Editorial

Challenges in teaching clinical reasoning in nursing education

Desafios no ensino do raciocínio clínico na educação em enfermagem

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Regardless of the country, clinical reasoning in nursing — defined as "an intellectual activity that synthesizes information obtained from the clinical situation, integrates it with prior knowledge and experience, and uses it to make decisions regarding patient diagnosis and management"[1] — forms the foundation of healthcare education frameworks in universities, nursing training institutes, and health colleges. Like in medical professions[2], it is considered an essential competency and a pedagogical priority for nursing practice and the discipline itself[3,4]. Clinical reasoning enables nurses to make individualized and appropriate clinical judgments in increasingly complex situations, particularly due to demographic aging and the rising prevalence of chronic diseases, thereby ensuring safer therapeutic decisions.

However, the literature points out that this is a complex and heterogeneous process, affecting both students and educators[5]. It highlights the lack of consensus regarding an *ad hoc* definition[6] and unified terminology[7], with the interchangeable use of terms such as clinical reasoning and clinical judgment. Furthermore, its structure is abstract and often invisible to students, frequently described as a "black box" phenomenon due to both conscious and unconscious cognitive operations that depend on contextual factors[8,9]. Although a multitude of teaching strategies are available, there is a lack of evidence-based pedagogical standards and recommendations.

Several scientific studies have been conducted to substantiate this observation[10-13]. For example, Sudacka et al.'s 2021 article[14], although focused on medicine, provides a relevant structure and guidance regarding the obstacles encountered when teaching nursing clinical reasoning. These authors identify seven major obstacles:

1. **Lack of time** (time to teach, insufficient curriculum time, or lack of time for self-training);

2. **Teaching process issues**, such as skepticism about explicit teaching of clinical reasoning, lack of knowledge of methods, shortage of qualified teachers, and absence of local leaders to drive this process;

3. **Lack of motivation and institutional support**, particularly financial, and insufficient incentives;

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4. **Insufficiently established culture**, due to an absence of a culture of error, lack of self-reflection, or insufficient collaboration between clinical professionals and academia;

5. **Teachers' lack of knowledge about the theoretical foundations of clinical reasoning** and disagreements over its definition;

6. **Lack of knowledge about relevant assessment methods**;

7. **Insufficient technical and logistical infrastructure** (availability of classrooms).

Faced with these obstacles and considering the increasing complexity of patient care as well as the evolving requirements of nursing education, this editorial aims to explore the foundations of clinical reasoning and the associated pedagogical challenges. It also provides a focus on several feasible strategies to enhance both the teaching and assessment of clinical reasoning, drawing on an experiential approach and evidence-based data.

Thus, several challenges need to be considered. First, it is essential to ensure semantic and methodological coherence among teaching professionals within training institutions. Although specialized teachers support the learning of clinical reasoning, all nursing education teams are concerned about this topic. No subject taught can avoid this essential competency.

Given that it is a complex process and is not always considered a priority in the profession, it is necessary to make its teaching engaging and attractive, and to give meaning to pedagogical activities so that they align with the future profession of students. To achieve this, as demonstrated in a book published in France[15], it is essential to rely on learning facilitators from educational and training sciences[16]. This implies that teachers responsible for this instruction must combine pedagogical and technical expertise. This inevitably requires rigorous training based on these principles, with a specific focus on conceptual models and nursing theories that are still underutilized outside Henderson's definition of nursing, Watson's Caring theory, or Nightingale's environmental theory.

This training will, in part, address the management of learner diversity, enabling teachers to develop differentiated pedagogy — that is, to implement a variety of teaching and learning methods and procedures so that students with heterogeneous abilities, skills, and knowledge can achieve common objectives in different ways[17]. This pedagogy could be based on a diversity of methods such as simulation, role-playing, mind maps, and, in addition to more traditional approaches, objective structured clinical examinations. In parallel, clinical placements would provide an opportunity, beyond the acquisition of technical skills (such as blood transfusion), to develop debriefings following care episodes, to strengthen reasoning and reflective practice.

Another challenge is to facilitate the development of shared clinical reasoning. To this end, teachers can organize pedagogical sequences to develop socio-constructivism and socio-cognitive conflict, which closely resemble students' future clinical activities[18,19].

Aligning the shared pedagogical project for teaching clinical reasoning between theory in training institutions and practice at the patient's bedside is also a challenge to reduce discrepancies between these two learning environments. The development of dual educator-clinician positions could be a sustainable solution to promote this alignment, thereby strengthening the partnership between these two worlds and providing more comprehensive and coherent teaching.

Finally, in addition to these non-exhaustive proposals, increased research in nursing science on this topic would provide new nursing knowledge and offer evidence-based data to leaders, positively influencing the teaching of clinical reasoning and, as a result, enabling more secure analysis of clinical situations and decision-making for better patient care. Such research would provide an opportunity to share knowledge on nursing clinical reasoning across different countries and to facilitate the creation of international collaborative networks.

Competing interests

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