

# The importance of logical thinking for clinical nursing care



*A importância do pensamento lógico para o cuidado clínico de enfermagem*

*La importancia del pensamiento lógico para el cuidado de enfermería clínica*

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## ABSTRACT

**Objective:** To present a reflection on the importance of logical thinking for clinical nursing care.

**Method:** Reflection paper

**Reflection:** The exercise of an effective clinical care brings with it the need for logical thinking and adequate reasoning for safe and effective nursing practices. Therefore, training based on philosophical principles that encourage the increase of logical and critical thinking is considered unquestionable, ensuring professionals the systematization of assistance with the application of the nursing process based on scientific understanding and strong arguments supported by the path of truthfulness, morality, ethics and critical self-reflection in order to value clinical practices.

**Final considerations:** The importance of logical thinking for nursing care is ratified here, supporting nursing care systematization and the nursing process stages. Thus, nurses can use clinical reasoning skills to deliver a humane, ethical, and effective professional performance.

**Keywords:** Nursing. Logic. Clinical decision-making.

## RESUMO

**Objetivo:** Apresentar uma reflexão sobre a importância do pensamento lógico para o cuidado clínico de enfermagem.

**Método:** Estudo de reflexão.

**Reflexão:** Pensar em exercer o cuidado clínico eficaz remete à necessidade de um pensamento lógico e raciocínio adequado para a realização de práticas de enfermagem seguras e eficazes. Para tanto, considera-se inquestionável a formação baseada nos princípios filosóficos que estimulem o incremento do pensamento lógico e crítico, assegurando aos profissionais a sistematização da assistência com aplicação do processo de enfermagem a partir do entendimento científico e argumentos sólidos abalizados pelo caminho da verdade, moral, ética e autocrítica, de forma a favorecer a valorização das práticas clínicas.

**Considerações finais:** Ratifica-se a importância do pensamento lógico para o cuidado de enfermagem fundamentando a Sistematização da Assistência de Enfermagem e as etapas do Processo de Enfermagem. Desta forma, o enfermeiro pode fazer uso do raciocínio clínico propiciando uma atuação profissional humana, ética e eficaz.

**Palavras-chave:** Enfermagem. Lógica. Tomada de decisão clínica.

## RESUMEN

**Objetivo:** Presentar una reflexión sobre la importancia del pensamiento lógico para el cuidado de enfermería.

**Método:** Estudio de reflexión.

**Reflexión:** El ejercicio de un cuidado clínico efectivo trae consigo la necesidad de un pensamiento lógico y un razonamiento adecuado para prácticas de enfermería seguras y efectivas. Por tanto, se considera incuestionable la formación basada en principios filosóficos que propicien el pensamiento lógico y crítico, asegurando la sistematización de la asistencia y el proceso de enfermería basados en la comprensión científica y argumentos sólidos sustentados en el camino de la verdad, moral, ética, y autocrítica, con el fin de favorecer la valorización de prácticas clínicas.

**Consideraciones finales:** Se confirma la importancia del pensamiento lógico para el cuidado de enfermería, apoyando la sistematización del cuidado y las etapas del proceso de enfermería. De esta manera, las enfermeras pueden utilizar las habilidades de razonamiento clínico, proporcionando un desempeño profesional humano, ético y eficaz.

**Palabras clave:** Enfermería. Lógica. Toma de decisiones clínicas.

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## ■ INTRODUCTION

Logic can be defined as a field that studies forms of thought and the art of correctly applying them to the demonstration of the veracity of facts. Thus, logic offers ways for scientific investigation, according to a method, providing criteria of truth. Logical reasoning directs the acts of thought towards the true, avoiding errors or settling doubts<sup>(1)</sup>.

