

ASSESSMENT OF THE TRAINING OF NURSING TECHNICIANS BY NURSES WHO WORK IN HOSPITALS

AVALIAÇÃO DA FORMAÇÃO DO TÉCNICO DE ENFERMAGEM POR ENFERMEIROS DA PRÁTICA HOSPITALAR

EVALUACIÓN DE LA FORMACIÓN DEL TÉCNICO EN ENFERMERÍA POR ENFERMEROS HOSPITALARIOS

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Submitted on: 2015/09/06

Approved on: 2015/12/03

ABSTRACT

Aim: To analyze how hospital nurses assess the training of nursing technicians by curricular references. **Method:** This was an exploratory, cross-sectional survey with a quantitative approach, conducted in two hospitals in a town in the countryside of the state of São Paulo, with 42 nurses, 17 in a private hospital and 25 in a public hospital. Participants answered a structured questionnaire using the Likert Scale from December 2013 and March 2014. **Results:** For 73%, the profile of trained nursing technicians did not meet the expectations of nurses and 90% understand that the process of teaching theoretical and practical learning and internships should be modified; for 68%, the professional's ethical commitment is precarious; 86% understand that the drafting of a political pedagogical project should involve hospitals; learning content, for 75%, should be revised to meet the current reality of the hospitals; in the category of evaluation, 75% understand that they should be stricter; 62% believe that we need to better qualify teachers and internship supervisors; and 68% claim that the workload of internships should be expanded. The average of 34.5% understand that the skills described in the references are satisfactory, while 45.9% believe that they are poor and 12.1% claim that they are inadequate. It can therefore be concluded that, in the evaluation of the participants, the design of the course, the articulation of theory with practice, and teacher and internship supervisor education need to move more towards qualifying the skills of nursing technicians as regards nursing care in hospitals.

Keywords: Education, Nursing; Licensed Practical Nurses/education; Education, Professional; Professional Competence; Hospitals.

RESUMO

Objetivo: este estudo analisou como enfermeiros da prática assistencial hospitalar avaliam a formação dos técnicos de enfermagem a partir dos referenciais curriculares nacionais. **Método:** pesquisa exploratória, transversal, com abordagem quantitativa. Participaram do estudo 42 enfermeiros assistenciais, 17 de um hospital privado e 25 de hospital público de uma cidade do interior do estado de São Paulo. Os participantes responderam a um questionário estruturado e Escala de Likert, entre dezembro de 2013 e março de 2014. **Resultados:** para 73%, o perfil dos técnicos em enfermagem formados não atende às expectativas dos enfermeiros; 90% entendem que o processo de ensino-aprendizagem teórico-prático e os estágios devem ser modificados; para 68%, o comprometimento ético desse profissional é precário; 86% compreendem que a elaboração do projeto político-pedagógico deve ter a participação dos hospitais; os conteúdos de ensino para 75% devem ser revistos para a realidade atual dos hospitais; no quesito avaliação, 75% compreendem que deva ser mais rigorosa; 62% avaliam que é preciso qualificar melhor os professores e supervisores de estágio; e para 68% a carga horária dos estágios deve ser ampliada. A média de 34,5% compreende que as competências descritas nos referenciais estão satisfatórias, 45,9% acreditam serem precárias e 12,1% insuficientes. Concluiu-se que, na opinião dos participantes, o planejamento do curso, a articulação da teoria com a prática e a formação docente e do supervisor de estágio necessitam avançar para qualificar as competências do técnico de enfermagem para o cuidado de enfermagem nos hospitais.

Palavras-chave: Educação em Enfermagem; Técnicos de Enfermagem/educação; Educação Profissionalizante; Competência Profissional; Hospitais.

