Cogitare Enfermagem

REVIEW

EXPERIENTIAL LEARNING AND NATIONAL CURRICULUM GUIDELINES FOR NURSING UNDERGRADUATE COURSES: INTEGRATIVE REVIEW OF THE LITERATURE*

Paula Bresolin[1], Jussara Gue Martini[2], Daniele Delacanal Lazzari[3], Isis da Silva Galindo[4], Jeferson Rodrigues[5], Maria Helena Pires Araújo Barbosa[6]

ABSTRACT

Objective: The present study aims to gain insight on the contributions of experiential learning to the achievement of the general competencies provided for in the National Curriculum Guidelines for Nursing Undergraduate Courses.

Method: An integrative review was conducted from January 2013 to August 2017.

Results: For the systematization of the discussion of the results, the presentation of the 43 selected articles was based on the general competencies set out in the National Curriculum Guidelines.

Conclusion: Experiential learning as a teaching and learning strategy in nursing and its contributions are consistent with the general competencies and skills set out in the National Curriculum Guidelines. The Health Care skill was the most covered skill in all the studies. It is noteworthy that experiential learning is maximized when it reaches critical-reflective thinking in vocational training. The simulation addressed in the selected articles was an effective teaching methodology for nursing students.

DESCRIPTORS: Nursing Education, Competency-Based Education, Nursing, Teaching, Learning.

HOW TO REFERENCE THIS ARTICLE:
Bresolin P, Martini JG, Lazzari DD, Galindo I da S, Rodrigues J, Barbosa MHPA. Experiential learning and national curriculum guidelines for nursing undergraduate courses: integrative review of the literature. Cogitare enferm. [Internet]. 2019 [access "insert day, monh and year"]; 24. Available at: http://dx.doi.org/10.5380/ce.v24i0.59024.

[1]Nurse. Msc in Nursing. Universidade Federal de Santa Catarina. Florianópolis, SC, Brazil.
[2]Nurse. PhD, Nursing. Nursing Professor from Universidade Federal de Santa Catarina. Florianópolis, SC, Brazil.
[3]Nurse. PhD, Nursing. Nursing Professor from Universidade Federal de Santa Catarina. Florianópolis, SC, Brazil.
[4]Nurse, Msc in Nursing. Universidade Federal de Santa Catarina. Florianópolis, SC, Brazil.
[5]Nurse. PhD, Nursing. Nursing Professor from Universidade Federal de Santa Catarina. Florianópolis, SC, Brazil.
[6]Nurse. PhD Student in Nursing. Professor from Universidade Federal do Pará. Altamira, PA, Brazil.

REVISÃO / REVISIÓN

APRENDIZAGEM EXPERIENCIAL E DIRETRIZES CURRICULARES NACIONAIS DE ENFERMAGEM: REVISÃO INTEGRATIVA DE LITERATURA

RESUMO

Objetivo: este estudo tem como objetivo conhecer as contribuições da aprendizagem experiencial para a conquista das competências gerais previstas nas Diretrizes Curriculares Nacionais de Enfermagem.
Método: realizou-se revisão integrativa, no período de janeiro de 2013 a agosto de 2017.
Resultados: para sistematizar a discussão dos resultados, os 43 artigos selecionados foram apresentados a partir das competências gerais definidas nas Diretrizes Curriculares Nacionais.
Conclusão: Evidenciou-se que a aprendizagem experiencial como estratégia de ensino e aprendizagem na enfermagem e suas contribuições alcançam as competências e habilidades gerais definidas pelas Diretrizes Curriculares Nacionais. A habilidade de Atenção à saúde foi a mais abordada nos estudos. Ressalta-se que a aprendizagem experiencial é potencializada quando atinge pensamento crítico-reflexivo na formação profissional. A simulação, abordada nos artigos selecionados, foi a metodologia efetiva de ensino para estudantes de enfermagem.

DESCRITORES: Educação em Enfermagem, Educação Baseada em Competências, Enfermagem, Ensino, Aprendizagem.

APRENDIZAJE EXPERIENCIAL Y DIRECTRICES CURRICULARES NACIONALES DE ENFERMERÍA: REVISIÓN INTEGRATIVA DE LITERATURA

RESUMEN:

Objetivo: El objetivo del estudio apunta a conocer los aportes del aprendizaje experiencial a la consecución de las competencias generales previstas en las Directrices Curriculares Nacionales de Enfermería.
Método: Se efectuó una revisión integrativa de literatura, entre enero de 2013 y agosto de 2017.
Resultados: Para sistematizar la discusión de los resultados, los 43 artículos seleccionados fueron presentados en función de las competencias generales definidas en las Directrices Curriculares Nacionales.
Conclusión: Se evidenció que el aprendizaje experiencial, como estrategia de enseñanza y aprendizaje en enfermería y sus contribuciones, satisfacen las competencias y habilidades generales definidas por las Directrices Curriculares Nacionales. La habilidad de Atención de Salud fue la más abordada en los estudios. Se resalta que el aprendizaje experiencial se potencia cuanto propicia el pensamiento crítico-reflexivo en la formación profesional. La simulación, abordada en los artículos seleccionados, fue la metodología de enseñanza más efectiva para los estudiantes de enfermería.

DESCRIPTORES: Educación en Enfermería; Educación Basada en Competencias; Enfermería; Enseñanza; Aprendizaje.

Paula Bresolin | Jussara Gue Martini | Daniele Delacanal Lazzari | Isis da Silva Galindo | Jeferson Rodrigues | Maria Helena Pires Araújo Barbosa

INTRODUCTION

Higher education in Brazil, particularly health education, has undergone significant changes throughout history to keep up with the transformations of Brazilian society. Thus, the Ministry of Health and the Ministry of Education engaged in a joined effort to create the National Curriculum Guidelines for Undergraduate Courses (DCN).

Regarding the Nursing course, in particular, the DCN advocate the principles, foundations, conditions and procedures of professional training and describe the exclusive competencies and skills of nurses in health care, in order to provide prevention, promotion, protection and health rehabilitation actions. According to the guidelines, the training of nurses aims to provide this professional with the necessary knowledge to exercise the following competencies and general skills: health care, decision-making, communication, leadership and permanent education [1].

