



RESEARCH ARTICLE

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## THE CONTRIBUTION OF THE NURSE PRECEPTOR IN THE NURSING RESIDENT FORMATION IN THE INTENSIVE CARE UNIT OF A TEACHING HOSPITAL IN BELEM-PA

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### ABSTRACT

This study is the result of a master's dissertation degree and had the purpose of evaluating the contribution of the nurse preceptor in the resident's formation at the Program in Intensive Care Unit (ICU), an Uniprofessional Nursing Residency, in a teaching reference hospital, located at Belem, Pará, Brazil. The methodology adopted was a qualitative, descriptive and exploratory study, conducted through interviews with 12 nurses who act as preceptors of a Uniprofessional Nursing Residency Program, from June to August 2019. Data collection was performed through semi-structured interviews and the analysis, by the Iramuteq software use, with a statistical recording data and consequent identification of discussion categories through simple frequency in the analyzed speech. As a result, we identified deficiencies in the process of training and insertion of preceptors in the residency program. We also observed that these professionals have fears and uncertainties regarding the objectives of the residency program, due to lack of theoretical and practical training as well as the absence of a scientific methodological application for teaching and assessment of residents. The lack of training of preceptors is a determining factor that impairs the quality of teaching and nursing care.

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## INTRODUCTION

The health residency programs are a broad postgraduate modality, characterized by a teaching-learning process that takes place in the service, that means, the professional in training (resident) is introduced into the service of health institutions, where he/she acts under the supervision of the preceptor (teaching assistance). This professional is responsible for the systematization of the learning process and technical guidance to residents, the modality provides the resident with the ability to combine theory with daily care practice (LANDIM et al., 2012).

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The residency allows the professional in training to know the reality of health work processes, acquire technical-scientific, ethical and relational skills, as well as safety in the development of their activities, in addition to the awareness of the need for complementary learning, these characteristics being fundamental for the development of their professional identity (ZANONI et al., 2015). The primary function of the preceptor is to teach clinic practice, through formal guidance and with certain objectives and goals. Therefore, among its striking characteristics should be the knowledge and ability to perform clinical procedures. In this context, the preceptor is mainly concerned with clinical competence or with the teaching-learning aspects of professional development, enabling the acquisition of skills and competences by recent graduates, in real clinical situations, in the work environment

itself. It is important to emphasize that formal assessments are also part of the preceptorship (BOTTI; REGO, 2008). The main actors in the process of teaching and learning at residence are the preceptor and the resident, who share teaching and learning, through the exchange of experiences, considerations about daily practice and the (re)construction of knowledge about the reality of health care. The residence, therefore, in addition to training qualified professionals to work in the Unique Health System (UHS), encourages the incorporation of the scientific community in the daily practice of the resident through the encouragement of scientific research (RIBEIRO; PRADO, 2014). Linked to the performance of professional health activities, in particular, the performance in the Intensive Care Unit, a highly complex place, the development and incorporation of new technologies in health allow scientific advancement both in teaching, research, extension and, consequently, improvement of care provided to the user and family, without losing essence of the humanization of care. This study, result of a master's dissertation, aimed to evaluate the contribution of the nurse preceptor in the resident's formation in an ICU at a Uniprofessional Nursing Residency Program in a teaching reference hospital, located at Belem, Pará, Brazil.

## MATERIALS AND METHODS

The project was approved by the Research Ethics Committee of the Universidade do Estado do Pará / Ophir Loyola Hospital under Opinion n°. 3,420,853, in accordance with the legal provisions contained in Resolution 466/2012 of the National Research Ethics Council. The present study has as methodology a descriptive, exploratory approach, from the perspective of qualitative research. The scenario for data collection was the Intensive Care Unit of a teaching hospital, referencelocated at Belem, Para, Brazil. The interviews were conducted with 12 nursepreceptors from the ICU Uniprofessional Nursing Residency Program. The inclusion criteria were: professionals of both genders, with more than one year of experience in the sector and who accepted to answer the interview questions. There were no exclusion criteria. Data collection was performed through a semi-structured interview script, thus enabling professionals to have the opportunity to discuss the topic. The interviews were conducted by one of the researchers, recorded, transcribed and reviewed. Those who agreed to participate in the study were invited to sign the Informed Consent Form. In addition, the interviews took place in the workplace, on a day and time previously scheduled with the participants.

