

Health Education and Critical Nursing Training: Four Years of Outreach Activities on World Heart Day in Porto Alegre, Rio Grande do Sul, Brazil

Educação em Saúde e Formação Crítica em Enfermagem: Quatro Anos de Práticas Extensionistas no Dia Mundial do Coração em Porto Alegre, Rio Grande do Sul, Brasil

Educación en Salud y Formación Crítica en Enfermería: Cuatro Años de Prácticas de Extensión en el Día Mundial del Corazón en Porto Alegre, Rio Grande do Sul, Brasil

RESUMO

Objetivo: A educação em saúde, orientada pelo diálogo e pela reflexão crítica, configura-se como espaço de emancipação frente às desigualdades no processo saúde-doença. **Método:** Este estudo qualitativo, descritivo e reflexivo, fundamentado no Standards for Reporting Qualitative Research, analisou práticas educativas realizadas entre 2021 e 2025 em espaços comunitários de Porto Alegre. A investigação baseou-se na Política Nacional de Promoção da Saúde, na pedagogia de Paulo Freire e em campanhas da World Heart Federation. Os dados, produzidos por meio de observação participante e registros de campo, foram submetidos à análise indutiva.

Resultados: Emergiram três dimensões: educação em saúde como prática emancipatória, interprofissionalidade como mediadora do cuidado integral e formação crítica como eixo da práxis em enfermagem. **Conclusão:** Conclui-se que abordagens dialógicas fortalecem o protagonismo, ampliam a autonomia e reafirmam o compromisso político da enfermagem com a equidade e a transformação social.

DESCRIPTORES: Educação em saúde; Enfermagem; Formação crítica; Promoção da saúde; Pesquisa qualitativa.

ABSTRACT

Objective: Health education, when guided by dialogue and critical reflection, constitutes a space for emancipation in the face of inequalities in the health–disease process. **Method:** This qualitative, descriptive, and reflective study, grounded in the Standards for Reporting Qualitative Research, analyzed educational practices conducted between 2021 and 2025 in community settings in Porto Alegre, Brazil. The investigation was based on the National Health Promotion Policy, the pedagogy of Paulo Freire, and campaigns from the World Heart Federation. Data were produced through participant observation and field records and analyzed inductively.

Results: Three dimensions emerged: health education as an emancipatory practice, interprofessional collaboration as a mediator of comprehensive care, and critical training as a structuring axis of nursing praxis. **Conclusion:** It is concluded that dialogical approaches strengthen protagonism, expand autonomy, and reaffirm nursing's political commitment to equity and social transformation.

DESCRIPTORS: Health education. Nursing. Critical formation. Health promotion. Qualitative research.

RESUMEN

Objetivo: La educación en salud, orientada por el diálogo y la reflexión crítica, se configura como un espacio de emancipación frente a las desigualdades en el proceso salud-enfermedad. **Método:** Este estudio cualitativo, descriptivo y reflexivo, fundamentado en los Standards for Reporting Qualitative Research, analizó prácticas educativas realizadas entre 2021 y 2025 en espacios comunitarios de Porto Alegre, Brasil. La investigación se basó en la Política Nacional de Promoción de la Salud, en la pedagogía de Paulo Freire y en campañas de la World Heart Federation. Los datos fueron producidos mediante observación participante y registros de campo, y analizados de forma inductiva. **Resultados:** Emergieron tres dimensiones: la educación en salud como práctica emancipadora, la interprofesionalidad como mediadora del cuidado integral y la formación crítica como eje estructurante de la praxis en enfermería.

Conclusión: Se concluye que los enfoques dialógicos fortalecen el protagonismo, amplían la autonomía y reafirman el compromiso político de la enfermería con la equidad y la transformación social.

DESCRIPTORES: Educación en salud. Enfermería. Formación crítica. Promoción de la salud. Investigación cualitativa.

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INTRODUCTION

Training nurses to work in Intensive Care Units (ICUs) involves the challenge of preparing professionals for highly complex scenarios, in which rapid, informed, and safe decisions can determine vital outcomes^{1,2}. In this context, active methodologies emerge as powerful teaching strategies, capable of integrating theory, practice, and critical reflection^{1,2}.

