

## Fundamentals of nursing and their importance for nursing students' practice

Disciplina de fundamentos de enfermagem e a importância para as práticas dos acadêmicos do curso de Enfermagem

Fundamentos de enfermería y su importancia para las prácticas de los estudiantes de enfermería

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### **Abstract**

**Objective:** To analyse scientific publications on the importance of fundamental nursing practices. **Methods:** A descriptive exploratory review with a qualitative approach was carried out using the following databases: Web of Science and Cochrane Library (SCOPUS), Brazilian Bibliography (BDENF), Online Medical Literature Search and Analysis System (MEDLINE/PUBMED) and Latin American and Caribbean Health Sciences Literature (LILACS). Using the descriptors with the aid of the Boolean operator "and". **Results:** According to the theoretical framework, fundamental practices influence the quality of care provided by nurses and undergraduate nursing students. It is also possible to verify that during their undergraduate studies, students who practice a wide variety of techniques under the direct supervision of their teacher show greater confidence in their work. **Conclusion:** Therefore, the dynamic between theoretical content and practice is essential for training nurses who are critical, reflective, humanized, competent and able to relate previous knowledge to their practice.

**Keywords:** Nursing practice; Nursing fundamentals; Semiotronics; Teaching.

### **Resumo**

**Objetivo:** Discorrer acerca da importância da atividade prática da disciplina de fundamentos de enfermagem a partir de referencial científico bibliográfico. **Métodos:** Foi realizada uma revisão exploratória descritiva com abordagem qualitativa, utilizando as bases de dados: Web of Science e Biblioteca Cochrane (SCOPUS), Bibliografia Brasileira (BDENF), Sistema Online de Busca e Análise de Literatura Médica (MEDLINE/PUBMED) e Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS). Por meio dos descritores com auxílio do operador *booleano* "and". **Resultados:** De acordo com o referencial teórico, as práticas fundamentais influenciam a qualidade de atendimento do enfermeiro e do acadêmico de enfermagem, também é possível verificar que durante a graduação os alunos que praticam uma ampla variedade de técnicas com acompanhamento direto do professor demonstram maior segurança em sua atuação. **Conclusão:** Sendo assim, conclui-se que a dinâmica entre o conteúdo teórico e prático são

imprescindíveis para se formar enfermeiros críticos, reflexivos, humanizados, competentes e capazes de relacionar o conhecimento prévio e sua prática.

**Palavras-chave:** Práticas de enfermagem; Fundamentos de enfermagem; Semiotécnica; Ensino.

### **Resumen**

**Objetivo:** Analizar las publicaciones científicas sobre la importancia de las prácticas fundamentales de enfermería. **Métodos:** Se realizó una revisión exploratoria descriptiva con enfoque cualitativo utilizando las siguientes bases de datos: Web of Science y Biblioteca Cochrane (SCOPUS), Bibliografía Brasileña (BDENF), Sistema de Búsqueda y Análisis de Literatura Médica en Línea (MEDLINE/PUBMED) y Literatura Latinoamericana y del Caribe en Ciencias de la Salud (LILACS). Utilizando los descriptores con la ayuda del operador booleano "and". **Resultados:** De acuerdo con el marco teórico, las prácticas fundamentales influyen en la calidad de los cuidados prestados por las enfermeras y los estudiantes de pregrado de enfermería. También es posible verificar que durante sus estudios de pregrado, los estudiantes que practican una amplia variedad de técnicas bajo la supervisión directa de su profesor muestran una mayor confianza en su trabajo. **Conclusión:** Por lo tanto, la dinámica entre los contenidos teóricos y la práctica es esencial para formar enfermeros críticos, reflexivos, humanizados, competentes y capaces de relacionar los conocimientos previos con su práctica.

**Palabras clave:** Práctica enfermera; Fundamentos de enfermería; Semiotecnia; Enseñanza.

## **1. Introduction**

In recent decades, nursing practice has evolved rapidly and the healthcare environment has become increasingly complex due to technological and medical advances, as well as the greater focus on standardization and production logic that permeates hospital culture. Nowadays this means that nurses not only have to look after the needs of patients and their families, but also face multiple demands from the medical team and hospital management in their daily work. The distinctive feature of nursing is a holistic approach whose fundamental values constitute an ethical obligation to preserve and respect the dignity and integrity of the individual. As a result, nursing is embroiled in ethical and moral issues, and consequently in daily practice makes ethical decisions not only in life and death situations, but also in more routine matters (Barbosa, et al, 2019; Vitória & Martins, 2023).