Nursing students or the future nursing professionals are expected to be able to assist in the amelioration of the precarious health conditions faced by the Brazilian population, by having a critical attitude towards the country's social, political and economic context. They are agents of change that recognize the role of nursing practice in the social context[1].

Nursing education encompasses educational aspects, which include theoretical, theoretical-practical and clinical teaching aspects [2]. Both undergraduate students and nursing workers as learning subjects should be considered in this training process, in order to contribute to the improvement of the current Brazilian health care system [3].

In view of the aforementioned, the teaching methods must achieve the desired academic and professional profile and, thus, we seek to understand and improve the teaching and learning process in the search for pedagogical strategies that include different ways of learning, taking into consideration the individualities and learning characteristics[4].

Theorist David A. Kolb is focused on the knowledge of how information is grasped and assimilated, how problems are solved and decisions made. Thus, Kolb devised a model that was called experiential, through which he attempted to know the learning process based on his own experience. One of his first statements is derived from this first argument: "If organizations and institutions focused on the learning styles of the individuals, they could improve and increase their ability to learn" [5].

According to Kolb, there is a cycle with four learning strategies. Concrete Experience emphasizes the personal experiences and feelings involved in the learning situation. In Reflective Observation, learners believe they can solve their problems through their thoughts and feelings and emphasizing patience, careful judgment, and the ability to understand ideas from a various points of view. In Abstract Conceptualization, understanding is based on the intellectual understanding of a situation, with a high level of abstraction. Finally, Active Experimentation, which involves active learning. Thus, the Kolb Learning Cycle is a tool that uses experiences to contribute to the individual's development, since they have a specific learning objective[6].

The present study aimed to gain insight on the contributions of experiential learning to the attainment of nurses' exclusive competences and skills related to health care, and provided for in the National Curriculum Guidelines for nursing undergraduate courses.

METHOD

The method used was integrative literature review consisting of six steps: problem identification, establishment of inclusion/exclusion criteria (sample selection), definition of information to be extracted from the selected articles, analysis of information, interpretation

of the results and presentation of the review [7].

The study began after a search on the databases VHL (BIREME - Virtual Health Library), PubMed NCBI, Scopus, Web of Science and ERIC (Education Resources Information Center), based on the following guiding question: What are the contributions of experiential learning to nursing education? Inclusion criteria were full-text articles available online in full text in Portuguese, Spanish and English, published from January 2013 to August 2017. Editorials, letters, opinion pieces, comments and previous notes, as well as publications duplicated in more than one database, theses, dissertations and manuals were excluded.

Data analysis and interpretation were performed after the translation and reading of the articles, according to the following steps: 1) identification of the hypothesis or guiding question - elaboration of a problem by the researcher in a clear and objective manner, followed by the search for descriptors and/or keywords; 2) sampling selection - determination of inclusion or exclusion criteria, establishing transparency to provide depth, quality and reliability in selection; 3) categorization of the studies - definition of the extraction of information from the reviewed articles in order to summarize and organize them; 4) Evaluation of the studies - critical analysis of the data extracted; 5) discussion and interpretation of the results - comparison and justification of the main results with theoretical knowledge and evaluation as to their applicability; 6) presentation of the integrative review and synthesis of knowledge - succinct and systematized information of each reviewed article, to demonstrate the evidence found [7].

Data was collected in August 2017. The materials extracted from the databases were exported to EndNote: year of publication, title, authors, journal, country of origin of the study, type/approach of study and main aspects or results. Regarding ethical aspects, copyrights were respected, and content was copied exactly as it was originally printed.

The following keywords and/or descriptors were used in the search strategy in the databases: "Pupil Nurses" OR "Student, Nursing" OR "Nurses, Pupil" OR "Nurse, Pupil" OR "Pupil Nurse" OR "Nursing Student" OR "Nursing Students" OR "Nursing Education" OR "Educations, Nursing" OR "Nursing Educations" Or nursing AND "Problem-Based Learning" OR "Experiential Learning" OR "Learning, Experiential" OR Kolb OR "David Kolb".

This search resulted in 2,315 articles. Of these, 980 were repeated, 772 used different learning methods, 223 did not concern nursing studies, 233 did not expose the learning methodologies, 11 were editorials, and 53 did not give access to the full-text articles. Thus, 43 articles were selected, according to Table 1, which were later discussed considering the general competencies and skills contained in the DCN.

Table 1 – Publications distributed by quantity, according to the electronic bases searched. Florianópolis, SC, Brazil, 2017

Electronic Database	Number of articles found	Number of articles selected
BVS English, Portuguese and Spanish)	864	16
ERIC	20	1
PUBMED	677	8
SCOPUS	525	9
WEB OF SCIENCE	229	9
Total	2315	43

Paula Bresolin | Jussara Gue Martini | Daniele Delacanal Lazzari | Isis da Silva Galindo | Jeferson Rodrigues | Maria Helena Pires Araújo Barbosa

RESULTS

Of the 43 articles selected, 36 address issues related to health care, 11 address decision making, 18 address communication aspects, nine address leadership, four discuss training for administration and management, and 17 address continuing education. Subsequently, the elements presented by the articles analyzed in each of the categories were discussed. The categories considered for this item are health care, decision making, communication, leadership, and permanent education.

Chart 1 summarizes the information concerning the 43 articles selected for this study, including title, authors, year of publication and location, type of study, and participants.