Thought comprises the mental functions of conceiving (formation and apprehension of ideas about an object), of judging (discrimination of the identity or diversity of two concepts) and of reasoning (completion from two or more related, previously known judgments). Nurses are supposed to organize their thinking process in a logical and orderly way to carry out the process of clinical reasoning<sup>(2)</sup>. Thus, in the scenario of clinical nursing care practice, nursing professionals must use the principles of logic to avoid clinical reasoning errors, allowing the development of criticality, reasoning and judgment skills, as well as adequate decision making<sup>(3)</sup>.

In this regard, clinical care is perceived as the act of caring in a responsible, and ethical way, and the social commitment of professional nurses, through the use of technical-scientific knowledge and showing empathy (eye level when speaking, careful listening, warmth, etc.), in order to meet the real needs of the patients, considering their particularities, singularities and life history<sup>(4)</sup>. Exercising effective clinical nursing care refers to the need for logical thinking and reasoning skills to carry out safe and effective nursing practices. Therefore, strategies and experiences that promote the development of logical skills for the correct organization of thought must be incorporated.

Thus, in their care practice, nurses must be familiar with the thinking process that leads to correct clinical reasoning. They must recognize clues and evidence about the situation investigated (conceiving the idea), be able to discriminate between similar situations (make their judgment) and based on general premises that are known, drawing a conclusion using a line of reasoning. Nurses are supposed to accurately interpret human responses, in order to select the appropriate interventions and assess the results achieved<sup>(5)</sup>.

Thus, the following questions about logical reasoning for clinical care in nursing emerge: What is the importance of logical thinking for clinical nursing care? What strategies can help nurses to develop effective and accurate logical thinking? Attempting to find the answers to these questions, this study aims to present a reflection on the importance of logical thinking for clinical nursing care.

## ■ REFLEXION

This is a reflection paper on the importance of logical thinking for clinical nursing care, deriving from the discipline entitled Philosophy of Science, Nursing and Health, from the doctoral postgraduate course.

### **Development of logical reasoning based on philosophy to promote clinical care**

The evolution of human thought has been influenced over time by philosophical theories, and such contribution is reflected in the development of human behavior. In this context, the insertion of Philosophy in the curriculum is of utmost importance, as the discipline has a crucial impact in educating students to be critical citizens that ask questions and must understand that we are all part of the Universe.

It is necessary to advocate, in conceptual terms, and also to demonstrate in reflection papers and empirical studies that the teaching of Philosophy is very important, as part of an integral education to individuals, at different ages, to help them becoming good and responsible citizens and (future) professionals. Thinking philosophically, or with a philosophical dynamics is essential for responsible, free and conscious action<sup>(6)</sup>. Therefore, philosophical foundations support the improvement of the cognitive skills of perceiving, problematizing, reflecting, conceptualizing and arguing based on real problems/situations, so that individuals think logically and critically, being capable of taking consistent and independent actions.

According to this line of thought, pedagogical projects should be periodically assessed, since, in addition to their guiding principles and axes, their theoretical, philosophical and methodological contribution must be anchored in a meaningful teaching-learning process, to foster the development of competences and skills in the training of professionals in the different fields of health care<sup>(7)</sup>. In this regard, the interface of the philosophical dimension with Nursing education is essential for the improvement of clinical care, which requires refined logical reasoning and know-how based on scientific experiences.

There are several theoretical models related to the education of nurses, but a discipline called Philosophy, mandatory in the curriculum matrices of some Nursing courses, and which contributes both to professional training and to the lives of human beings, making them capable of critical thinking, is unpretentiously inserted in the health sector<sup>(8)</sup>.

In its historical process, Nursing Science has faced numerous challenges that are imposed on scientific knowledge, including the need for a precise and robust philosophical basis that justifies and legitimizes knowledge in the area to support its assertions<sup>(9)</sup>.

Nursing, as a science and art, must have its own knowledge structure, as well as a specific terminology to guide the foundations of “how to do” and “how to be” in its daily practices and, consequently, guide its work process with exclusive elements of their professional identity<sup>(10)</sup>. Regarding professional duties, clinical care deserves considerable attention during graduation so that professionals are able to exercise them based on inductive logical reasoning.

