

Review

Nursing education in the perspective of teaching by skills: A systematic review

Luciene Rodrigues Barbosa^{1,2*} and Luciane Lúcio Pereira²

¹Rua Narciso Zanardi, 32/ Vila Zanardi, CEP [Zip Code]: 07020121 – Guarulhos (SP), Brazil.

²Universidade de Guarulhos/UnG. Guarulhos (SP), Brazil.

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To know the national and international scientific publications which address the teaching of professional skills for undergraduate students of nursing. A systematic review of LILASC, BDNF, MEDLINE, and TESEENF databases, using the following keywords: professional skills, education and nursing. The following inclusion criteria were established for this review: full articles available online and free of charge, published from 2005 to October 2011, in Portuguese, English and Spanish, and focused on the study object. Eleven articles were selected, which were predominantly published in Brazilian (81.8%) and nursing journals (99.9%); most of them were original (63.6%), and addressed, as their objective, the subject 'professional skills': in constructing the political pedagogical project (54.5%) and as a tool to be developed in the students (45.5%). We expect that the subject identified in this study may contribute to the development of critical/reflexive thinking and attitudes in nursing.

Key words: Professional skills, higher education, nursing.

INTRODUCTION

Constant changes in the economic scenario have given rise to the transformation of the labor process, and led organizations to seek a new employee profile. The organizations assume that their employees, within the professional scope, are able to develop their professional activities with competence.

In this setting, the use of management by skills is present at all work sectors, including the healthcare sector, covering primary to tertiary services.

Therefore, organizations can begin to value the skills demonstrated by the professional, so they expect that nurses, in their daily activities, would develop skills, attitudes and behavior appropriate to their practice during the work process. At this time, one can see the implementation of the skills taught in academic education (Fontes *et al.* 2010).

Some authors believe that professional expertise is expressed through a set of initiatives and skills, (Tai and Chung, 2008; Scott, 2008) which are developed and

should serve as a means to acquire capabilities. Thus, to develop the competence, professionals are required to have knowledge, attitudes, and skills (Brasil. Ministério da Saúde. Portaria GM/MS n.1.996, de 20 de agosto de 2007)

In this context, the practices developed in nursing due to changes in work and education paradigms have undergone structural changes (Tanji and Viana, 2012). Nursing professionals start to be seen as someone who adds value to him/herself and to the organization to which he/she belongs, and this development occurs through learning.

Then, performing the activities with competence reflects the professional's commitment to the actions developed, his/her ethical principles and ideals (Braga and Silva, 2006; Fernandes *et al.*, 2013). In this context, the Curriculum Guidelines for Undergraduate Nursing Courses propose changes in teaching and vision of education and educators role in nursing education, appraising the skills and abilities developed in the student by the teacher.

According to this Curriculum Guidelines for Undergraduate Nursing Courses, at the end of the undergraduate course students should have developed the following skills: assertive decision making, communication, leadership,

*Corresponding author. E-mail: lucienorodriguesbarbosa@gmail.com Tel: 55 11 998474248

innovation, proaction, interpersonal relationship, and continuing education (Brasil. Ministério da Saúde. Portaria GM/MS n.1.996, de 20 de agosto de 2007).

Education then becomes a pillar of changes in this paradigm of teaching skills to the professional. In recent years, scientific literature on professional skills has shown interest in understanding the teaching of professional skills, and how students are linking the theoretical knowledge to their professional practice (Preheim *et al.*, 2009).

Although educational institutions are seeking to implement, through their syllabus, a new approach matching the proposed Curriculum Guidelines, this topic is addressed during the classes as something very complex, and sometimes it can even be considered as an arduous process.

This review study is aimed at discussing the teaching of professional skills for students of undergraduate nursing courses. Its objective was to meet the national and international scientific publications addressing the teaching of professional skills for undergraduate students of nursing.

METHODS

This is an exploratory systematic review study performed through critical analysis of articles (Centro Cochrane do Brasil, 2013; Mendes *et al.*, 2008). A planned thorough review aims to summarize the original research highlighting its relevant issues. It uses a clear method to identify, select and describe the quality of the studies, data collection and analysis (Mendes *et al.*, 2008).

To start the study, the following guiding question was made: "What has scientific literature presented on the teaching of professional skills?"