RESUMEN

Este estudio tuvo como objetivo analizar cómo los enfermeros hospitalarios evalúan la capacitación de los técnicos en enfermería a partir de los planes de estudio nacionales. Se trata de una investigación exploratoria, transversal, con enfoque cuantitativo. Participaron 42 enfermeros asistenciales, 17 de un hospital privado y 25 de un hospital público de una ciudad del interior del estado de San Pablo. Entre diciembre de 2013 y marzo de 2014 los participantes contestaron un cuestionario estructurado y la escala likert. Para el 73%, el perfil de los técnicos en enfermería no atiende las expectativas de los enfermeros; el 90% cree que el proceso de enseñanza aprendizaje teórico-práctico y sus clases prácticas deben ser modificados; para el 68% el compromiso ético de dicho profesional es bajo; 86% entienden que la elaboración del proyecto político pedagógico debe contar con la participación de los hospitales; para un

75% los contenidos de las materias deben ser reconsiderados en función de la realidad de los hospitales; el 75% sostiene que las evaluaciones deben ser más rigurosas; un 62% opina que los profesores y supervisores de las prácticas deben estar más capacitados y para un 68% habría que aumentar la carga horaria de las clases prácticas. Un promedio del 34.5%, cree que las competencias descritas son satisfactorias, 45,9% piensan que son deficientes y 12,1% insuficientes. Para los participantes la planificación del curso, la articulación entre la teoría y la práctica y la capacitación docente y del supervisor de las prácticas deben mejorar con miras a que el técnico en enfermería se capacite en las habilidades necesarias a la atención de enfermería en los hospitales.

Palabras clave: Educación en Enfermería; Enfermeros no Diplomados/educación; Educación Profesional; Competencia Profesional; Hospitales.

INTRODUCTION

It is known that, on average, 70% to 90% of the professionals of a hospital nursing team, such as those in Intensive Care Units, consist of nursing technicians.¹ In this scenario, the search for nurse's opinions on hospital practices regarding mid-level training in nursing means expanding the understanding that one has about the results of the training of nursing technicians carried out in vocational schools. These results can expose both potentialities and weaknesses, and thus contribute to critical reflections on the pedagogical project of the course, teacher training, among other such aspects, considering the medical care provided at hospitals, which involves the full realm of healthcare.

It is understood that the greatest challenge today confronted by mid-level vocational training in nursing has been the difficulty to overcome the subservient view of the technical, historical, and socially constructed practice of this level of education and to allow workers more autonomy to make decisions, manage their own professional lives, and facilitate conditions so that these professionals can assume responsibility when faced with complex work situations.²

The possibility of breaking from this view arose with the concept of competency-based education and training.³ The challenge set forth with the approval of Brazilian Law 9.394, when the process of reforms in the Brazilian educational system legally took effect, was to make changes in school curricula to reorient educational practices that had hitherto been organized in disciplines, toward a practice geared toward the construction of competencies. For this, the process of the drafting of programs and curricula began to be guided by the National Curriculum Directory (NCD) for Mid-level Technical Professional Training and by the National Curriculum References (NCR) for professional training. These offer additional information and recommendations for the drafting of course plans, with the identification of functions and sub-functions, distinguishing competencies, skills, and technological bases involved in and necessary for this process.^{4,5}

The concept of competencies in education has led to broad national and international debates, which involve a cautious political and cultural view. In this study, "competency" is understood as the combination of knowledge, motiva-

tions, ethical values, attitudes, and emotions, as well as components of social character that, when mobilized, generate an effective action within a particular context.^{3,6} "To be competent is to know how to do a task well."^{7,20} The task is directly linked to knowledge, which we understand as the cognitive and procedural domain of the nursing technician in specific healthcare contexts, which loses its meaning if it is not linked to a political will, an intentional wish to provide care, and which must count on one's own free will, translated into a power to guide the process.⁷

It is important to remember that competencies evolve historically according to social, economic, and cultural contexts, and depend on the world views of those who define them, that is, of its actors; and that the educational centers need to continuously review their teaching methods and advance in teacher education to meet current demands.⁸

This perspective is aligned with healthcare policies, in which the notion of competency has a critical-emancipatory character and takes into account the broad range of aspects related to the professional practices of workers and to the specificities of the different units of production in healthcare, to the means of insertion and organization of the work, and to the care provided to individual, group, and collective demands. The competencies are identified through the integrator and structural frameworks of the professional practice.^{4,5}

However, what has been observed is a certain distancing of the mid-level vocational schools in nursing with the core principle of this proposal and with the actors who could contribute to this process and its assessment, among whom are nurses who work in hospitals. At the core of our reflection is the hypothesis that the changes that have occurred in mid-level technical professional education and training in nursing were merely legal adaptations, or arrangements, made to the curricular structure when faced with reforms in teaching and its demands, which has had little connection to the workplace itself.

