Chapter 02 / Capítulo 02

Health and Professional Practice in Argentina: Applied Research in Patient Care, Workforce Training, and Health Interventions (English Version)
ISBN: 978-9915-704-19-7
DOI: 10.62486/978-9915-704-19-7.ch02
Pages: 8-20

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Proposal to develop research skills in nursing staff who perform care duties / Propuesta para adquirir competencias investigadoras en el personal de enfermería que cumple funciones asistenciales

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ABSTRACT

Nursing professionals are immersed in the rapid social, technological, educational and healthcare developments that are taking place worldwide. They must respond with quality to new patient care needs while adapting to an increasingly competitive world of work. In this regard, research enables them to obtain information and generate their own knowledge, which is necessary for decision-making and problem-solving in nursing practice. It is the means to respond to these new demands and, at the same time, to highlight the humanistic and autonomous nature of nursing. To design a training programme to develop research skills in nursing staff who perform care functions. The methodology to be used in an educational intervention aimed at nursing staff performing care functions in a paediatric intensive care unit at a private hospital in Rosario is described. The intervention will take place between 3 March and 9 April 2025 and will consist of seven face-to-face meetings, during which a series of contents will be presented with the aim of developing research skills in nursing staff. An assessment of the nurses' knowledge will also be carried out at two points in time: before and after the intervention. Educational intervention using a survey-format instrument.

Keywords: Training; Research Skills; Nursing Staff.

RESUMEN

El profesional de enfermería se encuentra inmerso en el acelerado desarrollo social, tecnológico, educativo y sanitario por el que se atraviesa a nivel mundial; debiendo responder con calidad a las nuevas necesidades de cuidado de los pacientes al mismo tiempo que debe adaptarse a un mundo laboral progresivamente más competitivo. En este sentido la utilización de la investigación permite obtener información y generar conocimientos propios, necesarios para tomar decisiones y resolver problemas del quehacer enfermero; siendo el medio para responder a estas nuevas exigencias y al mismo tiempo hacer visible el carácter humanista y autónomo de enfermería. Diseñar un programa de capacitación para adquirir competencias investigadoras en el personal de enfermería que cumple funciones asistenciales. Se describe la metodología que se utilizará en una intervención educativa dirigida al personal de enfermería que cumple funciones asistenciales en una unidad de terapia intensiva pediátrica de un sanatorio privado de Rosario. La intervención se desarrollará durante el periodo comprendido entre el 3 de marzo al 9 de abril del año 2025; la cual constará de 7 (siete) encuentros presenciales en donde se expondrán una serie de contenidos que apuntarán a desarrollar competencias investigadoras en el personal de enfermería. Así mismo se llevará a cabo una valoración de los conocimientos que poseen los enfermeros en dos momentos siendo éstos: pre y post. Intervención educativa por medio de un instrumento en formato de encuesta.

Palabras clave: Capacitación; Competencias Investigadoras; Personal de Enfermería.

INTRODUCTION

This project seeks to design a training program that develops research skills among nursing staff, accompanied by knowledge-based skills.

When we talk about training, the term refers to an active and ongoing process that consists of acquiring, maintaining, renewing, reinforcing, updating, and increasing the knowledge, skills, and attitudes that enable them to face and solve, or where appropriate, contribute to the improvement of problems to preserve and improve the competence and attitudes of staff who have completed their formal education, to address technological changes and productive innovation competently and profitably. Thus, when discussing continuous training, it is essential to understand that when workers take on a professional activity, they bring with them prior knowledge, the result of their entire life history, and the formal professional training required.[1]

In this context, training is the most important resource available to healthcare institutions for the education and professional development of their staff. Its purpose is to address innovation and technological change competently and beneficially, ensuring the achievement of organizational goals in accordance with the institution's values and objectives. To this end, the personal development of its members is fundamental, as it seeks to improve skills and increase knowledge in specific areas, and to change attitudes to generate proactive individuals. Therefore, all healthcare personnel, in the exercise of their profession, are implicitly committed to continuous training.[2]

Like any administrative process, training should be seen as an investment and a means of developing nursing staff's skills, as there is a direct relationship between attendance at training courses and improved nursing productivity. In addition, it helps reduce accidents and work errors, improve the organizational climate and job satisfaction, and enhance the safety and quality of patient care.[3]

Based on this, when proposing a training program, the need to design a pedagogical and didactic proposal to impart learning in a specific field is addressed. This process involves making coherent decisions about:

- The learning needs to be addressed.
- The appropriate educational approach.
- The profile of participants and the contexts of action.
- The selection of content and knowledge resources.
- The degree of control over the content and the participants' margins of autonomy for the construction of their learning.
- The organization of individual and group learning activities.
- Monitoring and evaluation of the process and results.

The training tools, strategies, activities, and resources are highly varied, and their selection and sequence depend on the training program's purposes and objectives, as well as the available and relevant resources.

