Intensivist nurse: process of professional qualification

Enfermeiro intensivista: processo de formação profissional
Enfermera intensivista: proceso de formación profesional

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Abstract: Objective: to know the process of professional qualification of nurses to work in intensive care. Method: exploratory, descriptive and qualitative, performed with 20 nurses having their first professional experience in Intensive Care Unit (ICU), through a semi structured interview, from July to September of 2017. The results were analyzed from a content analysis perspective. Results: the results were grouped into two categories: the first addressed subjects related to the formative process of the intensivist that made them improve their knowledge and practice; the second deals with the formative decisions taken by nurses and their repercussions on their professional life. Final considerations: graduation is the construction of the nurse and the deepening of the knowledge for the intensivist performance and the attainment of success in this complex environment are believed in.

Descriptors: Labor market; Nursing education; Critical care; Internship and Residence

Resumo: Objetivo: conhecer o processo de formação profissional do enfermeiro para atuação no cuidado em terapia intensiva. Método: exploratório, descritivo e qualitativo, realizado com 20 enfermeiros com sua primeira experiência profissional em Unidade de Terapia Intensiva (UTI), através de entrevista semiestruturada entre julho a setembro de 2017. Os resultados foram analisados na perspectiva de análise de conteúdo. Resultados: os resultados foram agrupados em duas categorias: a primeira abordou assuntos referentes ao processo formativo do intensivista que o fizeram aprimorar seus conhecimentos e sua prática; a segunda trata das decisões formativas tomadas pelos enfermeiros e suas repercussões na vida profissional dos mesmos. Considerações finais: a graduação é a...
construção do enfermeiro e acredita-se no aprofundamento do conhecimento para uma atuação de intensivista e obtenção do sucesso nesse ambiente complexo.

**Descritores:** Mercado de trabalho; Educação em enfermagem; Cuidados críticos; Internato e Residência

**Resumen: Objetivo:** conocer el proceso de formación profesional de las enfermeras para trabajar con cuidados intensivos. **Método:** exploratorio, descriptivo y cualitativo, realizado con 20 enfermeras, en su primera experiencia profesional en una Unidad de Cuidados Intensivos (UCI), por medio de entrevista semiestructurada, entre julio y septiembre de 2017. Los resultados fueron analizados desde una perspectiva del Análisis de Contenido. **Resultados:** los resultados fueron clasificados en dos categorías: la primera trató de temas relacionados al proceso formativo del intensivista, lo que le contribuyó para mejorar su conocimiento y su práctica; la segunda trató sobre las decisiones formativas realizadas por las enfermeras y sus repercusiones en su vida profesional. **Consideraciones finales:** la graduación es el tiempo para la construcción de la enfermera y se cree en la ampliación del conocimiento para el desempeño intensivista y la obtención del éxito en ese entorno complejo.

**Descriptores:** Mercado laboral; Educación en enfermería; Cuidados críticos; Pasantía y Residencia

**Introduction**

Nursing qualification has been continuously changed since its beginning in Brazil. The current reference for training described by the National Curriculum Guidelines (NCDs) suggests a generalist, humanist, critical and reflective professional, qualified for nursing practice, based on scientific and intellectual rigor, based on ethical principles. NCDs are considered a milestone in nursing education, as they are involved in a commitment to a whole historical and social context, bringing flexibility and significant changes to nursing.

An important aspect contained in the NCD is the generalist training that advocates the lack of emphasis in a particular area or specialty. This training would facilitate entry into the job market, since nurses can access knowledge from all areas and specialties during their training.