In this sense, the guiding question of this study was: How does the hospital nurse assess the training of nursing technicians as regards the competencies of professional practices referenced by educational legislation?

Thus, this study analyzed how nurses who work with hospital care assess the training of nursing technicians by curricular references

MATERIALS AND METHODS

This research is an exploratory study, with a quantitative approach and a cross-sectional framework. This type of contextualized study through theoretical perspectives can bring a concrete basis to the understanding of educational phenomena, which go beyond casuistry and contribute to the production or confrontation of educational policies for the planning and management of education, yet still guide general and specific pedagogical actions.⁹

The fields of study included two hospitals from a city in the countryside of the state of São Paulo. One of the hospitals is a private institution, characterized by its work in highly complex procedures. It contains 89 hospital beds and an open clinical staff. The other is a public institution, which was inaugurated in 2008 and provides clinical and surgical medical care of mid-level complexity. This hospital contains 51 hospital beds.

The sample consisted of 42 nurses, of a total of 55 nurses that make up the nursing teams from both hospitals. As inclusion criteria, this study considered nurses that work in nursing care, who are in direct contact with the nursing technicians, and who have one or more years of experience in the institution.

The data were collected between December 2013 and March 2014. Interviews were conducted, supported by a structured questionnaire in three stages. The first contained sociodemographic and educational data; the second, the assessment of the general aspects of the training of nursing technicians; and in the third, the Likert Scale was applied,¹⁰ elaborate based on NCRs,¹¹ validated by three professors/nurses who work with professional training. This article selected the answers referent to the rehabilitation/recuperation function, in the sub-function of medical care provided to customers/patients in clinical treatment, with 11 competencies.

Through the dimension of competency, the participants assessed the educational training of nursing technicians on their team, which was defined in the following manner: excellent, when the competency is applied and the professional performs activities within the standards of quality and established performance; satisfactory, when the competency is improved and the professional resolves nearly all activities; precarious, when the competency is improving and the professional resolves only simpler activities; inadequate, when the competency presented by the professional is below expectations.

The data were tabulated in electronic charts using *Microsoft Excel for Windows 7.0*, while simple and descriptive statistics were performed in the *EpiInfo 3.5.3* program.

This study met the recommendations set forth in Resolution 466/2012 and consists of a larger project approved by the Research Ethics Committee, logged under protocol CAAE: 01433012.8.0000.5393.

RESULTS

As regards the main sociodemographic, educational, and work requirements investigated in this study (Table 1), this sample is characterized by the prevalence of the female sex (86%), with an age of between 25 and 53, average of 36.4 years (SD = ±9.06).

Table 1 - Sociodemographic and work data of the nurses from the studied hospitals, Ribeirão Preto, SP – 2014

Variables	n	%
Gender		
Female	36	86.00
Male	6	14.00
Type of institution in which the nurse works		
Public Hospital	17	40.00
Private Hospital	25	60.00
Type of institution in which the nurse did her undergraduate studies		
Public School	15	36.00
Private School	27	64.00
Time of experience with a degree		
2-5 years	7	17.00
6-10 years	16	38.00
11-15 years	13	31.00
16-20 years	4	9.00
More than 20 years	2	5.00
Has a technical degree in nursing		
Yes	13	31.00
No	29	69.00
Time of experience as a nursing technician		
5-10 years	9	69.00
11-16 years	4	31.00
How he/she knows about the technical course in nursing		
Professor	8	26.00
Internship supervisor	10	32.00
Ex-student	13	42.00
Has done vocational training		
Yes	12	29.00
No	30	71.00

Source: research data.

For 73% of the interviewed nurses, the profile of nurses' aides and technicians who had graduated in the previous three years and were contracted by the respective hospitals from this study did not meet care expectations. For 90% of the interviewed nurses, the teaching-learning theory-practice process must be modified. In addition, 85% were of the

opinion that this change must also extend to the internships, whereas 68% assessed that the ethical-professional commitment with the patient and with the other professionals of the nursing team is precarious.