On the other hand, it should be noted that:

- One of the main limitations affecting the effectiveness of a training program is the lack of a prior analysis of the needs that are expected to be addressed or improved through such actions.
- It is necessary to distinguish between needs that can be enhanced through training and those that could be addressed by other institutional strategies or means. In other words, it is essential to avoid the tendency to expect training to solve problems that are caused by other factors.
- Training processes and outcomes must aim to improve practices themselves. In other words, it is not just a matter of distributing knowledge, but of considering its transfer to practice. Therefore, a well-organized program should consider the monitoring and evaluation of learning and its transfer to professional practice.[4]

Based on this, a survey (post-educational intervention) will be conducted to assess the knowledge acquired during the training, as this will be an optimal tool for evaluating the design and development of future educational interventions. Finally, it should be noted that to achieve the development of health services and their care teams, it is essential to resort to continuous training, since this activity, framed within intentional and planned actions, has the mission of strengthening knowledge, skills, attitudes, and practices that the daily dynamics of the services do not provide, at least on a sufficient scale; to improve the quality of health care by strengthening human capital.

The purpose of this intervention project is to increase nursing staff's use of scientific information in nursing practice, so that the care provided by these professionals is based on scientific evidence that answers the question: What care is most appropriate to meet the patient's needs? When and how often should it be applied? What warning signs should be kept in mind to avoid complications?

In this sense, the aim is that the use of scientific information not only improves nursing practices but also increases scientific knowledge and research interest, resulting in improved quality of care and patient safety.

General Objective

Implement a training program to develop research skills in nursing staff who provide care in a pediatric intensive care unit at a private hospital in Rosario, during the period from March 3 to April 9, 2025.

METHOD

Training Objectives

General Objective

To develop research skills in nursing staff who perform care functions in a pediatric intensive care unit at a private hospital in Rosario, during the period from March 3 to April 9, 2025.

Specific Objectives

- Train nursing staff to conduct research related to specific patient care based on their pathology.
- Train nursing staff in the development of research communication skills.
- Train nursing staff in the preparation of a scientific article to disseminate research.
- Identify the skills acquired by nursing staff in relation to the activities carried out in the training.

Schedule

- The training program will begin on Monday, March 3, and end on Wednesday, April 9, with a total of seven in-person meetings planned.
- The first six (6) sessions will take place on Mondays from 10 a.m. to 12 p.m. and Wednesdays from 4 p.m. to 6 p.m., each lasting two hours.
- The seventh session will be devoted to evaluating the training program. It will last one hour. * Nursing staff who register may choose the day and time that is most convenient for them, subject to availability, with a maximum of 15 participants.
- Each meeting will consist of an oral presentation accompanied by audiovisual material and theoretical and practical methodologies. In addition, there will be interactive presentations that encourage audience participation.

A workshop will be held, consisting of seven sessions, each with specific objectives and defined purposes to achieve the overall aim of this intervention.

The schedule will be as follows: 1st, 2nd, 3rd, and 4th Meetings:

Objective

To train nursing staff to conduct research on specific patient care according to their pathology.

Purposes

- Improve the effectiveness of care.
- Improve the efficiency and effectiveness of care.
- Build scientific evidence to support nursing actions.

Activities

1. Before the first meeting begins, a survey (pre-intervention) will be administered to assess nurses' knowledge of research skills. (Survey I)Before signing the informed consent form.
2. Each participant will then be asked to select a hospitalized patient.
3. Based on the selected patient, an oral presentation accompanied by audiovisual material will be used to instruct participants on the first steps in conducting research. After the presentation, nurses will be asked to:
    - Correctly identify and formulate the research question, according to the pathology of the selected patient.
    - Distinguish between methodological designs and their characteristics.
    - Select the methodological design that answers the research question.
    - State the aspects related to the chosen research methodology.
    - Develop the research project.
    - Conduct the research.
    - Apply the results of the research to nursing practice.
    - Throughout the development of the above activities, assistance will be provided in the form of relevant corrections and ongoing tutoring using theoretical and practical methodologies, so that all sections can be completed correctly.

5th Meeting

Objective

To train nursing staff in the development of research communication skills.

Purpose

To learn how to present research papers at scientific events.

Activities

Oral presentations accompanied by audiovisual material and theoretical-practical methodologies will be used. In addition, presentation dynamics will be developed in which the active participation of the audience will be encouraged so that they can:

- Identify the characteristics of scientific events.
- Distinguish the characteristics of different types of scientific communication.
- Learn how to prepare oral presentations using PowerPoint (Class practice).
- Learn to defend the work presented in public (Class practice).
- Understand the ethical implications of scientific dissemination.

6th Meeting

Objective

To train nursing staff in the preparation of scientific articles for the dissemination of research.

