Theory-praxis relationship in education of nursing professionals: an integrative literature review
Relación entre teoría y praxis en la formación de profesionales de enfermería: revisión integradora de literatura

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ABSTRACT:
This article presents an integrative review of studies written in Spanish, Portuguese and English, which have been published in journals indexed in the databases Scielo, MEDLINE, CINAHL, lilacs, CUIDEN, Ovid, Pub Med and TESEO, between 2000 and 2014.

This study aimed to identify, in scientific literature, the problems of the theory-praxis relationship in the education of nursing professionals. 35 documents were selected, based on inclusion and exclusion criteria. In order to analyze them, the studies were arranged according to common aspects such as: document type, country of origin, author, year of publication, key concepts and/or definitions. This study made it possible to group the data into thematic units according to three categories: studies related to teachers and the curriculum, studies related to students, and studies related to care nurses, from their professional practice. Results indicate that complexity of the theory-praxis relationship is evident, demonstrating that there is no transfer of classroom-imparted theoretical knowledge to the actual care practice. Moreover, we highlight the inconspicuous production of studies related to this subject, considering its importance and its constant concern to teachers, students, and care nurses.

Key words: Nursing; nursing education; integrative review; nursing teachers; nursing students.

RESUMEN:
El presente artículo es una revisión integradora de publicaciones de revistas indexadas inscritas en las bases de datos Scielo, MEDLINE, CINAHL, LILACS, CUIDEN, OVID, PUB Med, y TESEO, entre 2000-2014 escritos en español, portugués e inglés.

El estudio tuvo como objetivo identificar en las producciones científicas la problematización de la relación entre teoría y praxis en la formación de los profesionales de enfermería.

Se seleccionaron 35 documentos, con base en criterios de inclusión y exclusión. Para el análisis, los estudios fueron ordenados de acuerdo a aspectos comunes como: tipo de documento, país de origen, autor, año de publicación, conceptos clave y/o definiciones. El estudio posibilitó la agrupación de los datos en unidades temáticas, emergiendo tres categorías: Estudios relacionados con los profesores y
el currículo, estudios relacionados con los estudiantes y los estudios relacionados con los enfermeros asistenciales a partir de su práctica profesional.

Los resultados indican que la complejidad de la relación entre la teoría y la práctica es evidente, demostrando que no existe una transferencia del conocimiento teórico de las aulas, a la realidad de la práctica asistencial. Adicionalmente, se resalta la discreta productividad de estudios relacionados con esta temática, más teniendo en cuenta la importancia del tema y la preocupación constante que genera tanto en los profesores, estudiantes, como en los enfermeros asistenciales.

**Palabras clave:** enfermería; educación en enfermería; revisión integradora; docentes de enfermería; estudiantes de enfermería.

### INTRODUCTION

The theory-praxis relationship has been a constant human reflection topic, from the beginning of philosophy until the present, which has spread to the various disciplines of knowledge. Particularly in the nursing field, the relationship, coherence or correspondence established by teachers between nursing knowledge and institutional practice has been recognized by different authors; it is evident here that there is a tension/set of problems in teachers, students and care nurses, as well as in the nursing discipline itself.

Etymologically, the word “theory” is derived from the Greek “to observe”, whose root is theós (god, divinity), so its meaning is linked to something divine, superior, ideal, not questionable, worthy of being revered and even feared \(^1\). The Dictionary of Spanish Language of the Royal Spanish Academy \(^2\) defines theory as a speculative knowledge, being considered independent of any application. For its part, the word “praxis”, is derived from the ancient Greek πρᾶξις, which means “practice”. It has been translated to Latin as “action” and to Spanish as “acción” (and to English as “action”). Thus, the first thinker who specifically proposed the theory-praxis problem was Aristotle (384-322 B.C.), by constituting his encyclopedia of sciences and distinguishing the actual (theoretical) sciences from the other disciplines (practical and poietic ones).