In this way, the teaching process must be designed to develop skills that lead to the development of critical, reflective, humane individuals capable of connecting what is learnt to previous knowledge. From this perspective, Paulo Freire's problematizing pedagogy comes to the fore, laying the foundations for the development of active methodologies in which students become active in the search for their own knowledge (Crisp, et al, 2020).

During the course, students carry out a wide variety of techniques under the direct and constant supervision of the teacher, including: simultaneous cleaning of wards, making beds, bed baths, assisted sprinkler baths, catheter dressings, surgical wounds and pressure injuries, venepuncture, capillary blood glucose detection, decompression probing, serum therapy, dietotherapy, airway suction, medication administration, nursing notes, application of nursing systematics and preparation and discussion of clinical cases, reinforcement learning based on practical problems (de Jesus, et al, 2019; Oliveira, et al, 2020).

One study pointed out that disagreement between nursing practice and ideology can lead to ethical dilemmas for nursing professionals. That said, stating that ethical dilemmas originate in the conflict between values, norms and interests shows that they can be understood as moral hesitation for nurses. Thus, they know "the right thing to do, but feel that institutional or other restrictions make it difficult to take the desired action". This means, therefore, that resolving the conflicting values of ethical dilemmas can pit personal and professional values against each other, as well as jeopardizing compassionate, quality care by nurses (Azevedo, et al, 2021; Chaung, et al, 2021).

Based on this, it is clear that in order to promote quality care, it is essential to combine theory and practice through teaching methodologies in order to consolidate learning, as well as instigating student reflection and critical analysis through the discussion of case studies in the laboratory. This confirms that the active teaching method allows students to interact with their own learning dynamics, as it enables them to present and reflect on situations that will permeate their professional lives

(Morais and Ribeiro, 2020).

Thus, when applied to the teaching-learning process, the active methodology offers a new perspective for the student, as it implements simulations and case resolutions that increase the student's curiosity and interest, based on the development of activities pre-established by the teacher, with the aim of bringing situations closer to the reality of the future nurse. In this context, students have autonomy in their learning, as well as becoming protagonists in the formation, discussion and application of their technical-scientific knowledge (Cummings, et al, 2021).

Therefore, the aim of this literature review is to analyze the importance of combining theory and the practice of nursing fundamentals techniques in order to implement quality teaching.