In many respects, generalist training is a facilitator for nursing, as it gives the student a sense of the whole and a glimpse of different realities. However, as it does not delve into any specific knowledge, it is imperative that nurses need to specialize, so as to acquire skills and
competencies that will reflect directly on the care provided, promote reflection and modification of actions, strengthening the profession.³

Thus, postgraduate studies have emerged as a way to continue the search for knowledge in one or more specialties, and can be divided into two types: *lato sensu*, which means “in a broad sense” and *stricto sensu*, which means “in a narrow sense”. Both aim to qualify the graduated professional. While *stricto sensu* postgraduate (Master and Doctorate) is in charge of training researchers and teachers, *lato sensu* tries to specialize professionals/workers, and offering a great contribution to their qualification.⁴

The objectives of *lato sensu* postgraduate studies in Brazil were defined for the first time, together with the parameters for their operation in 1966. They were considered courses aimed at the training of a professional or scientific branch, providing the student with mastery of a certain and limited area of knowledge or profession, qualifying a specialized professional. Postgraduate studies can help fill in the gaps left by undergraduate education and when done in conjunction with practice, becomes an advantage for the professional and the service where they work.

Thus, *lato sensu* postgraduate studies have become more popular in recent decades, due to the significant increase of scientific knowledge in all areas, the increase of courses and the demand of the labor market for more qualified professionals.⁵ However, little is said in the literature about *lato sensu* postgraduate studies and their impacts on the lives of professionals and the institutions to which they are linked, which brings the need for further studies on the subject.

Nurses wishing to enter the job market are looking for ways to be in accordance with the requirements of employing institutions, while at the same time improving and broadening the
knowledge of undergraduate studies. In particular, the highly specialized sectors, such as intensive care, cannot be broadened during undergraduate courses due to the sheer amount of content.  

The Intensive Care Unit (ICU) is a hospital department that treats patients in serious or potentially severe conditions with a viable prognosis for intensive care. Most of these patients are clinically unstable, with an increased risk of death. Expensive technological resources and the uninterrupted presence of professionals with the appropriate qualifications and training, focused on intensive care is necessary for the survival of these patients.  

Generalist education promotes a broader view of nursing disciplines, while the path to specialized training, whether for intensive care nurses or other specialties, is direct. The acquisition of knowledge is important and can come in different ways, but the incorporation of competences and skills are individual and each have their own academic and professional journey, showing that it is important to broaden studies, take courses, internships, have different experiences and seek the appropriate qualifications.

Therefore, the following question is proposed: What is the qualification process for nurses working in intensive care?

Given the above, this study is justified by showing the professional journey of intensive care nurses in order to inspire future professionals who wish to become intensivists and which of these alternatives, according to the research participants, prepare the inexperienced professional to safely join the ICU, so as not to cause harm to the patient and develop skills, as well as to make improvements in the work process already present.
Thus, the objective of the study was to understand the process of professional education and qualification of nurses in relation to working in intensive care.

**Method**

This is a descriptive, exploratory study with a qualitative approach. There were 20 study participants, all nurses. Inclusion criteria were to be a newly graduated nurse without a postgraduate degree who had their first professional position in an adult ICU. The search for participants was carried out first with the Coordination of the Nursing Course of the Federal University of Santa Catarina (UFSC). Initially, the course coordination granted the emails of sixty-two university graduated nurses, and an invitation was sent to all. After choosing some participants who met the inclusion criteria, others were nominated using the Snowball technique, reaching a total of 93 invitations which were sent by email. Among the total invitations sent, 35 nurses replied. After analysis, nine did not meet the inclusion criteria and six did not respond to the survey and/or did not return the Informed Consent Form (ICF) signed within the stipulated deadline, leaving a total of 20 participants. Data collection was performed from July to September 2017, through semi-structured non-standardized interviews.

Non-standard interviews are interviews that can take place in virtual environments, they are unconventional interviews, considered similar to an informal “conversation” between peers. This way of obtaining data is considered a practical and innovative strategy, having an important advantage in qualitative research, since it allows the free expression of the participants without the embarrassment of being face to face with the interviewer, and allows research with large numbers of people in order to obtain statistical data or opinion polls from people in different places without geographical limitations.7

Data collection was performed by using an instrument with open guiding questions referring to the professional and academic career and experiences in the day to day routine of
the ICU. The guiding questions were: “How would you describe your university education?” “Why did you choose Intensive Care?” “What were the main difficulties you encountered in starting your ICU activities?” “Which paths do you consider important for the nurse who wants to start a career in the ICU?”