Purpose

Learn how to publish research in scientific journals.

Activities

Oral presentations accompanied by audiovisual material and theoretical-practical methodologies will be used. In addition, dynamic presentations will be developed in which the active participation of the audience will be encouraged so that they can:

- Learn about the characteristics of dissemination in scientific journals (rules, essential details, mistakes to avoid)
- Apply scientific writing standards and styles.
- Correctly cite and reference the bibliography consulted.
- Learn about the ethical and legal aspects (plagiarism) that must be taken into account when conducting research.
- Learn the steps to follow to publish research.

7th Meeting

Objective

Identify the knowledge acquired by nursing staff about the activities carried out in the training.

Purpose

- Assess the knowledge acquired during the training.
- Assess nursing staff satisfaction with the training program.

Activities

- A survey (post-intervention) will be administered to assess the skills acquired during the training (survey II).
- A questionnaire will then be administered to assess nursing staff satisfaction with the training program, to obtain information for use in future interventions (survey III).

Table 1. Determination of deadlines

Activity	February 2025	March 2025	April 2025
Presentation of the training program to the institution's authorities. (Head of Service, Nursing Coordinator, Head of the Nursing Department, Medical Manager)			
Submission of authorization request to the Medical Manager to implement the training program			
Start of the training program: 1st meeting			
2nd meeting			
3rd meeting			
4th meeting			
5th meeting			
6th meeting			
7th Meeting Training Evaluation			

Table 2. Determination of necessary resources

Meeting	Resources Needed		Quantity	Unit Amount	Total Amount
1st,2nd, 3rd, and 4th	Human Resources	Head of UTIP service (provided by the institution)	16 hours	$6354	$101 664
		Nurse Andrea Vázquez (training coordinator)	4 p.m.	$5354	$85 664
		Medical therapist (provided by the institution)	4 p.m.	$12 500	$200 000
		Medical specialists according to pathologies included in research projects (provided by the institution)	4 p.m.	$12 500	$200 000
		Bachelor's degree in statistics (contracted)	16 hours	$6360 (according to the Professional Council of Economic Sciences)	$101 760
	Space	Meeting room (includes 15 chairs - Projector - Notebook - Internet) (provided by the institution)	4 p.m.	$20 000	$320 000

	Supplies	Ballpoint pens (provided by the institution)	15	$367,50	$7350
		Workbooks (provided by the institution)	15	$2938	$44 070
	Other	Refreshments (coffee, tea, sugar, sweetener, assorted cookies) (provided by the institution)	20	$464,45	$9 289
5th	Human Resources	Head of UTIP service (provided by the institution)	4 hours	$6354	$25 416
		Nurse Andrea Vázquez (training coordinator)	4 hours	$5354	$21 416
		Medical therapist (provided by the institution)	4 hours		
		Bachelor's degree in statistics (contracted)	4 hours	$6360 (according to the Professional Council of Economic Sciences)	$25 440
	Space	Meeting room (includes 15 chairs – Projector – Notebook) (provided by the institution)	4 hours	$20 000	$80 000
	Supplies	Ballpoint pens (provided by the institution)	15	Already provided at the 1st Meeting.	
		Booklets (provided by the institution)	15		
	Others	*Refreshments (coffee, tea, sugar, sweetener, assorted cookies) (provided by the institution)	20	$464,45	$9289
6th	Human Resources	Head of UTIP service (provided by the institution)	4 hours	$6354	$25 416
		Nurse Andrea Vázquez (training coordinator)	4 hours	$5354	$21 416
		Medical therapist (provided by the institution)	4 hours	$12 500	$50 000
		Bachelor's degree in statistics (contracted)	4 hours	$6,360 (according to the professional council of Economic Sciences)	$25,440
	Space	Meeting room (includes 15 chairs – Projector Notebook) (provided by the institution)	4 hours	$20 000	$80 000

	Supplies	Ballpoint pens (provided by the institution)	15	Already provided at the 1st Meeting.	
		Booklets (provided by the institution)	15		
	Others	Refreshments (coffee, tea, sugar, sweetener, assorted cookies) (provided by the institution)	20	$464,45	$9289
7th	Human Resources	Head of UTIP service (provided by the institution)	1 hour	$6354	$25 416
		Nurse Andrea Vázquez (training coordinator)	1 hour	$5354	$21 416
	Space	Meeting room (includes 15 chairs – Projector – Notebook) (provided by the institution)	1 hour	$20 000	$20 000
	Supplies	Ballpoint pens (provided by the institution)	15	Already provided at the 1st Meeting.	
		Booklets (provided by the institution)	15		
	Others	*Refreshments (coffee, tea, sugar, sweetener, assorted cookies) (provided by the institution)	17	$464,45	$7895,65

Total Budget: $1 517 646,65

RESULTS

At the end of the intervention, the aim is for all participants to have acquired research skills, which they can use to conduct research that generates scientific knowledge applicable to daily healthcare practice.