The ICU is characterized by the intensive use of technology, continuous monitoring, and the need for rapid decisions directly related to patient safety^{3,4}. More than just conveying content, nursing education should foster technical, cognitive, and attitudinal competencies—such as clinical reasoning, autonomy, leadership, and collaborative work—promoting skills for coordinating care and decision-making within multidisciplinary teams^{5–8}.

Active methodologies shift students from passivity to active participation, bringing learning closer to the complexity of healthcare work and integrating technical-scientific knowledge, ethical judgment, and social commitment. National and in y evidence points to gains in autonomy, critical reflection, and student engagement^{9–11}. Among these methodologies, clinical simulation has established itself as a central resource for linking theory and practice in safe environments, fostering meaningful learning¹², while international studies reinforce its effectiveness in developing clinical reasoning and patient safety^{13,14}.

The National Curriculum Guidelines for the Nursing program advocate for a critical, reflective, and generalist education, inextricably linked to teaching, service, and the community¹⁵. Complementarily, the National Policy on Continuing Education in

Health proposes work as the central axis of learning, understanding it as a space for problematization and transformation¹⁶.

From this perspective, Continuing Health Education has been recognized as an indispensable strategy for integrating teaching, management, care, and social control, constituting a pedagogical innovation within the Unified Health System (SUS)¹⁷. Despite these regulatory advances, significant gaps persist between what is planned and what is actually implemented in practice, due to structural inequalities and insufficient pedagogical resources in many institutions¹⁸.

This study is justified by the need to align nursing education with the real demands of care in ICUs. Despite regulatory advances, a disconnect still exists between guidelines and practices, especially regarding the integration of theory and clinical experience^{15–18}.

Reporting on how active methodologies contribute to strengthening innovative strategies that enhance student agency, refine clinical reasoning, and consolidate competencies aligned with the needs of the SUS¹⁷. Furthermore, this report offers insights that can be replicated and adapted in different institutions, disseminating critical, reflective, and socially engaged pedagogical practices^{9,12}.

METHODOLOGY

This study is a qualitative, descriptive-analytical research project based on systematic observation recorded in a field diary and on spontaneous feedback from students. The adoption of this approach follows Minayo's¹⁹ perspective, according to which qualitative research enables the capture of the meanings and intentions attributed by the subjects to pedagogical practices, moving beyond the mere description of activities and producing a critical reflection on the educational

processes experienced in the Intensive Care Unit Nursing course, offered as part of an undergraduate program at a public higher education institution.

In accordance with COREQ criteria, it is noted that the study was conducted by a faculty researcher, with systematic documentation of pedagogical practices and without the use of formal interviews or instruments for direct data collection from students. Reflexivity was ensured through the researcher's acknowledgment of their role as the course instructor and mediator of the educational process.

The study took place over one academic semester, involving approximately 40 students enrolled in their sixth through eighth semesters of the program, organized into two regular classes. Twenty in-person sessions were held, divided between theoretical and practical modules, designed to integrate technical-scientific knowledge, psychomotor skills, and critical reflections on the nurse's role in highly complex settings.

The theoretical classes were conducted in a dialogic and expository format, prioritizing active student participation and the collective construction of knowledge. Resources such as interactive videos, supporting materials, and guided discussions aided in the comprehension of high-density content, while the analysis of clinical cases allowed for the practical application of concepts, stimulating clinical reasoning, evidence-based decision-making, and ethical reflection²⁰.

Supervised laboratory practices were structured around three central pillars of nursing practice in the Intensive Care Unit. The first pillar involved arterial blood gas analysis, covering collection techniques, biosafety principles, and the interpretation of acid-base parameters in relation to different clinical conditions^{21–23}.

The second area covered airway management, with an emphasis on

oxygen therapy strategies, the use of basic and advanced devices, simulations of critical situations, and the application of a safety checklist for orotracheal intubation. The third module covered mechanical ventilation, including the fundamentals of ventilatory modes, initial settings, parameter monitoring, analysis of waveforms, and troubleshooting related to ventilatory support³.

As a culminating activity, the students organized and presented seminars on medications administered via infusion pump, covering preparation, dilution, dose calculation, compatibility, safe infusion administration, and the prevention of adverse events—a phase that reinforced the intersection between pharmacology, technology, and patient safety³.

The empirical material supporting this report was derived from entries in the instructor's field journal and spontaneous feedback from students during and after the activities. The analysis followed a descriptive-analytical approach, enabling the identification of technical, cognitive, and relational advances, as well as the meanings attributed by students to the educational process, in line with the qualitative perspective¹⁹.