The instrument was made available to participants through the Google® Form online platform, a very versatile data collection tool that allows the entire interview to be conducted in a virtual environment. After reading all the answers, it was possible to summarize and deepen some of the participants' answers, have discussions and clarify possible doubts.⁸

Data analysis was performed through content analysis according to Bardin's proposal (2011)⁸ which includes, pre-analysis, material exploration and treatment of results with inference and interpretation. The treatment and organization of the data, as well as the categorization was performed through Ethnograph® 6.0 software. In the first process, 197 codes from the participants' responses were identified. Next, the organization and assembly of the codes by similarity were grouped into basic categories, allowing the synthesis of data into 45 subcategories, which were grouped again into 26 others and after the reorganization, a total of seven categories were grouped into two themes.: 1) influence of academic education for the personal and professional development of nursing graduates that possibly contributed to their performance in ICU and 2) lifelong learning as a way and possibility to improve practice and achieve professional satisfaction in ICU.

This research followed the legal and ethical requirements in research involving human beings, from the National Health Council of the Ministry of Health, and was approved by the Research Ethics Committee of the University of Southern Brazil, under opinion No. 2.064.387, approved on the date. May 15, 2017.

In order to preserve the anonymity of the participants, the alphanumerical system was used to identify their speeches (E01 to E20).
Results and discussion

Regarding the characterization, 15 participants were female. Regarding ages, nine were 25 to 30 years old; seven were 32 to 35 years old; four were between 36 and 39 years old. In relation to the length of experience in ICU, five reported having more than 10 years of experience; while four reported between five and eight years; four reported between four and five years, five reported between two and three years, one had one year of experience and one had less than one year of professional experience. Regarding the states where the participants reside, eight are from Santa Catarina; five are from Rio de Janeiro; three are from Amazonas, two are from Rio Grande do Sul, one from Paraná and one from São Paulo.

Influence of academic qualification for the professional development of nursing graduates to work in ICU

Participants expressed different paths for effective ICU work, including the influence of undergraduate and graduate education. They also mentioned individual mechanisms for coping with difficulties as being necessary for their performance.

The content and practices presented during undergraduate clinical placement, in many cases, are the only experiences that nursing graduates have before entering professional practice. Certain contents go beyond techniques and procedures that assist them in personal growth, decision making, team management and patient care in a humanized and ethical manner. The training process is configured in the opportunities that students have to extrapolate the theoretical contents on physiological and technical aspects for the academic education of the professional, which includes recognizing the other and recognizing themselves in the teaching-learning process.
I learned respect for the patient’s life and to extend this respect to their family members during the undergraduate course, that was where I learned that we can even "lose" to the disease, but our care is perennial. (E3)

Besides theory, what helped the most was the practice in the clinical placement where I learned that the human being is fragile, vulnerable. That care should be focused on the patient. (E14)

The undergraduate course gave me theoretical knowledge that I did not have. The teaching method was traditional, not teaching how to think and relate theory to practice, but it gave me basic theoretical knowledge to support my professional practice in ICU. Although, it was very close to what I needed to study later. (E17)

I believe all the disciplines matter. But learning about patients’ illnesses already brings you a familiarity and peace of mind to begin with. Know the serious cases that can occur in the ICU such as an Acute Lung Edema and cardiopulmonary arrest and how the nurse should act; As much as you may not know in practice, having a good theory helps you develop better. (E7)

In undergraduate courses the tendencies of theoretical-practical activities and clinical placements are to offer learning based exclusively on techniques and procedures, maintaining the division between theory and practice. This sometimes causes difficulties for students in relation to clinical reasoning, as they themselves have problems associating the technical procedure with their scientific reasoning.⁹

For many of the participants, the contents considered important during the training are those that helped them develop skills, reduce their insecurities and make decisions. The NCDs give orientation towards generalist qualification, in which the knowledge to be solidified, is about the collectivity, human relations, dynamism, and the ability to work in a multidisciplinary team that can promote prevention and health promotion actions, wherever they act. These specifications are included in nursing NCDs as general competencies and skills to be acquired
by graduates of health courses needed for professional development: health care, decision making, communication, leadership, administration, management and continuing education.¹