Nowadays, Bárcena \(^3\), as other authors, affirms that the meaning of the word “practice” (to do) has changed, and supports this by referring to Aristotle, based on his distinction of two forms of activities: praxis (practical knowledge or phronesis) and poiesis (productive knowledge or tejné). For Bárcena \(^3\), as cited by Rivera \(^4\), these two primordial moments of human activity are no longer distinguished, since production has ended, according to the author, because of the accent that has established the instrumental rationality and the know-how paradigms, and it has been lost the reason for thinking what is done.

In nursing, these ideas are proposed by Medina \(^5\) in Spain, and by Benner in the Anglo-Saxon literature. Both authors highlight the distinction between tejné and praxis, and point out that the nature of the nursing practice is phrónesis, being a discipline that deals with the cognition and ethics of human actions. Bárcena \(^3\) additionally points out the practical nature of education, stating that what actually constitutes praxis in education is training. Likewise, the author states that nursing and education have a technological nature, but deployed as a reflexive and ethical practice. Some authors, such as Medina \(^5\), state that nursing education and professional practice should be combined as a praxis, and thus to transcend to a more universal contextual and social plane.
According to Acebedo (6), many authors such as Bourdieu (7), Schön (8), Toulmin (9), Benner (10) and Medina (11), among others, have pointed out very clearly the differences between the production processes and the relation forms of practical knowledge and theoretical knowledge, emphasizing that practical disciplines such as psychology, social work, education, law, medicine or nursing involve a combination of science, technology and praxis, where praxis is developed in a practical reason, which is very different from the instrumental reason characteristic of rational and formal thinking. In addition, they point out very clearly the differences between the production processes and the relation forms of practical knowledge and theoretical knowledge. Likewise, authors such as Benner criticize that the only knowledge which is considered in the rational-technical model of nursing practice is theoretical knowledge, leading to professional practice to be an instrumental application of scientifically derived knowledge.

López and Torres (12) state that since the nineties, the term “praxis” is introduced in the nursing field as a practical human behavior where a personal, ethical, aesthetic and empirical activity can be included. Considering these elements in the nursing field implies creative, expressive and evaluative dimensions in the nursing knowledge that will contribute to develop scientific bases. Therefore, thinking over praxis in nursing field leads to think over an epistemological sense of this concept and, by this way, to argue in favor of a creative and reflexive nursing praxis, understanding that this is formed in a theoretical-practical articulation, based on scientific knowledge.

For its part, nursing theory is defined by Durán de Villalobos (13) as a communication of a conceptualization of some aspect of nursing, focused on describing a phenomenon, explaining the relationships between phenomena, predicting consequences or prescribing the nursing care; considering them, additionally, as repositories where there lie investigation results related to nursing concepts such as health, health promotion, comfort, rest, care, among others; and as repositories of the answers obtained for the understanding of the significant nursing phenomena, such as the recovery and recurrent admissions to the hospital processes, among others.

In nursing field, the theory-praxis problems arises from the contextualization of the nursing theory and practice concepts. From a historical perspective, a differentiated origin is observed among these concepts: theory was introduced, according to different authors in 1852, by Nightingale (14); while, according to others, in 1952 by Peplau (15). While the care practice, as an instinctive activity, started when life began (16).

Theory and its practical application form a central axis for the advancement of disciplines, and particularly the nursing discipline. Durán de Villalobos (17) says that nursing has always used theory for practice, but theories derived from medical discipline have historically been the first ones used as a support for nursing practice, leading to a growing interest only in recent years of nursing professionals to use nursing theory in order to ground theoretical frameworks and discuss research findings, leading to a somewhat confusing context regarding the problems of both nursing theory and praxis, which requires serious reflection, particularly from education.

In addition, the weak articulation between nursing theory and nursing practice is evident in the literature review (18), which leads to a lack of correspondence between education in educational institutions and the activities carried out by professionals.
towards the services’ needs, leading to the so-called theoretical-practical gap, which leads to a difference between education and practice that constitutes a threat to the development of nursing (19).

