ORIGINALES

Current status and trends in the training process of critical care nurses

Estado actual y tendencias en el proceso de formación de enfermeras(os) de cuidados críticos

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ABSTRACT:
Introduction: International Organizations recognize that, for the health professions, the development of their specialties is transcendental since it allows them to deepen knowledge and skills for a more qualified professional practice that allows improving the quality of care.
Objective: To explore the state of the art, application of nursing models and theories in intensive care units and trends in the training of nursing specialists for critically ill patients.
Method: Documentary research whose object of study were 17 research articles related to the subject, the articles were captured in international databases Scielo, Elsevier, ScienceDirect, published between 2011-2021. A matrix for the selection of investigations and the Investigation Analytical Sheet were used as information collection instruments. The analysis was oriented based on the evolution of the training process, theoretical-disciplinary approaches and training trends and challenges
Results: Articles from documentary reviews were found and, to a lesser extent, from qualitative or quantitative research studies.
Conclusions: The study allowed us to recognize the progress of the training process and the evolution of teaching-learning strategies typical of traditional educational models to others that stimulate reflective and critical thinking. The literature that accounts for the application of nursing models and theories in critical care units is scarce; novel perspectives related to nursing training for critical care were found.

Keywords: advanced practice nursing; nursing education; critical care; trends; thought. Dec's Bireme.

RESUMEN:
Introducción: Las Organizaciones Internacionales reconocen que, para las profesiones de la salud, es trascendental el desarrollo de sus especialidades dado que les permite profundizar conocimientos y habilidades para una práctica profesional más cualificada que permita mejorar la calidad de atención.
Objetivo: Explorar el estado del arte, aplicación de modelos y teorías de enfermería en unidades de cuidado intensivo y las tendencias en la formación en la formación del especialista en enfermería del paciente en estado crítico.
Método: Investigación documental cuyo objeto de estudio fueron 17 artículos de investigaciones relacionadas con el tema, los artículos fueron capturados en bases de datos internacionales Scielo,

Elsevier, ScienceDirect, publicados entre los años 2011-2021. Se utilizó como instrumentos de recolección de información una matriz para la selección de investigaciones y la Ficha Analítica de Investigación. El análisis se orientó con base a la evolución del proceso formativo, enfoques teóricos-disciplinares y tendencias y retos de la formación.

Resultados: Se encontró artículos provenientes de revisiones documentales y en menor proporción de estudios de investigación cualitativa o cuantitativa.

Conclusiones: El estudio permitió reconocer los avances del proceso formativo y la evolución de estrategias de enseñanza aprendizaje propias de modelos educativos tradicionales a otras que estimulan el pensamiento reflexivo y crítico. Es escasa la literatura que da cuenta de la aplicación de modelos y teorías de enfermería en las unidades de cuidado crítico, se encontró perspectivas novedosas relacionadas con la formación en enfermería para el cuidado crítico.

Palabras clave: Educación en enfermería; cuidados críticos; tendencias; pensamiento. Dec's Bireme

INTRODUCTION

Intensive care has expanded and continues to grow every day, not only in terms of technology but also in terms of optimizing, training, and updating the skills of professionals who provide it.

Nursing specialties have been identified worldwide since the emergence of public health nursing specialties in the early 20th century. Since then, they have grown rapidly owing to health needs and demands, new knowledge, technological advances, and the advancement of the profession.

International organizations and health systems recognize that the development of specialties is critical for health professions because it allows them to deepen and broaden their knowledge and skills, leading to a more qualified professional practice that improves health care quality. This has been recognized in various countries, and some of them have chosen to ensure quality by creating specialties in emergency care, emergency medicine, and intensive care according to the characteristics of their environments [1]. The number of specialties varies by country, ranging from a few (6–8 specialties) to more than 50, as is the case of the United Kingdom. Since 1983, all countries have recognized the urgent need for qualified nurses to be prepared beyond their basic training [1].