The technical content and the treatment of diseases are the most important, demonstrating the attachment to the technical and curative teaching. Critical patient care disciplines arouse the interest and admiration of students, as it is during this period that they will face the most complex cases, in which it will be necessary to recover knowledge from previous stages of education to work on their clinical reasoning and respond to questions about the best therapeutic approach. In addition, these disciplines associate theoretical teaching with internship practice, in most institutions, which facilitates understanding of what is taught.

The contents I found most important to learn were notions about mechanical ventilation, vasoactive drugs, physiology, and patient care. (E11)

All basic content of nursing fundamentals, nurse-patient relationship, experiences in various specialties, wound and dressing management, urgent and emergency care, notions of patient transportation and knowledge of infectious diseases. (E16)

[...] I realized that well-founded notions of disciplines already taught in previous periods (anatomy, physiology, semiology and adult health) were essential for a critical perspective within intensive care. (E5)

The Intensive Care Unit is the place where intensive care is provided to critically ill patients and this unit has constant monitoring and a specialized multidisciplinary team with adequate technology to maintain life with quality. This unit arouses a certain anxiety and fear on the part of undergraduate students, especially in the beginning of the internships, when as opposed to fear, they feeling of curiosity and desire for the pursuit of knowledge.¹⁰

The statements express the technicist and curative view based on the initial training of nurses, who feel the need for experience in specialized units, as they think about the search to improve clinical thinking through courses and specializations.¹¹ This is a challenge in nursing
education and, while generalist education is important, it is necessary to consider the issues of advances in all areas of knowledge and the growing demands for more skilled professionals in the world of work.²

Thus, the teaching of specialties during undergraduate courses should not gain prominence in the qualification of nurses. However, if this is the maximum in nursing education, newly graduated nurses could not perform their activities in specialty places without proper preparation, or reflect if the profile described by the NCD would be able to keep up with the progress and complexity of health demands. One of the many ways to become a good ICU nurse, cited by participants, is the pursuit of improvement in order to achieve personal fulfillment, acceptance and respect from colleagues and to become a better, more qualified professional who reflects on practice and seeks to improve the care provided.

The *lato sensu* graduate qualifies the professional and broadens their knowledge in certain areas. In nursing, the job market has been growing and developing, and currently has many undergraduate nursing courses, which makes it highly competitive, requiring more professional qualification.¹²

In the case of the ICU, for newly graduated professionals with little experience and limited knowledge regarding equipment and procedures, specialization can have relevant value and be a facilitator of the acquisition of this knowledge and meaning of the contents already acquired in training.

*Specialization is essential. The content available in the undergraduate nursing program alone is not enough for the nurse to start working straight away and assume responsibilities in this sector. Intensive training of at least six months and a lot of dedication to studies are necessary to give the professional adequate qualifications to work in this department. Other courses are needed and continuing education is critical.*(E16)
Have a good foundation from the undergraduate course and seek a more concrete knowledge base after the academy, through postgraduate course and others that complement the work in the ICU. (E5)

Do specialization and work in the ICU. Study while working. Associate theory with practice. Reflect on care in practice and on practice. Interact with the team. Discuss cases with ICU staff (nursing and doctors). Team work. Always update and study. (E17)

Do a postgraduate course in ICU, since the knowledge offered in the undergraduate are not focused on ICU issues, by doing the postgraduate course, it is possible to learn the specific processes, procedures and complications, besides studying hard and always keeping yourself up to date. (E4)

Regarding the above statement, many see postgraduate courses as a way to delve into knowledge that is quickly touched on in the undergraduate course. This view is due to the fact that specialization has grown and expanded significantly in order to train more prepared professionals. Its main objective is to meet a specific demand in the labor market, expanding the knowledge necessary for the technical and scientific profile of nurses in nursing areas.11

Participants share their opinions about the best ways to meet the demands of an ICU and the statements differ when they say that “post graduate courses are essential” or when they say that the necessary skills come with time and experience, but doing without the science of meaning makes the nurse an executor of tasks and techniques, without scientific awareness of their actions, only learning to do without reflecting on the process. Repeating daily activities leads to the necessary experience toward quality.