The pedagogical planning for 86% of the nurses must be elaborated by the teaching institutions, together with the participation of the hospitals; the teaching contents, for 75% of the nurses, need to be revised to meet the current reality of the hospitals; on the issue of assessment, 75% also understood that assessments should be stricter; 62% assessed that it is necessary to better train the professors and internship supervisors; and, finally, for 68% of those interviewed, interns' workloads should be expanded.

The result of the Likert Scale is presented in Table 2, which treats the evaluation of the interviewed nurses about the competencies surrounding hospital practices in the training of nursing technicians, which are contained in the NCRs.¹¹

The average found in the Likert scale was of 3.3%, which assesses the level of excellent competence of the nursing technician to be contracted by the hospital; for 34.9%, the competencies are satisfactory; 47.8% assessed them as precarious; and 9.7% assessed them as inadequate.

DISCUSSION

CHARACTERIZATION OF PARTICIPANTS

The profile of the participants is highlighted by their maturity and by their experience in nursing. This profile is characterized by consisting mostly of women, whose majority had studied nursing at private schools. What calls attention is that the participants have acquired important experience in the training of nursing technicians, either as a teacher or as an internship supervisor. However, this study also found professionals who had been technicians and who had worked in this function while concluding their undergraduate studies in nursing.

The data confirmed that the feminization of the workforce has historically persisted in nursing.¹² Findings also confirmed the presence of professionals who completed their professional training and rose on the social ladder after a period of experience as a nursing technician. Studies on the profile of new students in undergraduate courses in nursing reveal that this phenomenon occurs more often in private schools, which corroborates with the present study's results.¹³

Table 2 - Assessment of the competencies described by the NCRs, for medical care provided to customers/patients in clinical treatment. Ribeirão Preto, SP – 2014

Competency	Excellent		Satisfactory		Precarious		Inadequate		Total	
	n	%	n	%	n	%	n	%	n	%
Identify signs and symptoms that indicate clinical and psychological disturbances and their complications in the body, assessing the severity.	1	3.00	14	33.00	18	43.00	6	14.00	39	93.00
Identify procedures and nursing care indicated in the medical care provided for basic customer/patient needs.	1	2.00	12	29.00	26	62.00	2	5.00	41	98.00
Interpret guidelines relative to the prevention and control of hospital infections.	2	5.00	12	29.00	22	52.00	5	12.00	41	98.00
Interpret safety guidelines relative to anti-cancer treatments.	2	5.00	9	21.00	17	41.00	14	31.00	41	98.00
Knowledge about the general characteristics of a healthy human being, with a holistic view as a reference.	2	5.00	14	33.00	20	48.00	5	12.00	41	98.00
Identify the ageing process in physiological, psychological, social, and pathological aspects.	1	5.00	16	38.00	19	45.00	4	10.00	41	98.00
Characterize the prevention, treatment, and rehabilitation of the clinical disorders that most commonly affect adults/elderly.	1	2.00	15	36.00	23	55.00	1	2.00	40	95.00
Interpret the technical guidelines about the workings of the specific materials/equipment.	1	2.00	15	36.00	22	52.00	2	5.00	40	95.00
Identify the most common antiseptics used when applying bandages.	1	2.00	15	36.00	21	50.00	3	7.00	40	95.00
Characterize the diverse types of bandages.	1	3.00	16	38.00	19	45.00	3	7.00	39	93.00
Know about the organization/structure and workings of the clinical unit.	1	3.00	23	55.00	14	33.00	1	2.00	39	93.00

Source: research data.

It is understood that this profile of work involvement and training as a nursing technician grants the participants the right to a more detailed overview, given that one's experience passes through one's reality and faces the questions raised by the researchers, but now with a possibly more refined, more critical, and more reflective view, which allows one to consider that the answers to this study were qualified and conscientious.

ASSESSMENT OF THE TRAINING OF NURSING TECHNICIANS

In general, the participants report that the profile of students beginning the nursing technician's course does not meet the expectation of hospital care researched in this study. They share a practically unanimous opinion that there is a need for change in the teaching-learning process. The results express that part of the technicians begin at hospitals with a precarious cognitive, procedural, and attitudinal knowledge, in other words, they are limited in their ability to solve the simplest of problems. Thus, their competency must be improved. These participants also question the quality of the process of training both professors and internship supervisors, as well as the lack of better course planning.