Nursing specialization in the care of critically ill patients is a relatively new and young discipline that aims to deepen this specific area of knowledge. The COVID-19 pandemic demonstrated both a need for training in this field and a scarcity of nurses specializing in this area, making accelerated training in this area necessary. Nursing professionals specializing in the care of critically ill patients are an essential health resource that provides coverage for the high frequency of cardiovascular processes, trauma, and the high demand for urgent care.This evolution has been marked by a significant technological advancement and a great improvement in effectiveness, with the achievement of significant challenges in the rapid care of critically ill patients [2].

According to data on the number of nursing specialization graduates in Colombia between 2001 and 2017, one of the most requested areas of knowledge is critical care (1,571 graduates), followed by emergency (626) and oncology care (218) [3].

Training processes in this specialization have changed and evolved as knowledge has advanced. Around 1860, Florence Nightingale, the first nurse, established the Nightingale Training and Home School for Nurses at St. Thomas's Hospital in London

with 10 students [4]. The school was founded on two principles: first, nurses should gain practical experience in hospitals that are specially designed for that purpose; second, nurses should live in a suitable home in order to lead a disciplined life [5,6]. Over time, this vision evolved to focus on issues that reinforced the profession and discipline. After World War II, traditional education focused on lectures gave way to problem-based education [7]. Teaching is no longer centered on the teacher but on the student, who bears the learning responsibility. In this regard, McMaster University in Canada was a pioneer in student-centered learning. The emphasis of this model remained on the acquisition of scientific knowledge, with new principles incorporated to facilitate it[7].

The Bologna process initiated the educational transformation and the obligation to direct education toward the attainment of competencies [8], therefore, universities for both undergraduate and graduate studies focused on the fact that the healthcare professional must acquire competencies in knowledge, skills, and attitudes during his/her training. In this sense.

Even before the pandemic, the global society demanded changes in the higher education teaching–learning systems in response to the changing scenarios caused by the fourth industrial revolution and in response to a society with greater access to information through digital technologies. The pandemic demonstrated that there are numerous ways to learn, particularly when using digital technologies. However, it is clear that the use of these modern technologies entails new challenges that cannot be avoided in higher education. Technologies such as virtual reality (VR) can enrich educational environments by enabling the visualization of complex structures and providing timely assessment and feedback [9] providing many benefits to learning [10].

The present study was carried out in order to explore the state of the art in the training process of nursing professionals in the specialization for the care of critically ill patients and obtain relevant data about theoretical-disciplinary approaches and identify trends and/or or challenges in the training process

METHODOLOGY

This state-of-the-art of nursing education is framed within the research typology "documentary review," and it aims to recover and transcend the accumulated knowledge within a specific area. The study was developed in the following phases [11]

- Topic identification and selection of the guiding question: How has the specialization training process evolved, what are the approaches, what are the trends and challenges in the training process?
- Establishing study inclusion and exclusion criteria

Inclusion criteria:

- Complete articles between the years 2011-2021.

- Articles that present in the title or abstract of the publication one or more of the keywords: State of the art; trends; academic training; professional competence; Nursing; critical care specialization; advanced practice nursing; intensive nursing; intensive care critical care; advanced care.

Exclusion criteria:

- Publications type letter to the editor, response from authors, non-complete articles.

After the selection of articles, a complete reading of the article was carried out and then a selective reading of the bibliographic material using the inclusion and exclusion criteria. Analytical reading was carried out in the selected texts, and for this purpose, the sheet for each article was prepared in summary form. The file included: title of the article, name of the journal, year of publication, methodology used, results.