Nurses must develop the ability of logical thinking before their professional practice. Theoretical knowledge that encourages reflection on the phenomena of care must then be stimulated. Thus, for successful achievement of nursing goals, discourses of teaching institutions must be reformulated, as they often have a mechanical and sociocultural view, according to which nurses are just a tool like any other<sup>(8)</sup>.

Thus, it is necessary to work intensively to reduce the dichotomies of nursing programs, specifically between theory and practice; training and the reality of professional practice; shift in the role of students from passive to active participants in the teaching-learning process. This enables the formation of an active, purposeful, creative professional, able to analyze, understand the context, who is flexible, capable of logical reasoning, and who permanently seeks for information and contributes to the solution of health problems<sup>(11)</sup>. Such professional seeks greater visibility and has a sense of belonging that provides the definition of particular competences, autonomy, recognition and support in decision-making on issues inherent to the profession's obligations<sup>(10)</sup>.

Nurses are supposed to know their professional instruments, both material and mainly intellectual, so that nursing becomes increasingly synonymous with autonomy and professional competence, and that a relationship of constant and effective dialogue is established between philosophy and evidence-based knowledge, which constitute one of the main pillars for the development of nurses' logical thinking<sup>(8)</sup>. When we philosophize, we learn to think logically, in a journey of reflection, action, admiration and contemplation<sup>(6)</sup>.

In this field of reflection, the need for training based on philosophical foundations, which encourages logical thinking, ethical prudence and self-awareness, is unquestionable, ensuring that professionals systematize rational ideas, based on scientific understanding, and solid arguments supported

by the path of truth, morals, ethics and self-criticism, to favor the appreciation of clinical practices.

### **Logical thinking as a facilitating agent of clinical care: focus on the Systematization of Care and the Nursing Process**

Nurses will often experience situations that require skills that involve logical thinking, such as their professional duties in Nursing Care Systematization (NCS) and the Nursing Process (NP) to promote clinical care. NCS is a methodology based on the practice of nurses in the support of management and clinical care in the NP.

NCS is understood as the organization of professional work of nurses concerning method, staff and instruments, enabling the operationalization of the Nursing Process, with a theoretical-philosophical basis. Based on this premise, the theoretical-philosophical foundation encourages the use of cognitive skills of critical and logical thinking by nurses, in the promotion of clinical care consistent with the health needs of the community under the responsibility of these professionals.

Nursing, as a science, has its own scientific method. It gives further rigor to the professional practice. Thus, for a correct systematization of care, health care professionals must use logical resources that support the entire NP<sup>(2)</sup>. During the implementation of all phases of the NP, nurses apprehend information and evidence (conception) for analysis and syllogism, which leads them to a conclusion, to a choice (judgment), based on the captured elements.

To ensure an effective NP, nurses must develop reasoning and clinical judgment skills, based on scientific knowledge, logical thinking and clinical nursing practice. This process requires intellectual skills and mental processes in diagnostic knowledge and the use of such knowledge. The cognitive process of preparing nursing diagnoses is commonly called diagnostic reasoning<sup>(12)</sup>.

Diagnostic reasoning involves the recognition of signs and symptoms of patients, human responses to health and/or disease conditions, analysis and judgment of data and clinical situations that will unfold in a diagnostic statement. It is a complex practice in which nurses make judgments about the patients' clinical status, identify nursing diagnoses and make decisions. Thus, cognitive ability, clinical knowledge and experience are added to the diagnostic reasoning process, being integrated by the intuitive perception of the situation as a whole<sup>(12)</sup>.

Judgment is the flexible and special ability to recognize relevant aspects (data) of an undefined clinical situation, interpret their meanings and give an appropriate response. To make an adequate judgment, nurses must have critical thinking, which involves a set of specific learned skills and attitudes necessary for the development of effective clinical reasoning<sup>(2)</sup>.

