching-learning strategy.

The author³⁷ emphasizes that the active methodology has allowed the articulation between the university, the service and the community. Two instruments have been recognized as activators of teaching and health service integration: problem-based teaching and curricular organization based on problem-based learning.

Another theoretical basis of CT that follows this line of reasoning is that of Habermas. His thinking encompasses several themes - law, politics, history, ethics - with which he seeks to highlight the possibilities of rational-critical communication and emancipation, repressed in modern institutions.¹⁸ Habermas created the Theory of Communicative Action, in which he clarifies that language, in its communicative use, postulates a close connection between speech and action and enables a full interaction between human beings. Communicative action is based on linguistic interaction, centered on significant aspects of the actors' lives. It is a form of social action, free of coercion, in which participants engage in equal conditions to express or produce personal opinions and to draw up subjective agreements.² The purpose of the interaction established in a communicative action is the development of CT, which refers to a continuous process of reflection on life, resulting in the emancipation of the actors.²

Habermas was used as the theoretical basis in a study performed in Spain, which highlights the CT as a new horizon for nursing. The authors argue the need to go beyond the CT model aimed at clinical practice and approach a critical and reflexive thinking model oriented toward citizen emancipation.¹¹ This model is based on the sociocritical paradigm that establishes a dynamic horizon of care, which means identifying social inequalities in health and transforming them through communication between the professional context and the daily life of people.⁴⁷

A theoretical and methodological framework of sociocritical nursing, which includes a network of concepts and a model of data analysis, was mentioned in a publication,¹¹ of which one of the authors is a creator. Siles,³ an advocate of sociocritical nursing, was based on Habermas to epistemologically explain the nature of this, linking the historical, social and cultural dimensions to the biological dimension of care. This way of interpreting care implies the need to consider not only the world of facts and

behavior (phenomena observable on the "surface" of society), but also those factors that remain hidden under the surface of the explicit manifesto, which determine the choice of one or another way of life.

Regardless of the thinking strain that supports the concept of CT, it is understood that this is an essential element for the planning of nursing actions. The understanding of CT as a skill and application in clinical practice - as outlined by the theoretical basis of Group A - is a determining factor in the construction of nursing diagnoses. The logic of this trend of thinkers is that the exercise of critical thinking can be trained in order to improve clinical reasoning about the health-disease process.

The concept of CT based on the thinkers in Group B supports the understanding of nursing as a social profession, committed to the subjectivity of the human being and its health needs.³ From this understanding, the nurse has the potential to care for the citizens with a sense of emancipation. It means care that includes the experiences and conceptions of the citizen's health in order to collectively build a care plan. It is a vision that goes beyond clinical practices and promotes care for life, for the citizen to interpret his needs and seek solutions, and to face the contradictions of society and to actively participate in his history.

CONCLUSION

This integrative literature review has revealed that in the last ten years, Ibero-American nursing has been dedicated to understanding CT and including it as a competence in vocational training. It was found that there is no uniformity in the adoption of a theoretical basis of CT. However, two conceptions of CT differ between thinkers, who were organized into two groups: Alfaro-Lefevre, Peter Facione, Scheffer and Rubinfeld and Richard Paul (Group A) and John Dewey, Donald Schön, Paulo Freire and Jürgen Habermas (Group B).

Group A, referred to in 17 publications, understands CT as having the ability for clinical reasoning, which is present in several nursing care actions and decisions: in the diagnosis of the phenomena, in the choice of appropriate interventions and in the evaluation of the results obtained. The thinkers of Group B weave a network of fundamental concepts for the construction of CT. The definitions of reflexive thinking, reflexive practice, critical awareness, autonomy and communicative action support the concept of CT as a cooperative process of disposition for mutual understanding between people. The

purpose of this process is the development of critical awareness and the exercise of citizen autonomy.

The challenge for the future of nursing research is to adopt a paradigm that will serve as a basis for formulating a universal definition of the concept and resulting teaching strategies. Considering that the subject of nursing care is the human is included in a sociocultural and historical context, the orientation of this study is to include the perspective of Group B - Dewey, Schön, Freire and Habermas - in the nursing curriculum and practice, as these thinkers weave a network of concepts and a dynamic theoretical framework in relation to CT.

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