In this way, 21 articles were found, of which 18 were chosen, which met the inclusion criteria and served as a source of consultation. The data were selected and subsequently coded and interpreted

RESULTS

According to the analysis and methodology of the type of study, 53 % of the 18 articles were documentary reviews, whereas 47% were qualitative or quantitative studies. The characterization and approach to the subject matter of the 18 articles are shown in Table I, where the year of publication, typology, and general results have been differentiated. These results, in accordance with what has been established in this study, allow us to know which topic to classify the articles in. However, it was found that several studies were related to two or all three of the following topics: advances in the nursing professional training process in the specialization for the care of the critically ill patient, application of theoretical-disciplinary approaches, trends and/or challenges in the training process

Table I. Articles (n = 18) related to the training of nursing professionals as specialists in the care of critically ill patients, 2021.

Title	Journal	Data base	Year	Typology	Results
Advanced practice or advanced care in nursing? Reflections on the concept	Iberoamerican Journal of Nursing Education and Research.	Enfermeria 21	2017	Documentary review	The use of the concept of advanced care rather than that of advanced practice is considered more appropriate.
Validation of a manual on good nursing practices in intensive care	Rev. Inv. Cient. *	Scielo	2018	Methodological triangulation	The overall consensus of the experts was "strongly agree" for the rationale underlying patient safety in good nursing practices in ICU** and the quality of the proposed book. Nursing procedure ratings from the exit test, which corresponded to the pre-experiment, were significantly higher than those from the entry ones.

Active methodology in intensive Care Nursing Training: an experience report	Nursing Index	Scielo	2020	Action research	The teaching–learning dynamics were acknowledged by students as strategies for reducing anxiety and generating knowledge acquisition and practice in intensive care. The development of an intensive care nursing-specific record-keeping instrument.
Patricia Benner's philosophy and clinical practice	Global Nursing electronic journal	Scielo	2013	Documentary review	The concepts of Patricia Benner's philosophy can be applied to nurses' professional development in the areas of emergency care, intensive care unit, and pediatrics; in these three areas, they must have the attributes that qualify them as experts.
Professional orientation in postgraduate nursing education in inpatient facilities	Superior Medical education.	Imbiomed	2013	Descriptive Research	Most nurses who continued their education thought it was important to take these postgraduate courses (88%).
Importance of ICT in pediatric intensive care training for nursing professional development in care.	Iberoamerican Journal of Nursing Education and Research	Enfermeria 21	2018	Descriptive Research	The use of ICT*** plays a significant educational role in the development of professional competencies, which will also benefit care practice. Meanwhile, the pediatric intensive care competencies include scientific, technical, and humanistic abilities, which contribute to safe nursing practice when using ICT-mediated or -simulated environments. Among the training activities included in the theory and practice classroom are group work devices, problem-based learning with educational simulations, and problem-solving workshops, which include reflection on the actions of students and teachers at the same time in order to strengthen and develop professional competencies.

Nursing care for the family of the critically ill patient Based on the theory of understanding facilitation	College Nursing	Scielo	2014	Research with Logical Framework design.	Based on the theory of understanding facilitation and the NANDA, NIC, and NOC taxonomies, a nursing care plan is presented that shows inherent aspects to the assessment, results, and interventions of four priority diagnoses and the most likely situations that the family faces when a loved one is in a critical health condition.
Innovations in continuing/permanent of intensive care nurses training methods	Intensive Nursing	Dialnet	2014	Documentary review	It is recommended that continued education be based on PBL and simulation. Other methodological innovations, such as the use of objective structured clinical examinations or portfolios, are less useful in the professional practice stage.
A description of the role of the ICU nurse liaison in Argentina	Intensive and Critical Care Nursing	Science Direct	2014	Descriptive Research	Liaison and outreach nurses are similar in their functions, as they provide advanced clinical management to prevent patient deterioration.
The nursing role of advanced practice in Primary care in Chile	Rev. med. clin condes	scielo	2014	Documentary review	This cost-effective model aims to broaden the scope of nurses' action so that through the direct care of patients and families in a community setting, nurses can provide services that include health promotion and prevention while treating low-complexity pathologies typical of APS.
Nursing models in critical patient units: a step towards advanced care	Global nursing electronic journal	Research Gate	2019	Documentary review	Emphasis on the Virginia Henderson Model, Roy Adaptation Model, and Primary Nursing Model.
Application of models and theories in critical care units: a literature review	Nursing Journal Benessere	Scielo	2021	Bibliographic revision	It is clear that there are studies in which models and theories are used in some instances of care. However, only Horta's Basic Human Needs theories, Roy's Adaptation Model, and Meleis' Transitions Theory are available in critical care units.