Chart 1 – Publications distributed by variable of analysis. Florianópolis, SC, Brazil, 2017

Title	Authors/Year/Location	Type of Study	Participants
The evaluation of simulation market in nursing education and the determination of learning style of students	Celik Y, Ceylantekin Y, Kilic I. 2017 Turkey	Quantitative Descriptive	Nursing Students
Ethical experiential learning in medical, nursing and allied health education: a narrative review	Grace S, Innes E, Patton N, Stockhausen L. 2017 Australia	Narrative literature review	Articles published between 2000 and 2015.
Nursing students' experiential learning processes using an online 3D simulation game	Koivisto J-M, Niemi H, Multisilta J, Eriksson E. 2017 Finland	Qualitative – interviews with focus group	Nursing Students
Analysis of student reflections of experiential learning in nursing health policy courses	McGuire M, Goldstein C, Claywell L, Patton R. 2017 USA	Qualitative - retrospective.	Nursing Master's and Doctoral students
Implementation of a state legislative fellowship for doctor of nursing practice students	Crowder SJ, Ironside PM, Cangany M, Roddy WS. 2016 USA	Experience Report	Nursing Doctors
Perceptions of graduating health professional students of their interprofessional education experiences during pre-licensure education	Doucet S, Loney E, Brown PA. 2016 Canada	Qualitative Descriptive	Nursing, Medicine, Pharmacy and Physiotherapy Students
The impact of a simulated intervention on attitudes of undergraduate nursing and medical students towards end of life care provision	Lewis C, Reid J, McLernon Z, Ingham R, Traynor M. 2016 United Kingdom	Quantitative. Quasi experimental	Nursing Students
Service learning in undergraduate nursing education: strategies to facilitate meaningful reflection	Schmidt NA, Brown JM. 2016 Chile	Reflexion	Nursing Students
New ways of seeing: Nursing students experiences of a pilot service learning program in Australia.	Townsend L, Gray J, Forber J. 2016 Australia	Qualitative. Descriptive	Nursing Students

Sculpting with people -An experiential learning technique	Andersen HE, Larsen KV. 2015 Denmark	Qualitative. Descriptive	Nursing Students
The use and application of drama in nursing education - an integrative literature review of the literature	Arveklev SH, Wigert H, Berg L, Burton B, Lepp M. 2015 Denmark	Qualitative. Integrative Review	Articles published between 2003 and 2014.
Experiential learning: using virtual simulation in an online RN-to-BSN program	Breen H, Jones M. 2015 USA	Qualitative	Nursing Students
Effects of an experiential learning simulation design on clinical nursing judgment development	Chmil JV, Turk M, Adamson K, Larew C. 2015 USA	Quantitative Quasi-Experimental	Nursing Students
Experiential learning in nursing consultation education via clinical simulation with actors: action research	De Oliveira SN, Prado MLD, Kempfer SS, Martini JG, Caravaca-Morera JA, Bernardi MC. 2015 Brazil	Research-Action	Nursing Students
Vaccination learning experiences of nursing students: a grounded theory study	Ildarabadi E, Karimi Moonaghi H, Heydari A,Taghipour A, Abdollahimohammad A. 2015 Iran	Qualitative. Grounded Theory (GT)	Nursing Students
Development of a post-simulation debriefing intervention to prepare nurses and nursing students to care for deteriorating patients	Lavoie P, Pepin J, Cossette S. 2015 Canada	Literature Review	Articles published between 2002 and 2012.
Enhancing empathy in undergraduate nursing students: An experiential ostomate simulation	Maruca AT, Díaz DA, Kuhnly JE, Jeffries PR. 2015 USA	Quantitative .Experimental	Nursing Students
Preparing students for clinical placements: The student's perspective.	McNamara N. 2015 New Zealand	Qualitative. Quantitative. Descrptive	Nursing Students
How learning styles and preferences of first-year nursing and midwifery students change	Mitchell EKL, James S, D'Amore A. 2015 Australia	Quantitative Cross-sectional	Nursing Students
A pedagogia por trás da experiência clínica simulada: uma percepção de estudantes de enfermagem	Nunes de Oliveira S, do Prado ML, Silveira Kempfer S, Waterkemper R, Caravaca Morera JA, Bernardi MC. 2015 Brazil	Qualitative Research-Action	Nursing Students
La enseñanza de la enfermeira con simuladores, consideraciones teórico-pedagógicas para perfilar un modelo didáctico	Piña-Jiménez I, Amador-Aguilar R. 2015 Mexico	Reflexion	
Identification of the learning styles and "On-the-Job" learning methods implemented by nurses for promoting their professional knowledge and skills	Rassin M, Kurzweil Y, Maoz Y. 2015 Israel	Quantitative Descriptive	Nurses

Learning style impact on knowledge gains in human patient simulation	Shinnick MA, Woo MA. 2015 USA	Quantitative Cohort Study	Nursing Students
Experiential learning not enough for organ procurement surgery: implications for perioperative nursing education	Smith Z, Leslie G, Wynaden D. 2015 Australia	Qualitative Grounded Theory (GT)	Nurses
Learning end-of-life care within a constructivist model: Undergraduate nursing students' experiences	Van der Wath AE, Du Toit PH. 2015 South Africa	Qualitative Descriptive	Nursing Students
Utilization of experiential learning, and the learning outcomes model reduces RN orientation time by more than 35%.	Zigmont JJ, Wade A, Edwards T, Hayes K, Mitchell J, Oocumma N. 2015 USA	Qualitative Quantitative	Nurses
An evaluation of advanced simulation in nursing: a mixed-method study	Chiang VC, Chan SS. 2014 China	Qualitative Quantitative	Nursing Students
Teaching delegation to RN students	Dai L, Turner K, Anderson RA, Mueller C, McConnell ES, Corazzini KN 2014 USA	Study case	Nursing Students
An evaluation of mental health simulation with standardized patients	Doolen J, Giddings M, Johnson M, Guizado de Nathan G, O Badia L. 2014 USA	Case study	Nursing Students
The role of critical thinking skills and learning styles of university students in their academic performance	Ghazivakili Z, Norouzi Nia R, Panahi F, Karimi M, Gholsorkhi H, Ahmadi Z. 2014 USA	Quantitative Cross correlation study.	Nursing, Medicine, Obstetrics and Health and Emergency Medical Students
Nursing students' experiences of involvement in clinical research: an exploratory study	Henoch I, Jakobsson Ung E, Ozanne A, Falk H, Falk K, Kenne Sarenmalm E, et al. 2014 Sweden	Quantitative Qualitative. Descriptive Cross-sectional	Nursing Students
Engaging the learner by bridging the gap between theory and clinical competence: the impact of concept mapping and simulation as innovative strategies for nurse-sensitive outcome indicators	Jamison T, Lis GA. 2014 USA	Reflexion	Nursing Students and Nurses.
Mock board hearing: giving students new insights through experiential learning	Jordan SD, Collins-Yoder AS. 2014 USA	Experiênce report	Nursing Students
Development and evaluation of a learner-centered educational summer camp program on soft skills for baccalaureate nursing students.	Lau Y, Wang W. 2014 China	Qualitativo Quantitativo Focal group	Nursing Students
Simulation-based interprofessional education guided by Kolb's experiential learning theory	Poore JA, Cullen DL, Schaar GL. 2014 USA	Literature Review	Nursing Students