It is also understood that the professional training necessary to be qualified to provide healthcare consists of a process mediated dialectically by aspects that reflect the transformations taking place in the working world, namely technology, ideology, and workforce management.¹⁴

These transformations are based on the practices of healthcare developed by multidisciplinary teams and guided by healthcare protocol consisting of scientific evidence to promote patient safety; problem-solving actions, and the principles of comprehensive care. These constitute healthcare practices that have added new technologies and equipment that demand differential knowledge, whose register can be seen through electronic mediums.^{15,16}

In the international context, what is discussed today is how to revolutionize nursing education, seeking safe and efficient training for healthcare based on the individual needs of the patient in specific situations. From this point of view, students are placed at the center of the educational process, and their learning should aid in guiding them toward their own reflection on the praxis itself and an efficacious dialog.¹⁷

It can be observed that this need is recurring and that, in Brazil, the changes have been leveraged by competency-based education and training.⁴ It is important to recognize that the progress in NCGs are unquestionable, given that this progress has sought to align professional training in Brazil, respecting its complexity and diversity.

However, the present study shows that the training of nursing technicians has worn thin in a scenario of change. It is understood that educational practices have possibly been reproduced with no in-depth reflection on this training through competencies and without a synergetic articulation among the actors involved in this educational practice. It could be observed that the changes expected from the NCGs and NCRs has served to deconstruct the cultural identity of the professional courses of the past, which maintained a certain technological and pedagogical rigor. On the other hand, the significant increase in vocational schools has not been accompanied by assessments that could qualify the teaching and learning processes, as is the case of accredited American schools, in other words, these must prove that they are apt to offer high-quality courses.¹⁷

To overcome this incongruence between school work and hospital work, it is necessary to make headway in the construction of a Course's Pedagogical Project (CEP), which is not merely a mission for the school's administrative board. Much to the contrary, this should be a collective project in which common interests concerning the quality of care with patient health should strengthen the dialog among broad range of professionals involved in this process:^{8,17} professors, internship supervisors, ex-students, healthcare managers, community representatives, among other segments.

Nevertheless, the educational institution maintains autonomy in the conception, drafting, execution, assessment, and revision of its political-pedagogical project. This represents a working instrument of the education community, respecting the laws and educational guidelines already in place, as well as the identity of the professional profiles of completing one's degree, which contemplate professional knowledge, competencies, and know-how demanded due to the nature of the work; technological developments; and socioeconomic and environmental demands.⁸

As regards the teaching-learning process, what could be noted was the concern of the interviewees regarding questions on ethics (professional attitude) and techniques (specific and procedural knowledge). Results from the Likert Scale confirm this, since, for the majority of the interviewees, the level of competency referent to clinical care is either precarious or inadequate, even though some reported it as being satisfactory, which points out certain progress on the issue. The individual discussion appears to be unnecessary at the present moment, since what is of interest here is to highlight that the training of the nursing technician needs to review the teaching-learning process, as the interviewed nurses propose.

Among the question raised by those interviewed is the need for articulation between theory and practice, as well as the expansion of the intern's workload. These arguments that do not fade empirically, as they are quite real. Moreover the nursing

courses are valued by their actions in real professional practice scenarios. This is a concern that is expressed legally⁶ and that, to a certain extent, incurs complex articulations from educational management to guarantee the best scenarios. The concept of 'practice' is a question that has been historically central to the training of the nursing technician, considering that the first courses were essentially performed in the workplace itself. The theoretical foundation of the practice occurred only later, gradually.^{3,4} Its concept has evolved and has brought advances in the training of professors and internship supervisors.

In the 1960's, a 'practice' was conceived as the acquisition of experience, understood as a model to be imitated, the good-practice to be acquired.¹⁸ In this sense, the nurse's professional training was geared toward the reproduction and exercise of pre-established models, and the professors chosen to teach were those with recognized technical skills. In the 1970's, the 'practice' was no longer seen as a reference for theoretical foundations and began to be highly valued. In this phase, one can see the expansion of the theoretical workload of the courses. Legally speaking, educational training began to be demanded of all teachers in both high schools and vocational schools. The understanding of the need to articulate theory with practice, and the concept that this relationship is inextricable, arose in the 1980's.^{2,18} From this point of view, the course internships began to be seen as a moment of integration that should be carried out in conjunction with theory.