Likewise, the Ibero-American Network of Nursing Education Research considers, when determining research priorities in higher nursing education in Ibero-America (Spanish-speaking countries in America), linking theory and practice in the nursing professional education as one of the priority research topics in nursing education. For its part, Benner et al. (20) highlight the need to investigate the existing gap between the imparted education in nursing schools and practice, due to the changes caused by the new context in which it is necessary to provide health care. The author calls for changing nursing training programs in order to bridge the gap between practice and education.

In this context, the results of this research constitute a contribution for nursing education, since it looks to promote reflection about the described problem; it is that way as it was stated as a goal carrying out a revision of the scientific literature integration, by searching documentary sources that approach the problems of the theory-praxis relationship in the education of nursing professionals.

**METHODOLOGY**

This is a study of qualitative approach that sought to identify in scientific publications the problems of the relationship between theory and praxis in the education of nursing professionals. In order to reach this objective, an integrative revision was adopted, based on the studies of Ganong (21), since it enables the generation of new perspectives, guides towards the identification of gaps regarding the studied subject, and enables to generate conclusions from the synthesis of the published studies.

Regarding the research design, we decided to adopt the six stages of the Ganong's methodology (21), which are: 1) selection of the research question, which constitutes the identification of the problem; 2) definition of the inclusion criteria of studies and selection of the sample; 3) representation of the selected studies by tables, considering all the common characteristics; 4) critical analysis of the findings, identifying differences and conflicts; 5) interpretation of results; and 6) clear report of the found evidence, which constitutes the review submission.

The selection of the topic and the question arise against the problem of the nursing theory-praxis relation, so the guiding question for this study was: what is the state of the art of the problems of the theory-praxis relation in the education of nursing professionals?

The identification and selection of the studies was based on the bibliographic study of indexed publications in databases of nursing and related disciplines, as education. Databases in Spanish and English were used, which were provided by the Universidad del Valle, the University San Buenaventura and the National University of Colombia, such as Scielo, MEDLINE (US NLM), CINAHL (Cumulative Index to Nursing & Allied), Lilacs, CUIDEN (Fundación Index), Ovid, Pub Med and TESEO (Doctoral Theses Databases). Descriptors were selected from the terminology consulted in the MESH (National Library of Medicine) and the health sciences descriptors (DECS-BIREME).
The defined criteria for the studies selection were the article categories: original, doctoral thesis, journal article, reflection, studies with abstracts and full texts available for analysis, published in Spanish, Portuguese and English; and studies published between 2000 and 2014, indexed in the selected databases and containing the following descriptors in their titles and/or summaries: nursing, education, nursing theory, nursing education, professional practice, practical nursing, nursing teachers and nursing students. This research used as resource the term “exact term” associated to the mentioned descriptors.

The exclusion criteria for the studies were the documents that did not fit in the mentioned inclusion criteria, as well as duplicate studies, letters and/or dissertations, and studies dealing with different subjects not related to this study.

Data collection took place between August and November 2015. In order to facilitate the studies review, once the texts were identified and selected, a first analysis template was adopted as a collection tool, which enabled arranging studies according to common aspects such as: document identification, country of origin, document type, author, year of publication, keywords, key concepts and/or definitions. Subsequently, a second template was elaborated, which made it possible to group data into thematic units related to emerging trends, where three actors were highlighted: teachers, students and care nurses. In this way, three categories were defined for the analysis: studies related to teachers and the curriculum, studies related to students, and studies related to care nurses, based on their professional practice. According to the inclusion criteria, 35 studies were selected for analysis.

RESULTS

From the 35 analyzed studies, 69% (24 studies) were published abroad and 31% (11 studies) were published here. The countries of origin were: Spain 31% (11 articles); Brazil 17% (6 articles); Cuba 9% (3 articles); and Peru, Mexico, Chile and Venezuela with 1 article each one.

Regarding their publication categories, 69% of publications are articles (24 articles); 23% (8 documents) are doctoral theses; and the following documents were classified as other documents: 3% (1) a book, 3% (1) an editorial and 3% (1) an institutional document. Regarding the years of publication, most of the publications, 60% (20 articles) were published between 2006 and 2010.