A virtual pregnancy for pre-licensure nursing students: nine months up and close	Weideman YL, Culleiton AL. 2014 USA	Qualitative	Nursing Students
Self-directed learning readiness and learning styles among Saudi undergraduate nursing students	El-Gilany A-H, Abusaad FES. 2013 Saudi Arabia	Quantitative Descriptive Cross-sectional	Nursing Students
The perceived benefits of a virtual community effects of learning style, race, ethnicity, and frequency of use on nursing students.	Fogg L, Carlson-Sabelli L, Carlson K, Giddens J. 2013 USA	Qualitative	Nursing Students
Nursing student anxiety as a context for teaching/learning.	Hutchinson TL, Janiszewski Goodin H. 2013 USA	Reflexion	Nursing Students
Improving collaboration among medical, nursing and respiratory therapy students through interprofessional simulation.	King AEA, Conrad M, Ahmed RA. 2013 USA	Qualitative	Nursing and Medical Students
Nursing student voices: reflections on an international service learning experience.	Main EE, Garrett-Wright D, Kerby M. 2013 Australia	Qualitative	Nursing undergraduate and graduate students
A novel approach to improve hand hygiene compliance of student nurses.	Salmon S, Wang XB, Seetoh T, Lee SY, Fisher DA. 2013 Singapore	Quantitative Exploratory	Nursing Students
An innovative tool for experiential learning of nursing quality and safety competencies	St Onge J, Hodges T, McBride M, Parnell R. 2013 USA	Experience report	Nursing Students

Regarding the year of publication, most studies were published in 2015: 17 articles, compared to 10 articles published in the previous year (2014) and seven articles in 2013. There has been a decrease in the number of studies on the subject recently, since in 2017 and 2016 only four and five articles, respectively, were published. The country with the largest number of publications is the United States (18 articles), followed by Australia, with five articles. The other 20 publications included in this study come from 16 countries.

Although Brazil is not the country with the largest number of publications, the articles examined focus on issues that may be related to training in Brazilian courses, including aspects similar to those presented in the DCN.

DISCUSSION

Health care

Nursing professionals' education processes should encourage them to think and act critically, both individually and collectively in a given society. These processes should contribute to ensure that professional performance is in line with public health policies, including the National Health Promotion Policy, whose objective is the implementation of

Paula Bresolin | Jussara Gue Martini | Daniele Delacanal Lazzari | Isis da Silva Galindo | Jeferson Rodrigues | Maria Helena Pires Araújo Barbosa

health promotion actions targeted to the community, stressing quality of life, reduction of vulnerability and risks to the population's health, with emphasis on primary care[8].

Professional training focused on health care develops prevention, promotion, protection and rehabilitation of health, and was addressed in studies on end-of-life care [9-10], mental health [10-12], heart failure [13], vaccination [14], physical examination/semiology [15], pregnancy [16-17], diabetes [18], respiratory therapy [19] and perioperative care [20]. Students were told to perform their activities so as to ensure high quality care in accordance with ethical/bioethical principles, emphasizing the development of learning and promoting interdisciplinary work [19].

Simulation [18,21-24], was a teaching strategy that provided students with clinical skills and proved to be a method capable of promoting experiential learning through the recreation of a scenario. This provoked the student's epistemic curiosity, bringing the experience closer to the theoretical context, transforming it[16,18,22]. This teaching method is focused on the student and stimulates the development of various skills, favoring a teaching and learning process in a safe environment, for the student and with the patient[25].

Health care, which has been addressed in most studies, presented teaching through experiential learning. In teaching, the curricula materialized in content and in theoretical and theoretical-practical lessons and curricular internships, are increasingly aligned with the primary health care model. These challenges are posed by the learning process of teachers towards students, involving the work of health care professionals who, by experiencing the practices through experiential learning, promote the commitment and responsibility of all agents involved in the learning process[26].

Decision making

In the analyzed articles, decision making was achieved in two ways: through critical thinking [12,27-29] and based on clinical judgment [30-35]. According to the authors, it is necessary to stimulate the reflexive act in order to learn to think critically, which means developing the ability of observation, critical analysis, autonomous thinking, broaden horizons, actively participate in society's transformations, seek to interact with reality[36].

One study conducted an experiential learning activity of clinical reasoning in which students were asked to use the virtual simulation model in an online program, to meet the needs of a family member in their virtual community, as an opportunity to show decision making in the definition of nursing care[12]. Other studies used experiential learning through online games for problem solving and decision making [22,37]. The results of the studies also emphasize the search for evidence-based knowledge to better guide decision making in clinical practice [12,22,37].

In 2015, the Ministry of Health launched the booklet Evidence Synthesis for Health Policies, encouraging the use of scientific evidence in decision making. It aimed to improve the use of resources, seeking greater effectiveness in health promotion, prevention and care. In this booklet, the scarce use of scientific evidence is attributed to different factors, from difficulties faced by decision makers in interpreting, adapting and applying scientific knowledge to the low level of interaction between politics and research. Therefore, to improve the use of scientific evidence in the elaboration and implementation of health policies, the processes of translation and dissemination of knowledge should be included, always taking into consideration the related institutional and social contexts, as well as equity aspects [38].

The clinical judgment presented in the studies [30-31] was influenced by the attitudes of nursing students and professionals, prejudices, philosophical perspectives and ability to think critically[22,27-28]. Clinical reasoning requires that the individuals master higher-order thinking skills for the development of critical and reflective thinking in professional nursing practice [12,35].