Therefore, it is a challenge to combine the many knowledge demands of a specialization course, making residency programs interesting, which constitute permanent education. Nursing residency programs were structured according to Federal Nursing Council Resolution (COFEN) No. 459/2014, to develop technical-scientific and ethical competences resulting from in-service training.14
Thus, residency emerges as an interesting educational proposal capable of filling possible gaps and preparing nurses, since residency enables care and management practice with health services, giving access to nurses who, in most cases, are newly graduated, to the reality of the work process having the support of professionals of the service and teachers. During the residency, the professionals receive technical and scientific preparation, which gives them security to develop, integrate with the team, and are sensitive to the need for constant study, as shown in the following statement:

Do a postgraduate course where I have an ICU internship, preferably an intensive care residency, right after I graduated, because the one I did not have that, it was just a five-minute visit just to find out what an ICU was like. If you could do some volunteer shifts to know if it really is what you want, but also keep up to date. (E3)

This statement shows that doing a postgraduate course is not the solution to become a good intensive care nurse and for this, it is necessary to know the reality, study, stay up to date and have the practice.

A study conducted with nursing residents in a University in the Southern Brazil demonstrated the contributions of the residence to nurses, such as: obtaining critical vision; being a transforming agent; working as a team; using the nursing process; working in management, care, teaching, community; developing research; participating in class entities; investing in continuing education; learning to use their own initiative; working ethically. The residency encourages the search for new knowledge and the continuity of studies, which leads graduates to seek other specializations, other courses, such as masters and doctorate degrees.
Lifelong learning as a way and possibility to improve practice and achieve professional satisfaction in ICU

The ICU is one of the most difficult and traumatic hospital environments for both patients and workers. People have different ways of coping with the difficulties encountered in this environment. For some it is to gain knowledge and learn more, for others it is necessary to acquire relational and social skills, to be sensitive to the suffering of others, patients or team members and to be face daily challenges.

To be a good ICU nurse, you must first study hard, because the team and the patient need the nurse at all times, secondly, be an example and know how to lead your team because the quality of care depends on how the nurse acts on duty, and lastly, have respect for the team and know that everyone is there to do their best for the one who can’t. (E1)

Studying hard and demonstrating scientific knowledge seems to be a facilitator in gaining the respect and admiration of colleagues, as well as assisting in professional development. These are differential attitudes of an intensivist described by the participants. Thus, Evidence-Based Practice (EBP) can be a determining factor in achieving excellence in nursing care provided in ICUs and achieving the profile of intensive care nurses described by participants.

The EBP brings benefits to the work of nurses, as it seeks to achieve the best results in the performance of care, which gives the profession credibility and visibility. For participants, the intensive care nurse needs to be a professional who constantly seeks knowledge and bases his or her practice on scientific data and uses it to direct their decisions, making care based on empirical knowledge replaced by care based on scientific evidence.
The theory of practice concerning interpersonal relations is very discrepant. Therefore, it is necessary to understand this reality, to understand ways to deal with the daily challenges of being a nurse in an intensive care unit. [...] makes a difference and prepares us better for a career in ICU. (E8)

Beyond theory, what helped the most was clinical practice, the physiology and intensive care disciplines, and interpersonal relationships which can be the most complex discipline for some people. (E9)

Developing relational skills was frequently mentioned by research participants for success in the work of intensive care nurses. They highlight this as one of the biggest difficulties while performing their work in the ICU. In addition, it is essential that nurses recognize the importance of dealing with and interacting and relating with each other, as this can cause significant interference in patient care due to demotivation caused by poorly resolved relationships in the workplace.19-20 Being inserted into the reality of the ICU before graduating seems to facilitate understanding and familiarization in the area.