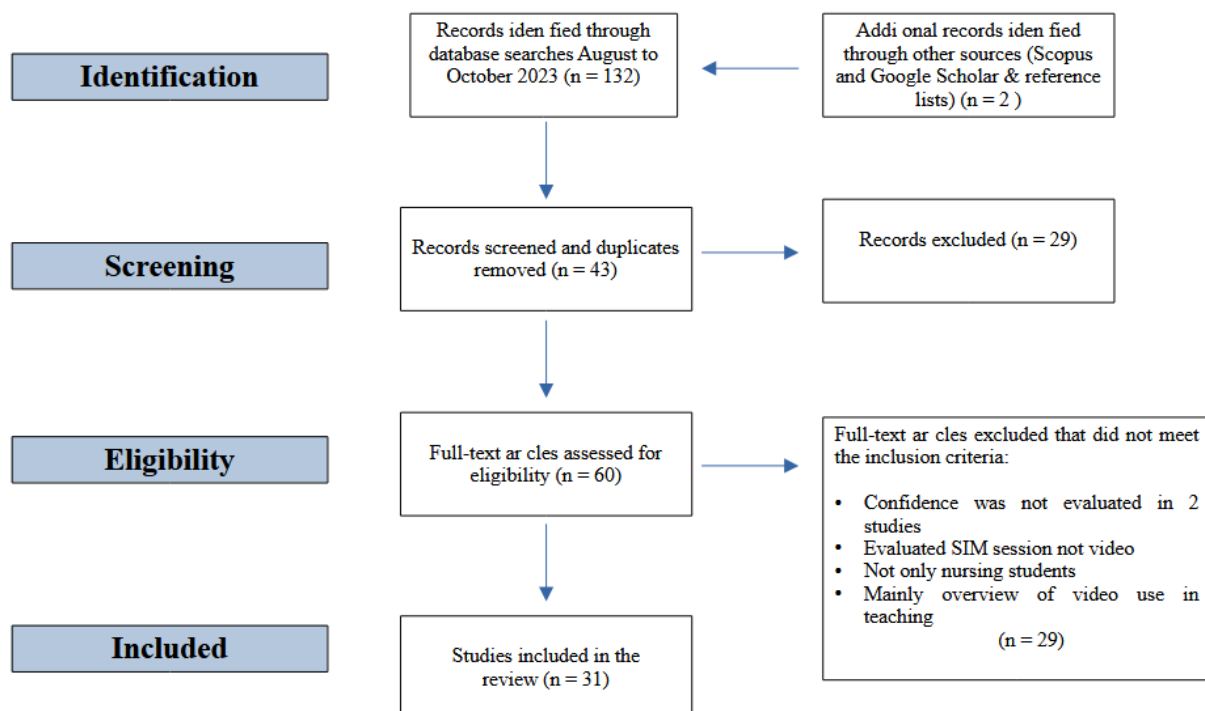
## 2. Methodology

Based on Benefield, 2003, an integrative literature review was carried out using the following databases: Nursing Database - Web of Science and Cochrane Library (SCOPUS), Brazilian Bibliography (BDENF), Online Medical Literature Search and Analysis System (MEDLINE/PUBMED) and Latin American and Caribbean Health Sciences Literature (LILACS).

For this search, descriptors were used according to the list of Health Sciences Descriptors (DeCS): Nursing Fundamentals, Academic Practice and Professional Practice, using the Boolean operator "and", and the descriptors were crossed. The articles were selected between August and October 2023, and those that could respond to the study's objective were sought.

The following inclusion/exclusion criteria were used: studies with free access, available online, complete, in English/Portuguese/Spanish, published between 2019 and 2023, and those that did not fit the above descriptions were excluded.

**Figure 1** - Selection flowchart of articles included in the review.



Source: Authors (2023).

### 3. Results and Discussion

After reading the articles, the results were summarized in Table 1 with information regarding the title/author, objectives and results found.

**Table 1** – Corpus of this research.

Article	Title/Author	Purpose	Results
1	The effect of audio-visual video with korotkoff sounds on anxiety levels and blood pressure measurement skills of nursing students: A randomized controlled study (Ulker e Korkut, 2023).	To systematically review, critically appraise and synthesize published evidence to answer the question "How does virtual reality simulation compare to simulated practice in the acquisition of clinical psychomotor skills in nursing students?"	All the studies used quasi-experimental designs, but the methodological quality varied. The significant heterogeneity of methods and lack of data limited synthesis and prevented meta-analysis. Compared to the simulation group, the virtual reality group performed well in terms of post-test knowledge scores, cognitive gains, skill performance scores and skill success rates. The results are conflicting in relation to the time taken to complete the skill.
2	Nurses' Adherence to Patient Safety Principles: A Systematic Review (Vaimoradi, et al, 2020).	The aim was to provide a synthesis of the literature and show factors that could influence nurses' adherence to patient safety.	Personal factors of each individual and the way they systematize their care were found to affect and interfere with adherence to the principles of patient safety.
3	Nursing theories and their articulation with practice: An experience report (Sampaio, et al, 2021).	The aim is to illustrate a student's experience of nursing theories and their connection through practice.	The experience was extremely important because it allowed us to leave the traditional classroom and experience a space that accommodates a diverse audience
4	Undergraduate nursing students' use of video technology in developing confidence in clinical skills for practice: A systematic integrative literature review (Stone, et al, 2020).	To evaluate and compare the literature on educational approaches used by different doctors to support ultrasound-guided peripheral intravenous catheter insertion in the emergency setting and the effectiveness of these current approaches.	This review demonstrates that various educational methods are being used to successfully train emergency physicians in the use of ultrasound-guided peripheral intravenous catheter insertion. Furthermore, this training results in safer and more effective vascular access. However, it is clear that existing formal education programmes lack consistency. Standardized formal education programmes and the addition of ultrasound equipment in the emergency department will ensure that consistent practices are maintained and retained, resulting in safer practices and happier patients.
5	Practical experience of nursing students in the medical clinic unit: an experience report (Lopes, et al, 2020).	Report on the experience of nursing students in hospital training in the Fundamentals of Nursing subject.	It emphasizes the articulation between the theoretical and practical knowledge of nursing students, strengthening the use of scientific evidence in clinical practice and training students in critical thinking for future professional practice.
6	Exploring nursing students' use of the Fundamentals of Care framework in case-based work (Voldbjerg, et al, 2019).	To describe the factors that influence the perceptions of nursing students who use the conceptual framework of the Fundamentals of Care in work based on clinical cases.	The study indicates that integrating the structure of the Fundamentals of Care based on clinical cases can be an effective way of teaching nursing students. However, it is necessary to consider an articulation of the Fundamentals of Care and their practice.
7	Nursing students' perceptions towards being taught the fundamentals of care by clinical nurses within a simulated learning environment: A qualitative study (Lillekroke, 2019).	To explore nursing students' perceptions of basic nursing training delivered by clinical nurses in a learning simulation environment.	The results are discussed on the basis of Vygotsky's theory, which shows that the students were satisfied with the teaching of the fundamentals of care by clinical nurses in a learning simulation environment.
8	Improving the learning outcomes of nursing students in the Fundamentals of Nursing course by combining traditional and e-learning methods (Sheikhaboumasoudi, et al, 2018)	To compare the effects of blended learning (combining e-learning with traditional learning methods) and traditional learning alone on the results of nursing students.	Based on the results, this study suggests that combining traditional learning methods and e-learning methods, such as educational website applications and interactive online resources, to teach the fundamentals of the nursing process can be an effective complement to improve nursing students' clinical skills.
9	Nursing students' understanding of the Fundamentals of Care: A cross-sectional study in five countries (Jangland, et al, 2018).	The way students perceive the importance of basic care can be influenced by the content and delivery of their nursing programme.	The data showed that certain platforms of care were identified more frequently, including communications and education; comfort and exclusion, while respect for choice, privacy and dignity were mentioned less frequently.
10	Students' perspectives on basic nursing care education (Huisman-de Wall, et al, 2018).	To explore nursing students' perspectives on education related to basic care acquired through theoretical or clinical training, with a specific focus on nutrition and communication.	Most of the students said they learnt more basic nursing knowledge during their clinical placements than during their theoretical training.