	Text and context in nursing	Scielo	2021	Qualitative research	The ICU** context influences social representations and creates identity aspects of this environment that shape a stereotype and stigmatize nursing as a disorganized environment that lacks material resources and trained professionals. In this context, when recent graduates act and, despite their efforts and dedication, fail to make progress with the patient, fear and a lack of confidence are exacerbated, resulting in actions that may involve risks for the patient. It is suggested that follow-up programs for newly graduated nurses be developed.
Intensive care in non-critical units: representations and practices of newly graduated nurses.					
Religious and spiritual support in the conception of nurses and relatives of critically ill patients: a cross-sectional study	USP School of Nursing Journal	Scielo	2014	Cross-sectional type research	Nurses and family members acknowledged religious/spiritual support as a significant factor in the critically ill patient care process and the need for professional qualification for a better integration of this support into the day-to-day activities of intensive care.
Most important needs of family members of critically ill patients in light of the Intensive Care Family Needs Inventory.	Invest Educ Enferm.	Scielo	2015	Cross-sectional descriptive research	The identified needs were to receive honest information about the patient's status and progress as well as an explanation on the equipment being used. Communication was the dimension with the most needs.
Bioethical aspects in the care of patients in intensive care units	La Paz Medical Journal	Science Direct	2018	Documentary review	The principles of bioethics are an analytical tool that can help in the resolution of any dilemma arising from patient care.
The role of advanced practice nursing in primary care in Chile.	Medical Journal Clínica Las Condes	Scielo	2018	Documentary review	A proposal is made to improve the responsiveness of the health system in Chile by implementing advanced practice nursing in primary health care.
Critical Care Outreach Services: Nursing Implications	Electronic Journal Enfermería Actual de Costa Rica	Scielo	2018	Systematic literature review	Identify and describe functions as well as determine the structure, benefits, and difficulties in implementing a critical care outreach service for an adult patient.

*Scientific Information Magazine
** intensive care unit
*** Technology of the information and communication
NANDA: North American Nursing Diagnosis Association

NIC: Classification of nursing interventions
NOC: Classification of Nursing results
PBL: Problem-Based Learning
APS: Atención Primaria en Salud

Articles about the evolution and progress of the training process are shown in Table II. The guiding question was: How has the specialization training process evolved? The results of these studies demonstrate an important change in the teaching–learning processes of nursing professionals caring for critically ill patients as well as the evolution of traditional education and its methods toward more active ones that involve student participation in order to improve their learning. In this regard, specialization has been at the forefront due to changes in educational training processes that have occurred globally.

Table II. Evolution and progress in the training process of nurses specialized in the care of critically ill patients

Identified item	Articles	Journal	Database
Evolution and progress in the specialist raining process	Active methodology in Intensive Care Nursing Training: an experience report	Nursing Index	Scielo
	Philosophy of Patricia Benner and clinical practice	Global Nursing	Scielo
	Professional orientation in postgraduate nursing education in inpatient facilities	Superior Medical education	Imbiomed
	Innovations in continuing/permanent education methods for intensive care nurses	Intensive Nursing	Dialnet
	Advanced practice or advanced care in nursing? Reflections on the concept	Rev. med. clin condes	Scielo
	Importance of ICT in pediatric intensive care education for nursing professional development in care	Iberoamerican Journal of Nursing Education and Research	Enfermeria 21
	Innovations in continuing/permanent education methods of intensive care nurses	Enfermeria Intensiva	Dialnet
	Intensive care in non-critical units: representations and practices of newly graduated nurses	Text and context in nursing	Scielo
	Validation of a manual on good	Rev. Inv. Cient.*	Scielo