Dedication and improvement, respect for professionals already working in the area, continuing and permanent training. During the training, seek clinical placements or visit places of interest to gain greater knowledge of the work process and certainty of the place you want to work. This is not only for ICU but for all areas. (E20)

In this context, the dedication of nurses as students is a differential in the quality of their education, not attributing all responsibilities to higher education institutions (HEIs). Participants recognize this responsibility and understand that teaching goes beyond the classroom and it is the student’s duty to seek more knowledge, experience, volunteer for placements and enjoy all the benefits the University offers.
Therefore, the voluntary clinical placement, as mentioned by the participants, may be an alternative to provide greater experience to the student in the practice of care and also allow him or her to be under the supervision of the nurse responsible for the unit, enabling them to perform some technical procedures, which are not always possible to perform during the clinical placements provided by the University.\(^2\)

This is an obstacle for professors of intensive care nursing, which need to help students develop skills and clinical reasoning and strive to expose, this complex reality as much as possible, always connecting with what has already been taught. The ICU scenario usually has an intense work pace, and some patients are so unstable that it is difficult for the student to perform and monitor care, which may not favor teaching in this reality.

In addition, the workload of the internship does not always seem to be sufficient, which may hinder the development of pedagogical strategies, as well as the lack of preparation of the department employees to deal with the students. Participants mention the reduced workload of clinical placements, corroborating a study that states that “[…] reduced workload (very fast clinical placements); internships (many Primary Health Units and little hospital experience) and lack of knowledge in the operating room and chemotherapy”, is common in nursing education.\(^2\)

It is not always possible for the teacher to have control over which situations to expose students to and which patients are best suited.\(^2\) In the ICU, the patient's health status can change rapidly and fast intervention is needed without knowing the clinical outcome or outcome of this situation and how the student will respond.

According to the students, the periods of practical activities are considered as the most significant moments of their education, as this is where they have the opportunity to practice everything they have learned and, in fact, be close to the reality of care. These moments are
extremely important for the student, as the student sees their professional performance, enabling their development and considering the stigmas that contribute to fear, such as technological density and the severity of patients in the ICU context.23

**Conclusion**

The objective of this study was to understand the process of professional education and qualification of nurses in relation to working in intensive care and to understand the difficulties faced by newly graduated professionals in a new and specialized environment, who still deal with doubts and insecurities caused by inexperience. The results of this study reveal some of the competencies and skills required for a good insertion, permanence and performance in the ICU. The results show the experiences of nurses who have gone through this process and realized the implications of starting in a care unit for critically ill patients without proper preparation.

The results indicate that students should seek to know the ICU and the complex reality of relationships with professionals, critical patients and family during the course. The search for volunteer clinical placements provides a closer approach to this environment, as compulsory clinical placements may be negatively affected by the reduced workload, or due to the large number of students, curriculum or absence of clinical placements. In addition, the search for scientific knowledge to support actions, highlighting the PBE as an excellent strategy to direct the conduct of the professional and bring recognition and credibility to the profession.

In addition, specialization is a way to broaden and deepen knowledge arising from undergraduate and acquire new knowledge, and bringing nursing residence as a denser insertion in the ICU environment / reality. Thus, the growing number of places in the ICU nursing area cause many hospital institutions to hire newly graduated nurses, or even hire them directly after passing the entrance exam, the newly graduates can fill the ICU, but it is necessary
that this professional receive training, and is continuously monitored by a more experienced professional, so that they do not feel insecure and have to deal with stressful and unprecedented situations without proper support.

This study contributes to the knowledge of the reality of the ICU for newly graduate professionals entering this department, and which qualifications offer greater support in the work to be performed in the intensive care environment. Undergraduate education provides the necessary foundation for the profession, making lifelong learning of this generalist nurse imperative.

This study is limited as it does not have the purpose of investigating the subjects' training or education regarding the curricular aspects, characteristics of the educational institutions or personal performance, factors that may influence the performance of this professional in his or her first experience in the field. ICU

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