In order to analyze and discuss the problems of the theory-praxis relationship in the education of nursing professionals and following the proposed method for this study, results were grouped into thematic units related to emerging trends, specified as follows: studies related to teachers and curriculum (18 documents), studies related to students (7 documents) and studies related to care nurses, based on their professional practice (10 documents). Table I shows the emerging trends of the state of the art against the problems of the theory-praxis relationship in the education of nursing professionals.
Table I: State of the art emerging trends, against the problems of the theory-praxis relationship in the education of nursing professionals.

<table>
<thead>
<tr>
<th>Emerging trends</th>
<th>No.</th>
<th>Study identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studies related to teachers and curriculum</td>
<td>18</td>
<td>23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40</td>
</tr>
<tr>
<td>Studies related to students</td>
<td>7</td>
<td>41, 42, 43, 44, 45, 46, 47</td>
</tr>
<tr>
<td>Studies related to care nurses</td>
<td>10</td>
<td>48, 49, 50, 51, 52, 53, 14, 54, 55, 56</td>
</tr>
<tr>
<td>Total of analyzed studies: 35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Next, we describe each emerging trend and its contributions to the investigated subject:

**Trend 01: studies related to teachers and curriculum**

51%, corresponding to eighteen analyzed studies, discuss aspects related to the theory and praxis problems by teachers, based on other studies and literature. Teachers recognize that there is an advance in this discipline knowledge, not reflected in practice (22-25), which is constituted in the reality (the real world) and as such is developed in this reality. This aspect is linked to their ignorance of the importance of recognizing this scientific development, since many say that they did not learn about discipline development during their studies, and that they have focused their practice on “the doing” (22).

It is evident in the reviewed papers the call made by their authors regarding the conflict where nursing is involved, which threatens its development as a profession and which is expressed by the lack of consensus between the aspects related to the theory (nursing sciences) and the aspects related to the nursing practice (professional practice) (22-25). Different researches show that, although there are important developments in this discipline, it is privileged the knowledge of the practice in nursing education. While the development of discipline is guided towards the use of nursing theories and models, curriculum keeps being predominantly based on the biomedical model (26-30), and its practice keeps under a technical (27), de-contextualized orientation, given by pre-established methods, times, spaces, form and content; i.e., it is not acknowledged the significance processes of the territory and its inhabitants, their own knowledge, their experiences and the contextualization of knowledge; this sets a dichotomy between discourse and action, between theory and praxis.

In some texts (27) the nursing curriculum is described as based on a scientific-technical rationality, given firstly by the basic sciences, and then by the clinical practices. This leads to an instrumental vision in the relations between theory, practice and research. In addition, there contribute to this division its hierarchical organization, where the basic biological (anatomy, physiology, biochemistry) and psychosocial sciences (psychology) are presented, as well as the bases of the nursing science (models and theories), which are subsequently applied in different subjects, ultimately leaving the practices in the (clinical) services, where the basic knowledge is applied to care situations (27).
Regarding the special situation of nursing education, some authors (14) say that the metaphor of a gap between theory and practice is established; arguing that for some authors it will always exist, as there are different types of knowledge involved. On the other hand, some teachers consider that this dichotomy exists because the theoretical concepts are obsolete, suggesting that the theory requires a reconceptualization, and in front of this, they call teachers to show the importance of integrating these different knowledge to students.

Some publications describe a de-contextualization of the curriculum regarding the social and particular context of each region (29). From this, the authors consider that nursing teaching should be based on the vertiginous changes of society and each specific region’s needs, in front of which, a call is made to the academy to make a curricular change by adapting the theory, the programs and the educational projects to the particular needs of the social context (29). It is emphasized that the disciplinary development must be constituted in a government plan (31); as a co-responsibility with environmental changes, modification of public policies in health and education; this responsibility must be assumed by the academy through the approach between theory and praxis, among classroom discourses and nursing care in its contextual reality (32-35).