In most studies on this category, the challenges were posed in the simulation strategy [27,29,31-33,35], role play [22,34], drama [28] and virtual community [12], through experiential learning, which occurred individually and in interactions between students and professionals, allowing the construction, sharing and discussion of clinical cases, enabling reflection for decision making.

Communication

Communication enables interactions between individuals, which may be verbal or non-verbal [1]. Rather than interaction, communication is a key element in ensuring the quality of health care among people, families and the community. In the articles analyzed here, the communication approach comprised two aspects: interprofessional communication and communication between students/professionals and individuals/families [9,15,39-40].

Interprofessional communication is related to the interaction between professionals and/or students from different areas. Intra and intergroup communication is capable of transforming the modes of relationship and communication between the subjects involved in health production processes [41]. Thus, communication can improve health care by highlighting the need for collaboration and co-responsibility [42].

The strategies for approaching communication between students/professionals and individuals/families, using experiential learning, identified in the studies, were essentially: simulation [18,25,43], service learning [14,21-22,35,40] and role play [22,34]. Such learning strategies have brought benefits such as improved communication between students/ professionals and clients and family members; increased reliance of patients' families on nursing practices performed by students; overcoming of fear and anxiety in the first contact with clients [9,14,18,29,35,40].

Thus, given the challenge of effective communication in health services, experiential learning strategies can contribute to improve the training of nursing professionals and, consequently, of nursing practices.

Leadership

Leadership is an indispensable competence for the professional nurses' practice in society, and it is necessary for the management of the work process and the achievement of common goals by the health care team [44]. Leadership, which is set out in the National Curriculum Guidelines, is related to multiprofessional teamwork, highlighting commitment, responsibility, empathy, decision-making ability, communication and effective management [1].

The selected articles address the leadership skill, which is useful to practical experiential learning strategies capable of improving leadership involving the interprofessional team [19,39,43,45]. These relationships are important for the insertion of future nursing professionals in their workplace, so that they are able to take actions focused on the well-being of the community. They also imply the distribution of power by nurses.

The acquisition of power by nurses and other workers is a group phenomenon in leadership, which involves the social influence of an individual over others. In this regard, a study [10] addressed leadership in the activity of delegation and supervision in nurses' practice, highlighting group work, emphasizing and valuing individual skills, observations, team power, so that each member recognizes the purpose and meaning of their work. It can be shown to nurses that they can play this new, future-oriented, more flexible, dynamic role of leader [12,46-47].

Some articles examined reveal that it is no longer possible to deny the importance of the leadership function for nurses' performance. Exercised under the guidance of new standards and values, this competence may provide to health organizations, nursing services, professional class and especially the client, benefits that favor safe and quality

care in constant human interaction[19,39,43,45]. The importance of an empathic relationship was addressed in an article that used experiential learning, through simulation with ostomy patients, to teach students how to perform nursing care while maintaining an empathetic relationship with their patients[48].

Administration and management

According to the DCN, when it comes to administration and management, professionals should be able to take initiative, manage human and material resources, as well as lead teams, among other skills[1]. For this reason, experiential learning can lead to good administration and management and relate to other general competencies and skills such as leadership, decision making, and communication.

The activities that involve administration and management in nursing are present in the work process of nurses and therefore the development of such skills is essential in the training of these professionals. Therefore, nursing professionals must have knowledge on people management, planning, interaction between individuals and decision making[49].

In the analyzed articles, the competence of administration and management was examined from the perspective of material and human resource management, as well as health action planning. In addition, the experiential learning strategies used were simulation and continuing/permanent education [12,14,28,47].

Permanent Education

Permanent education is the individuals' ability to learn continuously, both during their training and professional practice[1]. In the analyzed articles, experiential learning was used to train students at undergraduate and postgraduate levels, service learning, as well as to integrate experiences between students and/or professionals [11,39,46,40,50-51].

Within the Unified Health System (SUS), Permanent Education emphasizes that individuals must be active and able to learn, learn to be, learn to live and learn to do [4]. These pillars of education were approached by studies on learning to learn [12,18,51] and learning to do [19,21,35,45-46,50,52-53] and by the Kolb Learning Cycle [54-55].

Given the complexity of education pillars and the diversity presented in Kolb's learning styles [5], service learning can be a strategy for optimizing nursing education. Studies in primary care with undergraduate nursing students showed that service learning can contribute to a better understanding of the social determinants of health in a community, to identify the impacts of nursing practices and to the development of a sense of social justice [19,40,46,50,53,56-57].

It should be noted that SUS scenarios are perceived as spaces for integration between teaching-service-community, favoring the formation of human resources, education and research development[4,8]. Moreover, the relationships established between the community, students, teachers and professionals bring mutual benefits to all those involved due to the bonds established [54], as well as the training of more qualified professionals in health care and knowledge production.

CONCLUSION

The integrative review made it possible to systematize the knowledge produced at the national and international levels, with the purpose of gaining insight on the contributions of experiential learning in nursing education, emphasizing simulation as the most approached methodology in the selected articles.

Experiential learning is a teaching and learning strategy in nursing, and its contributions are consistent with the general competencies and skills defined by the DCN. Health Care was the most covered skill in the studies, promoting the commitment and responsibility of all agents involved in learning; Decision Making was achieved through critical thinking and based on clinical judgments, and in order to learn to think critically it is necessary to stimulate the reflexive act .

Communication, in turn, comprised interprofessional communication and communication between students/professionals and individuals/families; Leadership has produced practical experiential learning strategies that can improve leadership involving the interprofessional team; In Administration and Management, learning was focused on the management of material and human resources, as well as the planning of health care actions by nursing professionals.

It should be noted that experiential learning favors an educational process in constant transformation, influenced by the social context of the individual, who is able to create and recreate his own knowledge through experience. Thus, the simulation made it possible to live experiences in several articles, in a safe and pedagogically planned way.

REFERENCES

1. Câmara de Educação Superior (BR). Resolução CNE/CES n. 3, de 7 de novembro de 2001. Institui diretrizes curriculares nacionais do curso de graduação em enfermagem. Diário Oficial da União, [Internet]. 2001 [access 20 nov 2017]. Available at: http://portal.mec.gov.br/cne/arquivos/pdf/CES03.pdf.