Source: Authors (2023).

It can be seen that the interaction between laboratory practice, not only in terms of discussing clinical cases but also the correlation of adopting or carrying out any procedure, is essential for establishing relationships that strengthen the achievement of results in terms of students acquiring the confidence to carry out the same procedures with patients (Onovo, 2019).

Therefore, by merging theoretical and practical classes, students are expected to acquire technical and non-technical skills, as well as demonstrate competencies that enable the teacher to assess the skills required in nursing (Tartaglia and Rodrigues, 2020). In addition, nursing professionals are also expected to understand and perform a wide range of required procedures, which is essential when it comes to providing effective and quality care, in which nurses demonstrate their performance based on technical knowledge and, above all, centered on the patient (Yoost & Crawford, 2021).

Another important aspect of the practical application of procedures is the training and development of psychomotor skills that prepare students in the laboratory to later succeed in the clinical environment. To this end, it is clear that these activities need to be carried out by the students themselves, with the help of the teacher, in order to achieve a good performance (Rosa, et al, 2020). Therefore, just as they should be taught in clinical practice, they should also be assessed in clinical practice so that the assessor can see the student's progress in a real environment, as well as their ability to associate theoretical content with practical content. This way, as well as learning by doing, the student can also have contact with patients and realize the fundamental skills for nursing care (Zieber, et al, 2018).

The literature emphasizes that the development of psychomotor skills, when taught in a quieter environment such as a laboratory, provides essential learning. It is essential to place this practice appropriately, always emphasizing the teaching process and the clinical competence of these students, as they have the opportunity to develop through experience, with a view to providing quality patient care (Yahaya, 2019; Gasparino, et al, 2019).

#### **4. Conclusion**

Based on the analysis of the theoretical framework, it is clear that the subject of nursing fundamentals gives students the opportunity to get in touch with the environment and activities that permeate the profession. To this end, the importance of nursing practices is evident, as they prepare the student in an integral way, providing greater mastery and safety in their work. In this way, when the techniques are carried out under the supervision of the teacher, the student's performance improves, as does their interest and curiosity, which demonstrates the importance of autonomy in order to gain confidence in carrying out the procedures.

In addition, it can be seen that students participate effectively in their teaching-learning process when they are subjected to active methodology, thus instigating discussion and analytical thinking. Therefore, the combination of practice and theory through the subject corroborates the development of skills, the practical simulation of cases, reflection and critical analysis and, consequently, the promotion of quality care.

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