From an ethical standpoint, it should be noted that no data were collected from patients or students for scientific research purposes. This is exclusively a report of teaching experience, in accordance with CNS Resolution No. 510/2016; therefore, there was no need for submission to the Research Ethics Committee.

RESULTS

The results of this teaching experience demonstrated significant advances in the educational process of nursing students, particularly in the development of clinical, cognitive, and attitudinal competencies essen-

tial for care in Intensive Care Units. Throughout the twenty sessions, I observed growing engagement, reflected in active participation in theoretical discussions and increased autonomy in managing practical activities. This evolution underscores the relevance of pedagogical approaches capable of breaking away from passivity and fostering critical and active learning²⁴.

In the theoretical classes, it was observed that the dialogic nature of the sessions fostered the collective construction of knowledge, enabling a solid understanding of complex topics such as mechanical ventilation, arterial blood gas analysis, and the prevention of healthcare-associated infections. This experience reinforced, in my practice, the importance of methodological diversification in health education²⁵.

Supervised clinical practice proved decisive for the consolidation of clinical reasoning. In arterial blood gas analysis exercises, I observed the students' gradual progress in interpreting acid-base disorders, relating laboratory results to different clinical situations. This advancement went beyond the technical dimension, as students began to justify clinical decisions with greater confidence².

In airway management, I noted greater precision and technical confidence, with a reduction in basic errors and a strengthening of professional demeanor⁶. In the mechanical ventilation module, students began to interpret ventilatory curves and identify changes in parameters with increasing clarity, demonstrating the impact of structured practice on the assimilation of complex concepts².

Another relevant finding was the seminar on infusion pumps. During the presentations, I observed that students deepened their knowledge of medication preparation, dose calculation, and solution compatibility, integrating pharmacology with clinical

practice³. This activity reinforced a culture of safety in the use of technologies and medications³.

From a relational and attitudinal perspective, I observed significant progress in skills such as assertive communication, teamwork, and leadership. The students' spontaneous reports also revealed greater satisfaction and motivation regarding the learning process²⁶.

Overall, this experience demonstrated that active methodologies fostered a critical and reflective approach among students toward clinical cases, broadening their understanding of the complexity of decisions in intensive care and redefining the role of the nurse in highly complex scenarios²⁷. Thus, the " " course analyzed brought academic training closer to the reality of care, strengthening the connection between theory, practice, and critical reflection. Such integration proved essential for the development of competent, autonomous, and socially committed nurses, in line with the guidelines of the Unified Health System¹⁶.

DISCUSSION

The teaching experience analyzed demonstrates that the pedagogical organization of the Intensive Care Nursing course enhances professional training when structured as a pathway that integrates theory, practice, and critical reflection. In my experience, this integration proved decisive for student engagement and the consolidation of clinical and relational competencies. This finding aligns with studies that argue that teaching must move beyond linear instruction²⁴ and emphasize the role of active methodologies in fostering critical and socially committed individuals⁹.

Regarding highly technical content, such as arterial blood gas analysis, mechanical ventilation, and

pharmacotherapy, I observed that differentiated approaches were indispensable for fostering understanding and practical application. The dialogic nature of the classes and the use of clinical cases helped prevent the fragmentation of teaching, bringing students closer to the reality of patient care^{25,7}. Above all, the value of faculty mediation is confirmed, as it is the element that provides meaning and context to learning. Without adequate institutional conditions, such as simulation spaces, faculty time, and investment in equipment, there is a risk that these methodologies will be limited to individual efforts, lacking systemic educational impact.

Another central aspect was the strengthening of clinical reasoning and evidence-based decision-making. In practice, I observed greater confidence among students when interpreting laboratory parameters and justifying clinical approaches. This finding aligns with previous studies^{2,5}, but reinforces, based on lived experience, that such competencies only develop when the use of educational technologies is associated with constant dialogue and clinical contextualization. In this sense, active methodologies proved to be more than technical tools: they constituted pedagogical processes that require critical mediation, supporting the training of autonomous and reflective professionals.

The relational and organizational dimensions also stood out. Teamwork, assertive communication, and leadership emerged as competencies strengthened during supervised clinical practice. This observation aligns with analyses highlighting the role of the preceptor in complex environments²⁸ and the management of care in professional development⁸. By proposing simulated scenarios of clinical deterioration, I observed that students experienced the importance of multi-professional integration⁶.