2. Cunha M, Ribeiro O, Vieira C, Pinto F, Alves L, Santos R, et al. Atitudes do enfermeiro em contexto de ensino clínico: uma revisão da literatura. Millenium. [Internet]. 2010 [access 02 set 2017]; 38(15). Available at: https://revistas.rcaap.pt/millenium/article/view/8262.

3. Ministério da Saúde (BR). Educação Permanente em Saúde: um movimento instituinte de novas práticas no Ministério da Saúde: Agenda 2014. [Internet]. Brasília: Ministério da Saúde, 2014 [access 20 nov 2017]. Available at: http://bvsms.saude.gov.br/bvs/publicacoes/educacao_permanente_saude_movimento_instituinte.pdf.

4. Santos EO dos, Nunes CK, Demarco D de A, Amestoy SC. Aprendizagem baseada em problemas no ensino da enfermagem. Rev. Contexto Saúde [Internet]. 2017 [access 02 set 2017]; 17(32). Available at: https://doi.org/10.21527/2176-7114.2017.32.55-66.

5. Kolb DA. Experiential learning: experience as the source of learning and development. Englewood Cliffs, NJ: Prentice Hall; 1984.

6. Pimentel A. A teoria da aprendizagem experiencial como alicerce de estudos sobre desenvolvimento profissional. Estud. psicol. [Internet]. 2007 [access 02 set 2017]; 12(2). Available at: http://dx.doi.org/10.1590/S1413-294X2007000200008.

7. Ganong LH. Integrative review of nursing research. Res Nurs Health. [Internet]. 1987. [access 02 set 2017]; 10(1). Available at: https://doi.org/10.1002/nur.4770100103.

8. Ministério da Saúde (BR). A proposta da CIT de mudança na Política Nacional de Atenção Básica - PNAB. Nota técnica N° 30/2017. [Internet]. Brasília, 24 de agosto de 2017. [access 02 set 2017]. Available at: http://www.cnm.org.br/cms/biblioteca/NT_30_2017_Proposta_CIT_PNAB.pdf.

9. Lewis C, Reid J, McLernon Z, Ingham R, Traynor M. The impact of a simulated intervention on attitudes of undergraduate nursing and medical students towards end of life care provision. Bmc Palliative Care [Internet]. 2016 [access 23 ago 2017]; 15. Available at: https://doi.org/10.1186/s12904-016-0143-2.

10. Wath Van der AE, Toit PH du. Learning end-of-life care within a constructivist model: Undergraduate nursing students' experiences. Curationis [Internet]. 2015 [access 23 ago 2017]; 38(2). Available at: https://

Paula Bresolin | Jussara Gue Martini | Daniele Delacanal Lazzari | Isis da Silva Galindo | Jeferson Rodrigues | Maria Helena Pires Araújo Barbosa

doi.org/10.4102/curationis.v38i2.1537.

11. Doolen J, Giddings M, Johnson M, Nathan GG de, Badia LO. An evaluation of mental health simulation with standardized patients. Int. J. Nurs. Educ. Scholarsh. [Internet]. 2014 [access 23 ago 2017]; 11. Available at: https://doi.org/10.1515/ijnes-2013-0075.

12. Breen H, Jones M. Experiential learning: using virtual simulation in an online RN-to-BSN program. J contin educ nurs. [Internet]. 2015 [access 23 ago 2017]; 46(1):27-33. Available at: https://doi.org/10.3928/00220124-20141120-02.

13. Shinnick MA, Woo MA. Learning style impact on knowledge gains in human patient simulation. Nurse educ today [Internet]. 2015 [access 23 ago 2017]; 35(1):63-7. Available at: https://doi.org/10.1016/j.nedt.2014.05.013.

14. Ildarabadi E, Karimi Moonaghi H, Heydari A, Taghipour A, Abdollahimohammad A. Vaccination learning experiences of nursing students: a grounded theory study. J Educ Eval Health Prof. [Internet]. 2015 [access 23 ago 2017]; 12. Available at: http://dx.doi.org/10.3352/jeehp.2015.12.29.

15. Grace S, Innes E, Patton N, Stockhausen L. Ethical experiential learning in medical, nursing and allied health education: A narrative review. Nurse educ today [Internet] 2017 [access 23 ago 2017]; 51:23-33. Available at: https://doi.org/10.1016/j.nedt.2016.12.024.

16. Ghazivakili Z, Norouzi Nia R, Panahi F, Karimi M, Gholsorkhi H, Ahmadi Z. The role of critical thinking skills and learning styles of university students in their academic performance. J adv med educ prof. [Internet]. 2014 [access 23 ago 2017]; 2(3):95-102. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4235550/pdf/jamp-2-95.pdf.

17. Weideman YL, Culleiton AL. A virtual pregnancy for pre-licensure nursing students: Nine months up and close. Nurs. educ. perspect. [Internet]. 2014 [access 23 ago 2017]; 35(6):410-4. Available at: http://dx.doi.org/10.5480/11-601.1.

18. Oliveira SN de, Prado ML do, Kempfer SS, Waterkemper R, Morera JAC, Bernardi MC. A pedagogia por trás da experiência clínica simulada: uma percepção de estudantes de enfermagem. Rev iberoam educ invest Enferm [Internet]. 2015 [access 23 ago 2017]; 5(3). Available at: http://www.enfermeria21.com/revistas/aladefe/articulo/173/.

19. King AEA, Conrad M, Ahmed RA. Improving collaboration among medical, nursing and respiratory therapy students through interprofessional simulation. J interprof care. [Internet]. 2013 [access 23 ago 2017]; 27(3):269-71. Available at: https://doi.org/10.3109/13561820.2012.730076.

20. Smith Z, Leslie G, Wynaden D. Experiential learning not enough for organ procurement surgery: implications for perioperative nursing education. Prog Transplant. [Internet]. 2015 [access 23 ago 2017]; 25(4):339-50. Available at: https://doi.org/10.7182/PIT2015689.