	nursing practices in intensive care		

ICT: Technology of the information and communication

Regarding theoretical and disciplinary approaches used in the training of critical care nurses, articles related to the applicability of theoretical and conceptual models of ICU nursing were found, although their use is still very limited. The guiding question was: What theoretical and conceptual approaches of the discipline are applicable to critical care? It was found that although the 14-needs model of Virginia is still used, nursing care models that involve the family of the critically ill patient are used along with models that use the term "advanced care" and others that highlight spiritual care and the importance of bioethics in the care of critically ill patients. Although Patricia Benner's "from novice to expert" model emphasized competency-based training, it also served as a guide for the management of human resources in the ICU setting. Table III.

Table III. Theoretical and disciplinary approaches in the training process of specialists involved in the care of critically ill patients

Identified item	Articles	Journal	Database
Models and theories applied in ICU	Philosophy of Patricia Benner and clinical practice	Global Nursing	Scielo
	Nursing care for the family of the critically ill patient from the theory of facilitated understanding	College Nursing	Scielo
	Bioethical aspects in the care of intensive care units patients	La Paz Medical Journal	Science Direct
	Nursing models in critical patient units: a step towards advanced care	Global nursing electronic journal	ResearchGate
	Application of models and theories in critical care units: a literature review	Nursing Journal Benessere	Scielo
	Most important needs of family members of critically ill patients in light of the Intensive Care Family Needs Inventory	Invest Educ Enferm.	Scielo
	Religious and spiritual support in the conception of nurses and family members of critically ill patients: a cross-sectional study	USP School of Nursing Journal	Scielo

ICU: intensive care unit

Articles found on the challenges and innovations identified as trends in the training process are shown in Table IV. Faced with the guiding question: What trends and challenges are presented for the training process of the training specialist? Five influential globalizing trends were found for the training process of the critical care specialist nurse:The information age and the use of VR, Demographic diversity: aging, ethnic diversity, chronically ill patients, end-of-life care, and a shift in emphasis from curative care to health promotion and prevention; the latter being visible in studies

reporting that the presence of a critical care nurse specialist in primary health care areas is essential, the culture of competent care, health system reforms in countries, the boom in pharmacology and genomic medicine cause ethical issues, and unexpected events derived from new treatments.

Table IV: Challenges and innovations in the training process of specialists involved in the care of critically ill patients

Identified item	Articles	Journal	Database
Challenges and innovations	Validation of a manual on good nursing practices in intensive care.	Rev. Inv. Cient.*	Scielo
	Professional orientation in postgraduate nursing education in inpatient facilities.	Superior Medical education.	Imbiomed
	The nursing role of advanced practice in Primary care in Chile	Rev. med. clin condes	Scielo
	Intensive care in non-critical units: representations and practices of newly graduated nurses.	Text and context in nursing	Scielo
	Critical Care Outreach Services: Nursing Implications.	Electronic Journal Enfermería Actual de Costa Rica	Scielo

DISCUSSION

Progress in the training process

The analysis of articles grouped by similarity of contents reveals that in terms of advances in the training processes of critical care nursing specialists, traditional methods of training have been overcome, such as the master class based on the role of the teacher, passivity of participants, and memorization of contents, paving the way for active strategies and methodologies in critical care nursing education aimed at acquiring and practicing competencies. Problem-based learning and simulation have been highlighted in previous studies [12,13], promotion of experiences, care concept maps [12,14] that enable critical and reflective learning of nursing care in intensive care, and collaborative work, thus ensuring that routine nursing care gives way to nursing care tailored to the needs of each patient and his/her clinical situation.