To select the articles, inclusion and exclusion criteria were established and a thorough analysis of the articles quality was performed to ensure the reliability of selected literature, thus allowing increasing the study accuracy.

The search and selection of open-access indexed scientific articles were conducted in national and international databases, as follows: LILACS (Latin-American and Caribbean System on Health Sciences Information), BDENF (*Base de dados de Enfermagem*), MEDLINE (Medical Literature Analysis and Retrieval System Online), and TESESENF (*Base de Teses e Dissertações em Enfermagem*). The following DeCS/MeSH descriptors were established to check the quality of scientific publications: Professional Skills, Education and Nursing. These descriptors were combined using the Boolean connector AND. As a strategy to gather the articles, the first descriptor was crossed with the second, and subsequently, the descriptors mentioned earlier were crossed with the third one.

The inclusion criteria established for this review

include: (1) articles published from 2005 to October 2011, (2) articles in Portuguese, English and Spanish, (3) full texts, (4) articles available online for free, focused on the study object. Opinion articles, editorials, dissertations, and theses were excluded.

The selected articles were analyzed by two reviewers who judiciously and independently read the resumo/resumen/abstract of the relevant materials in order to identify articles fulfilling the inclusion criteria established for this review.

Thus, the final sample of this systematic review included 11 articles. Subsequently, all articles were read in full to identify and complete the data collection instrument that includes the following items: a) Subjects involved, type of study and analysis, b) Identification of the journals; and c) the research areas of interest. From that perspective, the designed instrument was used to conduct the analysis and qualitative assessment of the articles.

RESULTS AND DISCUSSION

With respect to selected articles, the articles were identified at the first crossing, with 59 in LILACS, 01 in MEDLINE and 01 in TESESENF. At the second crossing, 03 articles were found in DBENF. Thus, a total of 64 articles were identified.

All articles that did not address the proposed theme, whose full version was not available and that were repeated in more than one database were excluded from this review ($n = 51$ at the first crossing, and $n = 1$ at the second crossing), thereby forming a sample of ($n = 11$) articles. The articles selection flow is shown in Figure 1.

With regard to characterization of selected articles, Table 1 shows the study distribution by authors, objectives, data collection techniques, final considerations, and journal identification. Overall, it should be noted that the publications that address the teaching of professional skills are predominantly found in nursing journals (99.9%), followed by education journals (0.1%). Selected articles showed that researches with this theme were mostly conducted in Brazil (81.8%).

A total of 63.6% of the selected studies are original articles that used the following data collection techniques: interview (18.2%), focal group (9.1%), questionnaire (18.2%), direct observation (9.1%), and documentary source (27.8%). In relation to data collection, one can still observe that 9.1% of the articles used three different techniques to obtain the necessary information. It was found that 36.7% of the articles were literature review studies.

Professional skills in the development of a political-pedagogical project were the study object in most articles, and are present in 06 objectives (54.5%).

Furthermore, 05 (45.5%) articles among those selected address professional skills as a tool to be developed by

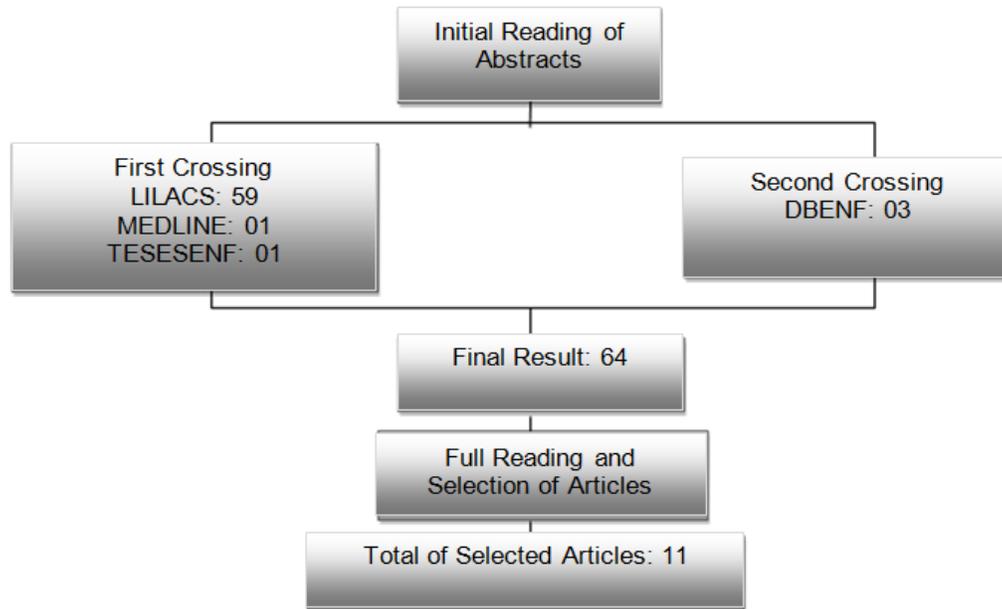


Figure 1. Article selection flow chart.