21. Jamison T, Lis GA. Engaging the learner by bridging the gap between theory and clinical competence: The impact of concept mapping and simulation as innovative strategies for nurse-sensitive outcome indicators. Crit. care nurs. clin. North Am. [Internet]. 2014 [access 23 ago 2017]; 49(1):69. Available at: https://doi.org/10.1016/j.cnur.2013.11.004.

22. Lau Y, Wang W. Development and evaluation of a learner-centered educational summer camp program on soft skills for baccalaureate nursing students. Nurse Educ. [Internet]. 2014 [access 23 ago 2017]; 39(5):246-51. Available at: https://www.ncbi.nlm.nih.gov/pubmed/24978015.

23. Fogg L, Carlson-Sabelli L, Carlson K, Giddens J. The perceived benefits of a virtual community effects of learning style, race, ethnicity, and frequency of use on nursing students. Nurs Educ Perspect [Internet]. 2013 [access 23 ago 2017]; 34(6):390-4. Available at: https://www.ncbi.nlm.nih.gov/pubmed/24475600.

24. Hutchinson TL, Janiszewski Goodin H. Nursing student anxiety as a context for teaching/learning. J Holist Nurs [Internet]. 2013 [access 23 ago 2017]; 31(1):19-24. Available at: https://doi.org/10.1177/0898010112462067.

25. Piña-Jiménez I, Amador-Aguilar R. La enseñanza de la enfermería con simuladores, consideraciones teórico-pedagógicas para perfilar un modelo didáctico. Enferm. univ. [Internet]. 2015 [access 23 ago 2017]; 12(3):152-9. Available at: http://dx.doi.org/10.1016/j.reu.2015.04.007.

26. Brehmer LC de F, Ramos FRS. The healthcare model in training for nursing: experiences and perceptions. Interface (Botucatu). [Internet]. 2016 [access 30 ago 2017]; 20(56). Available at: http://dx.doi.org/10.1590/1807-57622015.0218.

27. Celik Y, Ceylantekin Y, Kilic I. The evaluation of simulation market in nursing education and the determination of learning style of students. Int. J. of Health Sci. [Internet]. 2017 [access 23 ago 2017]; 11(1):13-8. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5327665/.

28. Arveklev SH, Wigert H, Berg L, Burton B, Lepp M. The use and application of drama in nursing education-an integrative review of the literature. Nurse educ today. [Internet]. 2015 [access 23 ago 2017]; 35(7):e12-7. Available at: https://doi.org/10.1016/j.nedt.2015.02.025.

29. Chiang VC, Chan SS. An evaluation of advanced simulation in nursing: a mixed-method study. Collegian [Internet]. 2014 [access 23 ago 2017]; 21(4):257-65. Available at: https://doi.org/10.1016/j.colegn.2013.05.003.

30. Andersen HE, Larsen KV. Sculpting with people: An experiential learning technique. Nurse Educ Pract. [Internet]. 2015 [access 23 ago 2017]; 15(6):556-60. Available at: https://doi.org/10.1016/j.nepr.2015.07.014.

31. Chmil JV, Turk M, Adamson K, Larew C. Effects of an experiential learning simulation design on clinical nursing judgment development. Nurse Educ. [Internet]. 2015 [access 23 ago 2017]; 40(5):228-32. Available at: https://doi.org/10.1097/NNE.0000000000000159.

32. Oliveira SN de, Prado ML do, Kempfer SS, Martini JG, Caravaca-Morera JA, Bernardi MC. Experiential learning in nursing consultation education via clinical simulation with actors: Action research. Nurse educ. today. [Internet]. 2015 [access 23 ago 2017]; 35(2):e50-e4. Available at: https://doi.org/10.1016/j.nedt.2014.12.016.

33. Lavoie P, Pepin J, Cossette S. Development of a post-simulation debriefing intervention to prepare nurses and nursing students to care for deteriorating patients. Nurse educ pract. [Internet]. 2015 [access 23 ago 2017]; 15(3):181-91. Available at: http://dx.doi.org/10.1016/j.nepr.2015.01.006.

34. McNamara N. Preparing students for clinical placements: The students perspective. Nurse educ pract. [Internet]. 2015 [access 23 ago 2017]; 15(3):196-202. Available at: https://doi.org/10.1016/j.nepr.2014.11.011.

35. Zigmont JJ, Wade A, Edwards T, Hayes K, Mitchell J, Oocumma N. Utilization of experiential learning, and the learning outcomes model reduces RN orientation time by more than 35%. Clin Simul Nurs [Internet]. 2015 [access 23 ago 2017]; 11(2):79-94. Available at: https://doi.org/10.1016/j.ecns.2014.11.001.

36. Sordi MRL de, Bagnato MHS. Subsídios para uma formação profissional crítico-reflexiva na área de saúde: o desafio da virada do século. Rev. Latino-am. Enferm. [Internet]. 1998 [access 30 set 2017]; 6(2). Available at: http://dx.doi.org/10.1590/S0104-11691998000200012.

37. Koivisto J-M, Niemi H, Multisilta J, Eriksson E. Nursing students' experiential learning processes using an online 3d simulation game. Educ. inf. technol. [Internet]. 2017 [access 23 ago 2017]; 22(1):383-98. Available at: https://doi.org/10.1007/s10639-015-9453-x.

38. Ministério da Saúde (BR). Síntese de Evidências para Políticas de Saúde: estimulando o uso de evidências científicas na tomada de decisão [Internet]. Brasília: Ministério da Saúde; 2015 [access 20 nov 2017]. Available at: http://bvsms.saude.gov.br/bvs/publicacoes/sintese_evidencias_politicas_saude_1ed.pdf.

39. Doolen J, Giddings M, Johnson M, Guizado de Nathan G, O Badia L. An evaluation of mental health simulation with standardized patients. Int. j. nurs. educ. scholarsh.. [Internet]. 2014 [access 23 ago 2017];

Paula Bresolin | Jussara Gue Martini | Daniele Delacanal Lazzari | Isis da Silva Galindo | Jeferson Rodrigues | Maria Helena Pires Araújo Barbosa

11. Available at: https://doi.org/10.1515/ijnes-2013-0075.

40. Townsend L, Gray J, Forber J. New ways of seeing: Nursing students experiences of a pilot service learning program in Australia. Nurse educ pract. [Internet]. 2016 [access 23 ago 2017]; 16(1):60-5. Available at: https://doi.org/10.1016/j.nepr.2015.08.004.