The content of the interviews was recorded, transcribed in full text format in Microsoft Office Software, enabling data could be processed and analyzed by IRaMuTeQ0.7 alpha 2 software (Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires). This software allows performing, automatically, the lexical analysis of content and tables from the frequency of repetition (CAMARGO; JUSTO, 2013). The preparation of the text in the transcription of the interviews was carried out for a *corpus* with analysis by segment of 20 texts. The 12 interviews were organized in a single file. Each one was separated by a command line, comprising only one variable (P), chosen according to the number given to each question (\*\*\*\* \*Q1, \*\*\*\* \*Q2 until \*\*\*\* \*Q4). The questions were suppressed, keeping only the answers complete and referenced to the question. After processing, the Descending Hierarchical Classification (CHD) method was used.

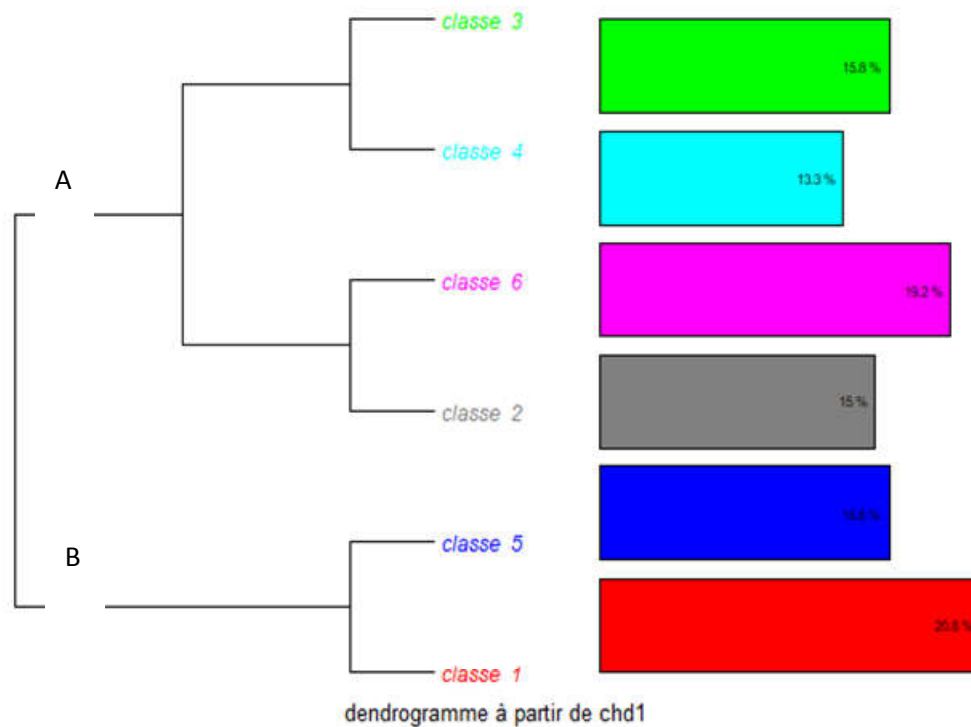
The CHD, in turn, classifies the text segments according to their vocabularies, verifying the differentiation between the words in repeated by means of tests of the type  $\chi^2$  (chi-square), thus creating the classes with their words and characteristic variables. Three steps were taken to perform the HDC: the preparation and coding of the initial text, the descending hierarchical classification, performed by data processing, and the interpretation of classes. For the creation of a word dictionary, the chi-square test ( $\chi^2$ ) revealed the associative strength between words and their respective class. This associative strength was analyzed when the test was greater than 3.84, representing  $p < 0.0001$ . The lower value of the chi-square represented a lower relationship between the variables, becoming not useful in this research. In this process, three categories were identified that highlighted primary information from intensive care preceptors. In order to ensure the integrity and confidentiality of the information and the interviewees, we chose to use alphanumeric codes with the letter "P" referring to Preceptor, followed by an Arabic number corresponding to the order of participation in the interview (P1, P2, P3, so on).