the students during their academic education as a means of ensuring their professional performance in the nursing assistance and/or management area.

Most studies on the teaching of professional skills found that due to the changes occurring in the labor market and healthcare sector this theme has been constantly discussed by teachers in undergraduate nursing course both in the preparation of the Political Pedagogical Project (PPP) and as a tool developed during the student education (Resck and Gomes, 2008; Preheim *et al.*, 2013). However, when analyzing the results shown in Table 1 on the scientific publications addressing professional skills, it can be noticed that teachers are more focused on developing the PPP in order to structure his theory syllabus, reinforcing the importance of developing in classroom the skills required by the Curriculum Guidelines for Undergraduate Nursing Course. Therefore, the use of professional skills as a tool developed during the student education still proves to be undervalued by teachers.

An interaction between these two views on the use of professional skills seems to be something still slightly distant from teaching reality, becoming a bureaucratic discussion where professional growth is still in the background. However, the articles show that in general teachers have tried to develop this theme both in their theoretical classes and practical experiences (Madeira and Lima, 2007).

But it was found that many students still have difficulty in developing in practice what the theoretical concepts taught (Mendes *et al.*, 2008). Thus, it can be undoubtedly stated that there is a need to enhance the pedagogical

practices of Higher Education Institutions so that abilities and skills be developed in these undergraduates.

For teachers, it is still somewhat complex to make undergraduates understand the teaching of professional skills; they realize the importance and responsibility of teaching this subject. The difficulties and uncertainties felt by teachers at the time of teaching the skills that, at first, are shown to be something subjective may interfere with the student's teaching-learning process. This may represent a strong impact on the development of the nurse new professional profile expected by organizations in the healthcare sector. Thus, it is possible to understand why the discussion on this topic has been increasingly focusing on the preparation of PPP instead of being focused on student learning.

It is important to emphasize that teachers consider themselves as a mediating element in the teaching process, and believe that in general undergraduates can absorb the contents proposed in the amendments of curricular subjects (Tai and Chung, 2008). Teachers believe that they are facilitators of the understanding of professional skills for students, preparing them to responsibly and efficiently perform their management activities in organizations.

Another important feature to be mentioned is that teachers claim that the undergraduates understand the significance of teaching general skills (Fontes *et al.* 2010; Brasil. Ministério da Saúde. Portaria GM/MS n.1.996, de 20 de agosto de 2007; Mendes *et al.*, 2008; Cogo *et al.* 2006), and point out its relevance to improve their professional performance in organizations. This fact is relevant considering the conditions under which the

Table 1. Characterization of selected articles.