It is understood that 'practice' is a social activity supported by the theories that they themselves construct.¹⁸ In this sense, we understand that the mere increase in practical workload for nursing technician students is not enough. What is needed is a reflection on and a theorization of healthcare practices. Thus, there needs to be a reflection on the practice that unites theory and practice.

Also corroborated in this idea is the fact that in all practices there exists a relationship between spontaneity and reflection, that is, between the levels of high and low conscientiousness.¹⁹ With this, the break from the technical and mechanical tendencies found in the training of nursing technicians² means teaching them to act in a conscientious manner, to reflect on their actions, using a theoretical and scientific basis, a process which should begin in the vocational school, but that should also extend to the workspace continuously, since knowledge is both dynamic and procedural.

The present study confirms that, for the interviewed nurses, the discussion surrounding this issue needs to be broadened, as does the selection of teaching contents, teaching strategies, and resources involved in each activity, in other words, there is a need to reflect on the competencies and skills required to provide proper healthcare in hospital practices, which should appear in curriculum references.

Teaching resources, such as virtual learning objectives and simulations, are alternatives that can contribute to the teaching-learning process and the development of various competencies, given that the lack of teaching didactics and expository strategies used by professors in nursing technician courses have also been related to students' lack of motivation. Nonetheless, these are technologies that are still in need of further assessment to be considered qualified teaching approaches.²⁰⁻²²

Most agree, however, with the affirmation that the competencies to be developed in the nursing technician courses imply results. In this sense, assessments can ensure the development of essential knowledge, skills, and attitudes for the professional to be prepared to enter the job market. Essentially, education focuses on student performance to achieve these curriculum goals.²³

From this viewpoint, education in the training of nursing technicians who are aware of their actions depends on professors from the initial and continued training who understand the importance of articulating theory with practice in the wide range of learning environments to measure student performance. These actions focus on the ethical and sensitive view of the cultural and political values in everyday interactions with students.⁵

This daily, hand-crafted construction, founded on knowledge and assessed procedurally, which is concerned with and acts because of and in order to provide the proper healthcare to the patient, is what is understood as education. In this sense, the pedagogical competency involves a dynamic group of activities developed together with the students, which requires the engagement of the professor, who influences them through his/her own experiences in order to add quality to the learning of how to provide this type of healthcare.²⁴

CONCLUSION

It can therefore be concluded that, for the interviewed nurses, the current training of nursing technicians in the scenario studied herein fails to meet the expectations of hospital care. They unanimously suggest that it is necessary to make changes that can improve the pedagogical planning of the courses, the inseparable articulation between theory and practice, and the competent pedagogical training of the professors and internship supervisors in the construction of conscientious and ethical educational practices.

The complexity of the problem raised by this study limited the discussion to the pedagogical project of mid-level training courses in nursing from the standpoint of competency-based education and training. However, the voices of the professionals in hospital care for this dialog were brought to the forefront.

We, therefore, recommend a rapprochement among the educational centers, the hospitals, and/or the healthcare institutions. Many weaknesses were detected that the schools

should be aware of, routinely calling the nurses who work directly with nursing technicians to contribute in the assessments and possible changes in educational practices.

We therefore suggest that the managers from vocational schools, the professors, and the supervisors take a collective look at the references, reflect on these, and restructure these according to the changes that they are experiencing in the field of hospital care.

It should also be considered that the training of nursing technicians needs to qualify the significant reforms already underway in the Brazilian educational system, which involve concepts and principles referenced by academic research, by looking at the learner as an active, thinking, autonomous subject, who is a protagonist in the process, to develop a competent ethical approach that is committed to healthcare and to giving meaning and value to each professional activity. In the end, the aim is to teach the student in nursing technician courses how to execute one's task appropriately and conscientiously.

ACKNOWLEDGEMENTS

The authors would like to thank the Pro-Education in Health, linked to CAPES public Notice 024/2010.

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