## RESULTS AND DISCUSSION

In the initial summary, the software analyzed and divided the general corpus into 4 texts, separated into 151 text segments (ST). There were 2,868 occurrences (words, forms or words), 726 forms and 394 hapax, this being 13.74% of the occurrences in 54.27% of the forms - hápax, which are words presented in texts only once. When performing the Descending Hierarchy Analysis, the software presented the following results:

- Number of texts: 4
- Number of text segments: 151
- Number of shapes: 726
- Number of hits: 2868
- Numbers of active forms: 367
- Numbers of different shapes: 149
- Numbers of active shapes present at a frequency  $> = 3:110$
- Segment retention: 120 segments used of 151 (79.47%)

From the analyzed content emerged 2 subcorpus (A and B). There are two subgroups of the A subcorpus that present affinity: Class 3 and 4 with approximation and Class 2 and 6 in another group. The approximation of subcorpus B was between Classes 1 and 5 (Figure 1). To achieve a better visualization of the classes, a chart with the list of words of each class generated from the  $\chi^2$  was elaborated, for a significance level  $p > 0.0001$ . It lead to the evocations that present similar vocabulary to each other and different vocabulary from the other classes. The following will be described, operationalized and exemplified each one of these classes mentioned in the CHD. From the significance and solidity of the data, paired with the most statistically relevant words, they were categorized for the discussion of results. (Chart 1). The first category was named "Difficulties in the process of training and insertion of preceptors in the field of residences". In this category, it was identified the difficulties that the preceptors experienced or observed during their process of training and insertion as preceptors of the residency program. It was observed that, through the interviewees' speeches, the residency program does not offer any type of previous training to ensure the nurses' activity.



Source: Results of data analysis from Iramuteq Software v. 7.2.

Figure 1. Descending Hierarchy Analysis (CHD)

Chart 1. Categorization of classes from the contexts of significance

CHD (by approximation)	ST retention	Words significance ( $\chi^2$ for $p > 0,0001$ )	Categorization
Class 3	15,83%	Difficulty	Difficulties in the process of training and insertion of preceptors in the field of residences
Class 4	13,33%	Training, preceptorship	
Class 2	15%	knowledge	The specific activities developed by the preceptors
Class 6	19,17%	Arriving, starting, when, situation	The preceptor role during the teaching-learning process in the field of work of residents
Class 1	20,83%	More, teach, guide	
Class 5	15,83%	Activity, assistance, possible	

Source: Results of data analysis from Iramuteq Software v. 7.2.

That means, the professional who became a preceptor had to perform his teaching activities without training on which evaluation method to use or on techniques that should be reviewed following the programmatic content of the program. It was also observed that there were no criteria defined for the selection of preceptors, since many were invited from the experience in the intensive environment or for having participated in the programs of previous residencies, in this case, as students of the residence. These observations reveal the worrying reality of many residency programs in Brazil, since the choice of preceptors is not based on methodological criteria, but on the need to hire the professional to fill gaps temporarily. The lack of adequate training or no training is highlighted in the interviewees' speech. The fear of the questions and opinions of the residents, the uncertainties regarding the objectives of the program, the lack of theoretical and practical training and the absence of a scientific methodological application compose the main difficulties for the process of performance of the interviewed preceptors. The preceptor 'straining is the starting point for the success of the program, so, the institution must provide means and resources for its preceptors to acquire a dialectical teaching-learning process and promote the application of an educational-pedagogical model, capable of enabling the preceptor to extract alternatives of solutions from the various situations, instead of the complex and contradictory they may be, and that

these alternatives are efficient to overcome obstacles arising from their profession (RIBEIRO, 2015). For this, the preceptor must know and become intimate with the active teaching methods so that the teaching-learning process is developed with excellence. Among these methods, one that can be used is the Problematization Methodology (PM). This methodology aims to value the learning to learn, turning the students independent from the construction of critical-reflective thinking with the help of didactic and content pedagogical strategies. By this, the residency programs become more efficient and adhere to the guidelines and principles of the UHS, in order to transform the model of performance of both residents and preceptors (SILVA *et al.*, 2018). Considering the informations above, the university has the duty to train the preceptors in order to ensure opportunities for these professionals to experience the issues of teaching and learning. It is also necessary that, the university offers refresher courses in specific areas, enabling the participation of these preceptors in scientific events, aiming, therefore, at the proximity of the preceptor to the reality of their students outside the academic environment. Therefore, for the training of these professionals to be effective, it is necessary to have an active channel for communication between institutions, preceptors, tutors, coordinators and students (Antunes *et al.*, 2017). The second category was named "The specific activities carried out by the preceptors". In this category, we sought to identify which were

the main activities that the interviewees developed together with their students as preceptors. Given the interviewees' speeches, it was possible to identify that there is no well-defined schedule of activity between residents and preceptors, however, the assistance activity is highlighted by the interviewees, that means, the residents adapt to the routine of the work camp and follow this routine, without a clear, well-defined and predetermined division of daily, weekly or monthly activities.