Another identified situation is the lack of articulation and integration between teaching-assistance and research; an effective link between educational institutions and services and these with nursing research is of vital importance. This is considered as a formula to reduce the separation between theory and practice. This review has also found that in many cases, theoretical and practical teachers act and teach from distant perspectives and discourses (36, 37), due in particular to the lack of articulation between the educational processes of professionals in relation to the caution towards practice strategies, which are more focused on “the doing”, which is obtained through direct experience in a situation. This, according to the reviewed texts, leads to a dichotomy between the education provided by teachers and the service activities carried out by students and care nurses. (39)

Trend 02: studies related to students

Seven documents, which correspond to a 20%, contribute to the problems of the theory-praxis relation by the students. The research results indicate that students perceive a difference between two forms of knowledge: academic (theoretical) and practical. These texts state that academic knowledge is characterized by being abstract, out of context, stable and rigid. While practical knowledge is concrete and is placed in a constant understanding-transforming-understanding process; it is unstable, complex, uncertain and saturated by values; it reflects the real life and the context where people are (45), as it is identified by some authors (46) who define the theoretical knowledge as that one which enables the individual to establish relationships to understand events, and practical knowledge as the knowledge of a situation, where skills, habits and knowledge are shared.

From the findings, it is evident that this knowledge is infrequent in books, but is described in the care nurses’ labor experiences, which cannot be formalized or taught by the teachers to the students from the classroom theory, since it is very difficult to make it verbally explicit and it can only be demonstrated (46). This makes evident a difference between two forms of teaching: one for theoretical knowledge (theory teaching) and another particular one for teaching of practice.
The lack of articulation between the knowledge acquired by the students during their university education towards the professional practice is especially due to the technical rationality, which leads to understand the professional practice as that one in which problem solving is based essentially on theoretical knowledge, as well as in a practice centered on technique and technological devices, which prevents the visualization of human care \(^{46}\). Additionally, other factors contributing to this lack of articulation, also described by students, are: the dominion of the biomedical model, the rigid structure of the organizations, the imposition of other models, and the prevalence of taking care of physical aspects.

It is worth pointing out that despite efforts made by teachers to develop a reflective and critical teaching, in reality it is evident that as long as there is no transfer of theoretical knowledge from classrooms to the practical context, it will be difficult to achieve the nursing models' integration in people care and, therefore, in the nursing theory-praxis relation.

**Trend 03: studies related to care nurses**

The results of ten reviewed investigations, corresponding to 29\%, present the professionals’ experience regarding the problems of the theory-praxis relationship, which focuses on the identification of a lack of applicability of theoretical models in the practice \(^{47-49, 51}\). Nurses consider that nursing models and theories are relegated from practice because of their complexity, pointing out that nursing records do not favor enough working under a model, possibly because they have become obsolete. Additionally, the studies identified some aspects such as the lack of mastery for their application, since many of them were not educated under the concept of the nursing model, perhaps because the conceptual models were not included in their undergraduate curriculum until the middle seventies (with a different intensity and progression in each school). This caused that an entire generation of care nurses has not been adequately educated in this regard \(^{51}\).

Likewise, studies point out a difference between reality and “what it should be” \(^{47}\); nursing models are very often considered by nurses as difficult to put into practice, as a space where professionals are concerned for “what it actually is”, which is linked to a concern for their technical ability, considering their use is important from a theoretical point of view, which is fundamental for the disciplinary construction, as a differentiator regarding other professions and clarifier of the professional role, but obviated in the care practice.

In addition, it is considered that there are factors that hinder the theory-praxis relationship, which were identified by care nurses as limitations due to the dominant medical and biological ideology \(^{47}\), the organizational structure of the institutions, the high care stress in the work units, the complexity of the models and the existence of hidden rules by which professionals are socialized according to the needs of the institutions, so that the care of physical aspects prevails over the others \(^{47}\), as well as the fact that for a long time, a biological and medical view has prevailed on everything related to health, illness and the people who live under different circumstances because of these conditions. Additionally, some studies found resistance to change and a perceived lack of applicability on daily work in theoretical models, concluding in some studies that professionals are not satisfied with the relationship between what they learned during their studies and what they apply in their daily practice \(^{47, 48, 55}\).
DISCUSSION

The integrative literature review is a type of research that enables a comprehensive review regarding other reviews; it enables inclusion of experimental and non-experimental studies that lead to a complete understanding of the analyzed phenomenon, and combines data from the theoretical and empirical literature \(^{(56, 57)}\) in such a way that it facilitates the identification of knowledge gaps and conclusions on a specific topic\(^{(58)}\), in this particular case, in face of the problems of nursing theory-praxis relationship.