In this sense, this intervention project aims to be a contribution that will continue to enrich nursing knowledge grounded in scientific evidence, thereby improving the quality of care provided. Likewise, the training program is intended to be delivered on an ongoing basis, addressing different pathologies, and to be extended to the rest of the institution's services, with the proposal to publish the work in scientific journals, thus empowering not only nursing professionals but also the institution itself.

External factors affecting the achievement of results

Among the factors that may hinder the development and implementation of the training program are:

- Overload of care work.
- Lack of time for research or academic study. This is because studying, training, and research during working hours are not permitted.[5]

These factors relate to institutional elements, such as the institution's administrative and organizational processes, which form part of a set of rules and/or statutes that govern institutional life.[6,7]

Let's consider that continuous training is a right of every employee and a condition that enables individuals to develop further in their areas of work. It is necessary for the institution, in addition to providing authorization for the training program to be created, to allow nurses to participate actively in it and to offer them appropriate facilities so that attendance at the program does not interfere with their work.[8,9]

In this regard, modifications to schedules, permits, and continuous shift changes should be considered, and the possibility of organizing work groups according to the training program schedules should be evaluated so that all professionals have the same opportunities to participate.[6]

The belief that it is a complex area

This factor involves the motivation of nursing staff to participate in the training program in a complex area. This factor has an essential and decisive weight in the decision to participate in the training program, as it is directly linked to the recognition the institution offers to those who participate, which is closely tied to the feeling of personal/professional self-fulfillment.[10,11]

Likewise, motivation has different origins for each person; these origins may be internal or external. Even so, true motivation comes from within if the person gives free rein to their interest and desire to achieve their goals.[12,13]

Characteristics inherent to the idiosyncrasy and sociology of the profession, with the belief that nursing only has a caregiving role.[5,6]

CONCLUSIONS

As an intentional action, committed to improvement and learning outcomes, training cannot be improvised. In this sense, training programming is essential to provide consistency, viability, and effectiveness to the learning to be transmitted.

Based on this, planning training facilitates:

- Decisions in the selection of the educational approach, seeking consistency between the purposes and the problems or needs of the practices, and between these and the profile of the participants.
- Anticipating actions, organizing content, training strategies, and learning activities, as well as forecasting and selecting the necessary resources and duration/time.
- Communication to others about educational intentions and activities.
- Planning the monitoring and evaluation of the learning acquired.

Based on this last point, the evaluation stage should consider the personal benefits that nurses receive from training. These include: learning itself and interaction with colleagues; the exchange of knowledge through social networks; professional responsibility; and the development of discipline, all of which are clearly related to knowledge, skills, productivity, maintenance of capabilities, competence, and quality of care.

The overall evaluation of the training process should be comprehensive, that is, it should

take into account the planning, development, and evaluation stages to make a value judgment that allows for the identification of the fulfillment of objectives, areas for improvement, the efficiency and development of the potential of the nursing staff that has been trained, a cost-benefit analysis, as well as the available resources and their application. The degree of learning and the results in daily practice. However, they are not the focus; this study seeks to understand how nursing staff evaluate the training provided by their institution.

This intervention aims to develop the evaluation process, taking into account three instances, namely:

1) Pre-intervention evaluation: which will aim to assess the research skills of the nursing staff who will participate in the training program.

Based on this, the survey has 16 questions with dichotomous response options (Yes/No) to which a numerical value has been assigned to quantify the competencies possessed by the staff, as follows:

- Yes = 1
- No = 0

In this way, research skills will be measured as follows:

- 1 to 5 = Poor research skills
- 6 to 12 = Moderate research skills
- 13 to 16 = High research skills

2) Post-intervention assessment: the aim will be to assess the research skills acquired by participants during the training program based on the results obtained.

Based on this, the survey has 16 questions with dichotomous response options (Yes - No) to which a numerical value has been assigned to quantify the skills acquired, as follows:

- Yes = 1
- No = 0

In this way, the research skills acquired will be measured as follows:

- 1 to 5 = Poor acquisition of research skills.
- 6 to 12 = moderate acquisition of research skills.
- 13 to 16 = high acquisition of research skills.

3) Questionnaire to assess satisfaction with the training program: this questionnaire aims to assess participants' satisfaction with the training program to obtain information for use in future interventions.

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FINANCING

None.

CONFLICT OF INTEREST

None.

AUTHORSHIP CONTRIBUTION

Conceptualization: Andrea Vázquez.
Data curation: Andrea Vázquez.
Formal analysis: Andrea Vázquez.
Research: Andrea Vázquez.
Methodology: Andrea Vázquez.
Project management: Andrea Vázquez.
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Supervision: Andrea Vázquez.
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Visualization: Andrea Vázquez.
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