The seminar on infusion pumps was another revealing moment. In addition to delving into technical aspects, such as preparation and dose calculation, it facilitated discussions on risks and protocols. This experience reinforced the culture of safety³. These findings align with recent research^{3,2}.

Student motivation and satisfaction also emerged as relevant factors. Several students spontaneously reported increased confidence and engagement, which, in my view, was a direct reflection of the leading role they assumed in the activities. This result aligns with analyses highlighting confidence as a determining factor for retention and motivation in intensive settings^{26,29}.

From a normative perspective, the results align with the frameworks of health education in Brazil. The National Nursing Guidelines (DCNs)¹⁵ and the National Policy on Nursing Education (PNEPS)¹⁶ already advocate for a critical, comprehensive education linked to health practice. My experience confirms that, although these guidelines are well-established, there remains a gap between what is prescribed and what materializes in institutions. CNE/CES Opinion No. 443/2024 signals a necessary update, more in line with the contemporary demands of the SUS, but it will still require efforts to overcome structural inequalities.

Despite the advances, some challenges remained evident: the heterogeneity of prior knowledge and the limited time available for in-depth debriefings constrained part of the process. This difficulty corroborates analyses indicating the need for methodologies that consolidate clinical reasoning as a cross-cutting pillar of training^{6,30}. In my practice, I identified the urgent need for leveling strategies and greater institutional investment in simulation spaces as a way to reduce inequalities and enhance learning.

Finally, the experience reinforced the role of the teacher as a mediator, capable of guiding students in the construction of critical and socially engaged knowledge^{24,31}. Without teaching mediation, even innovative methodologies lose their transformative power.

Overall, the discussion shows that teaching in Intensive Care, supported by active methodologies and supervised practices, goes beyond the transmission of technical content. It promotes the training of critical, reflective professionals aligned with the principles of the SUS. This experience highlights the relevance of pedagogical innovation in this field and points to the need for its institutionalization as a structured training practice, ensuring sustainability and collective reach.

FINAL CONSIDERATIONS

The teaching experience in the Intensive Care Nursing course demonstrated that the combination of interactive classes, supervised practicals, case studies, and integrative activities enhances the training of nurses prepared to work in highly complex settings. This pedagogical approach fostered the development of technical, cognitive, and relational competencies, strengthened student autonomy, enhanced clinical reasoning, and contributed to the consolidation of a culture of safety in care.

The experience demonstrated that the combination of interactive classes, supervised clinical practice, and integrative activities not only expanded students' technical mastery but also transformed their attitude toward intensive care, fostering the development of a critical, autonomous profile committed to patient safety and the principles of the SUS. For these results to be sustainable, it is essential that active methodologies be incorporated as

institutional pedagogical policy, rather than as isolated initiatives by faculty members. This perspective expands the possibilities for replication in other curricular components, strengthens critical and socially committed training, and contributes to consolidating an educational practice aligned with the demands of the Unified Health System.

Despite the progress made, some challenges remain, such as the wide variation in students' prior knowledge, the limited time available for conducting more in-depth debriefings, and the scarcity of teaching resources. These factors underscore the need for institutional support policies, remedial strategies, and greater investment in infrastructure for simulation practic-

es, ensuring equitable learning conditions.

Among the limitations of this experience, the following stand out: the limited time available for in-depth debriefings, the heterogeneity of prior knowledge among students, and the limited pedagogical resources. These factors require constant adaptation by faculty and supportive institutional policies to ensure equitable learning conditions.

Future research should longitudinally assess the impact of active methodologies on the clinical performance of graduates in real-world settings, as well as investigate strategies for more systematic integration between teaching and health services. Furthermore, it is recommended to expand initiatives

that systematically integrate teaching with health services, reinforcing the inseparability of theory and practice and consolidating the university's role as a producer of pedagogical innovation.

Overall, this experience confirms that teaching in Intensive Care constitutes a strategic field for pedagogical innovation. By articulating theory and practice in a transformative teaching-learning process, it contributes not only to the training of critical and competent nurses but also to the strengthening of innovative, ethical, and socially -committed educational practices, reaffirming the university's role as a producer of knowledge and a key player in the advancement of healthcare.

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