From the obtained data, a permanent dichotomy was found in the educational practice of teachers, in the education of students, and in the care practice. This dichotomy is observed in teachers between discourse and action, between theory and praxis \(^{(23,31,36,37)}\). In students, it is identified through the differentiation between two forms of knowledge: academic (theoretical) knowledge and practical knowledge, which are generated by two different forms of teaching. Regarding care nurses, it is identified in “what it should be”, which is the basis of nursing models, in face of “what it actually is”, which characterizes the care practice.

From the analysis of the reviewed studies, it was identified the lack of consensus between the aspects related to the theory (nursing sciences) and the aspects related to the nursing practice (professional practice) as one of the main factors associated to the problems of theory-praxis relationship by the involved actors; while the development of this discipline is oriented towards the use of nursing theories and models, the curriculum is characterized by continuing being predominantly based on the biomedical model \(^{(27-30, 34)}\), and the practice is mainly developed under a technical orientation \(^{(27, 34)}\). Additionally, other factors are described, such as the dominion of the biomedical model, the organizational structure of the institutions, the high stress imposed on care in the work units, as well as the fact that during a long time, a biological and medical vision has prevailed on everything related to health and disease.

It is important to highlight that one of the factors that has contributed to establishing this problem, and that is described in numerous publications, is a de-contextualization of the curriculum regarding the political, social and particular contexts of each region \(^{(29, 35)}\). In face of this, the academy is called upon to make a curricular change, by adapting theory, programs and educational projects to the particular needs in the social context. It is highlighted how some authors consider that disciplinary development must be constituted in a plan of government \(^{(31)}\) that adopts the environmental changes, the modifications of the public policies regarding health and education, and that this responsibility must be assumed by the academy through an approach between theory and praxis, between classroom discourses and care, in their contextual reality.

From the analysis performed through the state of the art, theory and praxis are considered as dichotomous, difficult-to-connect variables, since they constitute large and intrinsically complex worlds. However, the coherence of what is taught depends on their relationship, the nursing care, as well as the identity and professional development. Therefore, it is necessary to approach the relations between these two worlds by the recognition of this reality. Knowledge about the aspects that constitute the problems of their relationship is fundamental, as it leads to establish a form of
relationship that contributes to clarifying and linking the concepts in order to contribute through teaching to the recognition and strengthening of nursing profession.

CONCLUSIONS

The complexity of the theory-praxis relationship is evident. Literature shows that as long as there is no transfer of theoretical knowledge from classrooms to the practical context, it will be difficult to achieve the integration of nursing theory and praxis.

Among the limitations of this study, we highlight the scarce bibliography that was identified, considering this subject's importance and the constant concern of teachers, students and care nurses in this regard. However, it is noteworthy to point out a greater number of studies were focused on the teachers’ role, which implies their relevant role in the problem and the possibility of looking for an approach from the teaching. It is striking that the studies do not focus on investigating and broadening the knowledge of the causes of this distancing; most of them are descriptive studies that focus on describing the problem and how it is perceived by the subjects who are involved in it.

In general, the results indicate the need to carry out research with different perspectives, by approaching other situations that may influence the described problem; we suggest to carry out more studies with different methodologies in order to broaden the understanding of the described problem and its impact in the professionals' performance. We also suggest to consider the specific and particular context of the different professional performance areas in order to broaden the perception on this topic, and to contribute to improve the education of nursing professionals, by articulating theoretical, technical, political, sociocultural, ethical and aesthetic aspects, which constitute the nursing praxis.

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