It is also mentioned that the professional orientation prior to postgraduate studies favors the knowledge and orientation that the nursing professional can receive from the undergraduate level [12] from the option of elective and in-depth courses. OECD and European Union legislation proposed that competencies were a primary component of student learning processes, teacher training, and quality assessment of institutions. Teaching-learning at the university must be able to train people for lifelong learning. In the knowledge society, each person has to assimilate a knowledge base

and effective strategies; You have to know what to think and how to act in realistic life situations [15].

The need to improve critical thinking continues to grow in order to gain competence in the ability to develop and apply theory in practice, thereby fostering professional identity, discipline visibility, and the achievement of global health agenda challenges from a humanistic perspective [15].

In Europe, it is widely accepted that because of the increasing complexity and holistic nature of care, the nursing role is essential for providing evidence-based care in the ICU, for which the nursing professional must master a specific set of skills, knowledge, and attitudes, competencies of knowing, doing, and being [15,16] that can be linked to the knowledge patterns described by Barbara Carper [16] and demonstrated through the rubrics used during training practices.

The approach, from beginner to expert, leads to competency-based training, which will be reflected in nursing work or personal and professional development. In this field, where professionals have direct contact with patients and apply values, abilities, and attitudes, there are skills that can only be linked to practical knowledge. Personal development is based on these three major factors, which demonstrate the extraordinary ability of the nurse to resolve any conflict or problem that may arise in the clinical setting as well as to face conflicting situations and ethical dilemmas involved in caring for the health, life, illness, and death [17].

On the contrary, among the teaching–learning methods and strategies needed for the acquisition of competencies and the achievement of learning objectives, VR is a teaching tool that provides an immersive, multisensory environment, set in whatever is desired to be shown.

Nowadays, the education of health professionals is shifting toward virtual education, requiring that educators and students adapt to new technological tools that enable them to meet practical training needs[18-20]. VR involves immersive, three-dimensional VR based on artificial intelligence [21], mixed reality [22], and augmented reality. [23]. Augmented reality can be thought of as a supplement to learning because it allows students to build their knowledge through the visualization of abstract phenomena obtained from the digital world, but it requires a whole pedagogical scaffolding for the knowledge to be reinforced [24].

Although VR is not a modern technology, it has only recently gained popularity because of the use of these tools by large corporations and institutions. With the emergence of modern technologies such as smartphones, televisions, and "smart" computers, VR began to be integrated into these devices, making it more accessible[25].

Application of models and theories in critical care

The application of nursing models in ICUs is still limited because of work overload, overvaluation of the biomedical model, and a lack of knowledge about its usefulness in practice [24]. Nursing care models facilitate the development of skills required in the cognitive processes during the training process, thereby contributing to reflective and autonomous professional practice. The Primary Nursing model, also called "bedside

nurse" model, is one of the models that can be used in the training practices. This model, developed by Marie Manthey, proposes patient-centered nursing care through an interpersonal and human relationship while promoting four fundamental principles: Responsibility for the comprehensive care of a group of patients according to their needs; Case method: by assigning a set number of patients for whom he or she organizes and coordinates all care activities; Communication, as interlocutor for the care of patients with the health team, with the patient and his or her family; Continuity of care [26]. The model of Virginia Henderson, which focuses on the nursing role, establishes 14 components to be evaluated in patient care, allowing for a comprehensive assessment of the person that takes into account the patient's environment and recovery. It is a model to be used in the nursing process, and it describes a nurse-patient relationship as a "substitute" when the patient is dependent. It establishes a teaching role for nursing while considering dignified care during the dying process [26].

The adaptive model by Roy and the organizational theory by Weick are other applicability models in ICU patient care. Judy Davidson's model aims to reduce the psychological effects on the family member, such as depression, trauma, and post-traumatic stress disorder, by including him/her as a member of the care team and contributing to the well-being of the loved one. On the contrary, the theory of understanding consolidates a comprehensive care model that promotes visibility, continuity, efficiency, quality, and excellence of care and reduces the hostility that the intensive care experience generates in patients' families [27].