Authors	Data collection techniques	Objectives	Final Considerations	Journal identification	Country
Madeira and Lima	Semi-structured interviews	To investigate the teaching knowledge supporting the pedagogical practice of nurses-teachers, aiming at understanding the meaning of this social practice.	The teaching knowledge and pedagogical practice positively affect the consolidation of the process of becoming a teacher by profession in the context of teaching in nursing courses.	Rev. Bras. Enferm	Brazil
Fontes et al.	Likert questionnaire	To investigate the skills, knowledge and abilities of undergraduates to apply the nursing process.	It is concluded that it is necessary to have skills, knowledge, and abilities to apply the steps of the nursing process.	Rev. Rene. Fortaleza,	Brazil
Witt and Almeida,	Literature review	Theoretically reflect on the theme of professional skills in order to contribute to the development of political-pedagogical projects for the teaching of health and, in particular, nursing.	It is necessary to reflect on our clients' needs and the skills acquired by health professionals when developing political-pedagogical projects in nursing.	Rev Bras Enferm	Brazil
Ciampone and Kurganct	Documentary source	To identify the conceptual, methodological and pedagogical bases of teaching of Nursing Administration in Brazilian Nursing Schools; to identify and characterize the managerial skills developed in this discipline.	Although advances are occurring in the conceptual bases, the generation of managerial skills is not made explicit in the plans and pedagogical proposals are traditional.	Rev Bras Enferm	Brazil
Lucchese and Barros	Literature review	To make nursing teachers to reflect on their practice by approaching one of the current pedagogical trends based on the constructivism: pedagogy of skills.	Of note, working skills involves breaking the traditional models, both in the act of learning and teaching, and teacher education becomes the key point of the entire process.	Acta Paul Enferm	Brazil
Resck and Gomes	Focal group	To analyze the requirements and expectations arising from the managerial practices setting against the Pedagogical Project and the strategies favorable or unfavorable to transformative praxis	Nursing education and praxis must go through the working processes in the scope of care, management, education, and scientific research, building paths for the development of skills, with greater teaching-service interaction, according to the current National Curriculum Guidelines.	Rev Latino-am Enfermagem	Brazil
Lourenção and Benito	Documentary source	To identify the integration of managerial skills in nursing education	This study enabled the reflection on the responsibility of educating competent professionals and make them enter the labor market to perform health management actions	Rev Bras Enferm	Brazil

Table 1. Contd.

Dias, HCVB Paiva, KCM	Documentary source, direct observation and a questionnaire	To describe and analyze how the configuration of professional and managerial skills of nursing students varied before and after they attended two management subjects in the nursing course.	The need to improve pedagogical practices developed at Higher Education Institutions related to that role was observed, as well as the roles of coordinator and director, in view of the (small) changes perceived by students about such roles	Rev. Min. Enferm	Brazil
Jara Concha, Stiepovic Bertoni	Literature review	Critically analyze the components of a skills curriculum focusing on a master's nursing program, as well as their implications in the employment and academic setting.	When designing a competence-based curriculum for a graduate program, internal and external relevance, coordination with training of different action levels, different knowledge dimensions and, more importantly, the team work of those involved in graduate education should be considered.	Investigación y Educación en Enfermería	Chile
Román, CAL	Literature review	To specify the problems of general nursing, professionals, discussing their significance for the curriculum, skill development and difference with the concept of nursing diagnosis.	When providing health care, nurses must develop abilities based on personal, interpersonal, social, clinical performance, technical, intellectual and behavioral skills which enable excellence. Nursing abilities are diverse and are found in all activity-related healthcare areas.	Rev Cubana Enfermería	Cuba
Braga EM, Silva MJP.	Interview	To propose methodological bases for monitoring the progression of communication skills in nursing students.	The article has shown that acquiring interpersonal communication skills is fundamental to the education of nurses, and this should be based on a straightforward teacher-student relationship.	Rev Esc Enferm USP	Brazil

teaching of professional skills have been developed at Higher Education Institutions: on the one hand, there are the teachers who express their difficulty in communicating to students something that seems to be subjective, and showing their high level of interest in making use of the skills directed to a more bureaucratic aspect; on the other hand, there are the organizations that require competent professionals to perform their tasks, thus adding economic value to the company and assuring its competitive advantage.

CONCLUSIONS

Through this critical and reflexive analysis, it was possible to develop a new perspective on the teachers and students point of view on teaching professional skills and comparing it with theoretical references on the skills

that should be developed during the teaching-learning process, expanding the perception as to how they should be developed to cause changes in the nurse professional profile.

It is clear that the proposed development of the new professional profile has been the subject of ongoing discussions between the different social actors (teacher-student), and that all involved parties believe in the importance of teaching professional skills for the success of the actions performed by nurses.

It is important to emphasize that by promoting the development of new nursing practices, the teaching of professional skills also contributes to the process of work transformation in healthcare sector. We do not have the purpose of exhausting all discussions on this theme, considering how complex the teaching of skills is. But it is believed that it is important to conduct discussions in education, society and nursing on professional skills

developed on the nurse, and the challenges faced by teachers when teaching this theme.

Therefore, the results allow us to claim that it is necessary to develop critical/reflexive thinking and attitudes to allow us to rethink about teaching practices, enabling a better interaction between the proposed Political Pedagogical Project and experience in the classroom, thus allowing in this setting adequate preparation of nurses so they can meet the needs of the healthcare labor market.

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