These skills can be divided into three categories: cognitive (analysis, patterning, self-regulation, discernment, information seeking, explanation, inference, interpretation, prediction and knowledge transformation), behavioral (analysis, self-confidence, authentic search, investigation, mind openness and systematization) and habits of mind (understanding, confidence, creativity, curiosity, flexibility, intellectual integrity, intuition, perseverance, intellectual perspective and reflection)<sup>(13)</sup>. The development of these skills is essential for the construction of the professionals' clinical reasoning. Such reasoning is understood as the process of thinking and decision-making integrated in clinical practice to assist users of health systems<sup>(2)</sup>.

For explanatory purposes, a study showed that most Brazilian nurses perceived NCS and NP as important, but effective application of these processes in the practice of clinical care is still a gap to be overcome. Similarly, another study in Brazil reported that nursing professors advocated the need for inclusion of a theoretical-philosophical, historical and dialectical proposal in an undergraduate course, supporting a broadened understanding of the NP and its responsible operationalization and using consistent references and robust scientific evidence, based on nurses' practices in health services and on the current teaching model<sup>(15)</sup>.

It is known that the devaluation of theories of care and of the clinical reasoning process is associated to poor knowledge of NCS and NP by health professionals, and it should be emphasized that the recognition of clinical reasoning is essential for a positive attitude, aimed to ensure safer care<sup>(14)</sup>. Clinical reasoning in nursing is a complex and dynamic mental process, which occurs both in the identification of situations that demand nursing care and in the selection of the actions necessary to provide care and achieve the health outcomes for which nursing is responsible<sup>(2)</sup>.

Clinical reasoning in nursing is complex, requiring the use of logic, criticality and interdisciplinary knowledge, as people should receive a holistic assessment. The ability to think can comprise a global analysis of the assisted individual, in the search for effective clinical care. Through the NP, professionals reflect on the problem/ situation experienced by the patients, and finally take action and assess their interventions, through organized actions, seeking to ensure the

well-being and health of their patients. Health workers must also observe the legal ethical principles of the profession, as logical and critical thinking means also acting consciously according to the patients' point of view<sup>(8)</sup>.

Based on the above considerations, it is worth stressing that the teaching-learning process of Nursing on NCS and NP, both in the academic and professional settings, must be continuous and presented in active theoretical-philosophical methods strategies, which encourage the use of cognitive skills of critical and logical thinking, according to a perspective of shared and transformative approach, seeking the practice of clinical care in an interdisciplinary and holistic way, to meet the real health needs of society.

Furthermore, health professionals must use logical thinking resources in NCS and in each stage of the NP, in order to properly carry out, in an ethical and human way, anamnesis and physical examination, in the main nursing diagnoses. This allows for an adequate planning of actions, with effective intervention in clinical care practices, and assessment of the results of the process, in a logical and consistent manner.

The emergence of logical thinking with critical-philosophical reasoning supports safe nursing practices, enabling the provision of effective clinical care, anchored in NCS and the NP.

## ■ FINAL CONSIDERATIONS

Thus, the importance of logical thinking for clinical nursing care is ratified here, in the NCS and all stages of the NP, so that nurses use clinical reasoning for the correct planning of their actions, exercising a good judgment to make the right decisions, carrying out nursing interventions based on a scientific method, and thus providing a humane, ethical and effective professional performance, as well as enabling the systematic reassessment of the results obtained in care interventions and the appropriate redirection to previously planned actions.

The lack of nursing studies on approaches that integrate logical thinking and clinical health care may have made it difficult to deliver deep reflections in this paper. However, based on the reflections made in this study, we expect to provide a set of relevant information so that nurses who work in pedagogical functions can understand that the teaching of Philosophy is essential to prompt logical thinking in students. It is also expected that these professionals understand that the quality of clinical nursing care depends on proper training of nursing students during graduation, to help them develop logical, reflective, critical and ethical thinking to be used in their professional practices, in care, management, teaching and research.

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