Among other influential thinkers in the development of theory and practice, Schön's reflection in action, also known as "Schön's reflective practicum," stands out because it questions the structure of knowledge in action and allows for its modification by restructuring new action strategies. Action becomes the object of reflection. The reflective learning intervention of Gross-Forneris and Peden-McAlpine and dual processing as a guide to clinical practice by Jefford *et al.* are also highlighted. [26]

Trends and challenges

The trend is to achieve an education that is more focused on the student's self-regulation but supervised by a mediator (teacher or nurse on duty) in order to form more critical and reflective specialists who are more humane and supportive and connected to the realities and people they may care for[12]. The use of research and cultural competence are basic requirements for professional practice so that critical care nurses are prepared to understand and provide quality nursing care to people from diverse backgrounds and lifestyles in a highly technological context[28].

However, because the ICU is a closed unit with limited quotas and highly specialized personnel, its functions are limited to the unit itself, leaving the most basic units without this coverage and allowing patients in the process of decompensation to deteriorate rapidly in less complex wards because of a lack of staff with training in that specific area of care. Therefore, critical care extension services, which are currently in use in Europe, Canada, Australia, and Argentina, are novel [29].

The implementation of outreach teams includes nursing care and support, with critical care nurses at the forefront of the group to provide "critical care without walls" through actions that impact patient mortality, prevent clinical deterioration, and provide

advanced clinical management for patient deterioration. They are thus, the first link in the rapid response system. They constitute an autonomous body that actively monitors patient evolution in the emergency room and other services and have even developed a strategy that can have an impact on primary health care[30, 31].

Other challenges to be considered during the training process were as follows:

- Inclusion of a clinical simulation program in the curricula so that future professionals can learn while acting and enter the real-world clinical environments with greater safety and practical knowledge [12].

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- Incorporation and integration of a critical care nursing best practice program for reducing variation in care, transfer evidence from research to practice, transmit nursing knowledge base, assist with clinical decision making, identify gaps in nursing research, discontinue interventions that have negligible effect or cause harm, reduce care, and incorporate evidence-based nursing into daily practice [32].

- The implementation of advanced practice nursing in primary health care (PHC) as a model that aims to broaden the scope of action of the critical care nurse specialist so that through direct patient and family care in a community setting, the specialist nurse can provide services that incorporate health promotion and prevention while treating low complexity pathologies that are typical of PHC [30,31]

- The COVID-19 pandemic provided an opportunity to reconsider the role of institutions that train health professionals in terms of not only ensuring the continuity of the teaching–learning processes but also becoming an active agent of intervention using alternative methods [6]. It is highlighted if a model of guidelines implies Academic continuity with distance education presenting an intensive use of technology, digital resources, and simulation with virtual scenarios. Communication- emotional companionship and social Responsiveness and responsibility allowing the development of competencies in students [33].

- Nurse-led autonomous or extended clinical practice, including advanced direct care interventions, care plan monitoring, and care optimization. Subcategories included the following: providing advanced or complex therapeutic interventions; engaging in nurse-led case management; making differential diagnoses; engaging in comprehensive patient assessment; optimizing care by establishing boundaries between disciplines and services; and identifying risks and interventions to promote patient or individual safety [33,34].

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CONCLUSION

The review allowed us to know how the training processes of the nursing specialist for critical care have been improving according to the needs and demands of the national and global educational regulations for care directly from the critical patient. Although Nursing models and theories provide the guiding approach to care that must be provided in ICUs, their application is not yet widespread. Currently, new challenges are generated to reconsider the role

of the institutions that train health professionals, highlighting distance education with an intensive use of technology, digital resources and simulation with virtual scenarios with social responsibility and allowing the development of competencies in students.

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