41. Ministério da Saúde (BR). Humaniza SUS: documento base para gestores e trabalhadores do SUS. [Internet] 4. ed. Brasília: Ministério da Saúde; 2010 [access 20 nov 2017]. Available at: http://bvsms.saude.gov.br/bvs/publicacoes/humanizasus_documento_gestores_trabalhadores_sus.pdf.

42. Henoch I, Ung EJ, Ozanne A, Falk H, Falk K, Sarenmalm EK, et al. Nursing students' experiences of involvement in clinical research: an exploratory study. Nurse Educ Pract. [Internet]. 2014 [access 23 ago 2017]; 14(2):188-94. Available at: https://doi.org/10.1016/j.nepr.2013.07.009.

43. Poore JA, Cullen DL, Schaar GL. Simulation-based interprofessional education guided by Kolb's experiential learning theory. Clin Simul Nurs. [Internet]. 2014 [access 23 ago 2017]; 10(5):E241-E7. Available at: https://doi.org/10.1016/j.ecns.2014.01.004.

44. Almeida É de, Piexak DR, Ilha S, Marchior MRCT, Backes DS. Liderança do enfermeiro responsável técnico: um fazer necessário para o exercício profissional. Rev. pesqui. cuid. fundam. (Online). [Internet]. 2014 [access 23 ago 2017]; 6 (3). Available at: https://doi.org/10.9789/2175-5361.2014v6n3p998.

45. Onge J St, Hodges T, McBride M, Parnell R. An innovative tool for experiential learning of nursing quality and safety competencies. Nurse Educ. [Internet]. 2013 [access 23 ago 2017]; 38(2):71-5. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23407197.

46. Crowder SJ, Ironside PM, Cangany M, Roddy WS. Implementation of a state legislative fellowship for doctor of nursing practice students. Nurse Educ. [Internet]. 2016 [access 23 ago 2017]; 41(3):156-9. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26771941.

47. Jordan SD, Collins-Yoder AS. Mock board hearing: giving students new insights through experiential learning. Clin Simul Nurs [Internet]. 2014 [access 23 ago 2017]; 10(12):630-3. Available at: http://dx.doi.org/10.1016/j.ecns.2014.09.005.

48. Maruca AT, Díaz DA, Kuhnly JE, Jeffries PR. Enhancing empathy in undergraduate nursing students: An experiential ostomate simulation. Nurs Educ Perspect [Internet]. 2015 [access 23 ago 2017]; 36(6):367-71. Available at: https://www.ncbi.nlm.nih.gov/pubmed/26753295.

49. Benito GAV, Tristão KM, Paula ACFS de, Santos MA dos, Ataide, LJ, Lima R de CD, et al. Desenvolvimento de competências gerais durante o estágio supervisionado. Rev. bras. enferm. [Internet]. 2012 [access 30 set 2017]; 65(1). Available at: http://dx.doi.org/10.1590/S0034-71672012000100025.

50. Schmidt NA, Brown JM. Service learning in undergraduate nursing education: strategies to facilitate meaningful reflection. J Prof Nurs. [Internet]. 2016 [access 23 ago 2017]; 32(2):100-6. Available at: https://doi.org/10.1016/j.profnurs.2015.06.006.

51. Rassin M, Kurzweil Y, Maoz Y. Identification of the learning styles and "On-the-Job" learning methods implemented by nurses for promoting their professional knowledge and skills. Int J Nurs Educ Scholarsh [Internet]. 2015 [access 23 ago 2017]; 12(1). Available at: https://doi.org/10.1515/ijnes-2015-0006.

52. Day L, Turner K, Anderson RA, Mueller C, McConnell ES, Corazzini KN. Teaching delegation to RN students. J Nurs Regul [Internet]. 2014 [access 23 ago 2017]; 5(2):10-5. Available at: https://doi.org/10.1016/S2155-8256(15)30083-1.

53. Salmon S, Wang XB, Seetoh T, Lee SY, Fisher DA. A novel approach to improve hand hygiene compliance of student nurses. Antimicrob Resist Infect Control [Internet]. 2013 [access 23 ago 2017]; 2. Available at: https://doi.org/10.1186/2047-2994-2-16.

54. Mitchell EKL, James S, D'Amore A. How learning styles and preferences of firstyear nursing and midwifery students change. Aust J Educ [Internet]. 2015 [access 23 ago 2017]; 59(2):158-68. Available at: https://doi.org/10.1177/0004944115587917.

55. El-Gilany A-H, Abusaad FES. Self-directed learning readiness and learning styles among Saudi undergraduate nursing students. Nurse educ today [Internet]. 2013 [access 23 ago 2017]; 33(9):1040-4. Available at: https://doi.org/10.1016/j.nedt.2012.05.003.

56. McGuire M, Goldstein C, Claywell L, Patton R. Analysis of student reflections of experiential learning in nursing health policy courses. Nurse Educ. [Internet]. 2017 [access 23 ago 2017]; 42(2):95-9. Available at: https://www.ncbi.nlm.nih.gov/pubmed/27580301.

57. Main EE, Garrett-Wright D, Kerby M. Nursing student voices: reflections on an international service learning experience. Ky Nurse. [Internet]. 2013 [access 23 ago 2017]; 61(1):10-1. Available at: https://www.ncbi.nlm.nih.gov/pubmed/23367657.

Corresponding author:
Paula Bresolin
Universidade Federal de Santa Catarina
R. José Dutra, 70 - 88036-205 - Florianópolis, SC, Brasil
E-mail: paulabresolin5@gmail.com

Role of Authors:
Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - JGM, ISG, MHPAB
Drafting the work or revising it critically for important intellectual content - JR
Final approval of the version to be published - DDL
Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - PB

Paula Bresolin | Jussara Gue Martini | Daniele Delacanal Lazzari | Isis da Silva Galindo | Jeferson Rodrigues | Maria Helena Pires Araújo Barbosa