These findings reveal great weaknesses of the preceptors during the development of their specific activities with the residents. This fact is justified by the lack of training and courses when they are inserted as preceptors in the residency program. In addition, the development of attitudes and practices of nurses as residence students are essential for their professional training. Therefore, the preceptor, who plays the role of facilitator, must be qualified to apply a scientific teaching methodology appropriated to the reality of the program. It should be taken into account also the regional epidemiological and social characteristics, following a pre-defined schedule that covers, in a satisfactory way, the management and assistance aspects of reality evaluating, finally, in a fair and accurate way, its residents. From this scenario, we highlight that the preceptor has the function of articulating the practice to the scientific knowledge of residents through health training. For this, it is essential that this professional master the clinical practice, the specific pedagogical aspects of their profession so that it is possible to transform the work environment into an educational environment (BOTTI, 2012). Another important role of the preceptor includes the responsibility to facilitate the teaching-learning process and serve as a reference for the learner from their creative and improvisational strategies, mediated by scientific and practical knowledge, in order to develop the learner's skills and improve the quality of training of its residents (FREITAS, 2015).

The success of this preceptor depends on the pedagogical plan provided by the coordinator or tutor of the residence program. In this case, both the tutor and the preceptor have the pedagogical responsibility, however, the daily and constant monitoring with the resident is the non-transferable role of the preceptor who, once trained, converts the work environment into an environment rich in experiences and learning. In order to happen, the preceptor must understand that his or her role includes mediating the process of learning and teaching in the workplace, in addition to problematizing reality and provoking, among residents, the restlessness to build skills capable of making the learner practice the action-reflection process directed to build their daily practice (RIBEIRO; PRADO, 2014). In addition, it is essential that the nurse who acts as a preceptor is in his or her field of work, since this enables the dynamics, the inter and intrapersonal relationship and better knowledge of the physical structure and materials of their health environment. Thus, this preceptor will be able to direct the tasks, observe the skills and difficulties, assist and assess its residents based on their knowledge and skills. Furthermore, this preceptor can situate his students in the environment in which they are inserted, in order to help them understand and reflect on the experienced reality (Ferreira et al., 2018). The third category was called "The preceptor role during the teaching-learning process in the field of work of residents". Regarding this category, we sought to understand, taking in consideration the speeches of the interviewed

preceptors, what is the role of the preceptor during the teaching-learning process for the residents 'training in the work field, in this case, in the intensive care environment. The preceptors highlighted their activities as facilitators of teaching, guiding, answering questions, supporting during technical procedures and improve the existing knowledge among residents. According to Silva *et al.* (2018), the period which nurses act as residents is essential for a differentiated and complete training of this professional, since clinical experience during residency practices enables nurses to develop skills and competencies to build a clinical, humanized and efficient judgment of complex situations in their work environment. Given the benefits that the residency offers to students and the complexity to achieve this success, it is a fact that the residency program must be developed in partnership with the institution's preceptors and coordinators, mediated by a specific schedule and a team trained to ensure a quality education to residents. In order to achieve this success, the preceptorship must build new health care paradigms based on the principles established by the Unique Health System, in order to ensure improvements in the education of residents and in the quality of care to the population (Lima *et al.*, 2015).

Based on these principles, the results of this research presented gaps in relation to the objectives of an institution that aims to build preceptors and residents prepared for health care. According to the statements of the research participants, there is no clear definition of the educational institution towards its preceptors in relation to what should be done so that nursing education is built in a standardized and humanized way in the residency program. It is worth mentioning that the role of the institution is to train its preceptors, which, in turn, should provide possibilities for residents to reflect on the expectations experienced in health services. Thus, it becomes more feasible to establish relationships between theory and practice experienced through continuing education in health, transforming, at the end, the process practice-reflection-praxis into effective practices (SILVA *et al.*, 2014).

## Conclusion

This study permitted a critically reflection on the forming processes, insertion, care, managerial and pedagogical practices, and teaching-learning of residence preceptors in ICU Nursing. Regarding the objective proposed for this study, this was achieved, thus, it was possible to strengthen the knowledge, attitudes and practices of preceptors, coordinators, residents and institutions, to ensure the elementary construction in qualitative training in health. We observed that the practice of preceptory without previous specific training limited the answers of the interviewees. The development of skills, methodological and didactic techniques are essential for the improvement of the quality in residence teaching. To this end, the preceptor should be trained by the contracting institution, a fact that did not occur with most of the preceptors interviewed. Given these results, we believe that this research can help to improve the reception of preceptors for nursing residency programs in the country, may also provide moments of reflection and changes in the institution that was the setting of this study, with the possibility of training teams of preceptors already hired and new hired.

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