

RESEARCH ARTICLE (ORIGINAL)

Teaching Nursing Management in Undergraduate Education: A Curriculum Analysis at a Public University in Southern Brazil

Ensino da Gestão em Enfermagem na Formação Pré-graduada: Análise do Currículo numa Universidade Pública do Sul do Brasil

Enseñanza de la Gestión en Enfermería en la Formación de Grado: Análisis Curricular en una Universidad Pública del Sur de Brasil

Silvia Cristina Garcia Carvalho¹

 <https://orcid.org/0000-0002-6668-3014>

Miguel Lucas Silva da Paixão¹

 <https://orcid.org/0000-0002-7467-568X>

Daniela Silva dos Santos Schneider¹

 <https://orcid.org/0000-0001-9593-9931>

Daiane Dal Pai¹

 <https://orcid.org/0000-0002-6761-0415>

Juciane Aparecida Furlan Inchauspe¹

 <https://orcid.org/0000-0002-2386-1378>

Gabriel Fernandes Gonçalves¹

 <https://orcid.org/0000-0002-5097-4052>

Ana Maria Müller de Magalhães¹

 <https://orcid.org/0000-0003-0691-7306>

¹ Federal University of Rio Grande do Sul, Nursing School, Porto Alegre, Rio Grande do Sul, Brazil

Abstract

Background: Nursing education plays a key role in preparing professionals for management roles. However, teaching in this area is often limited. This study examines the gaps in a nursing curriculum related to nursing management to improve alignment with the demands of professional practice.

Objective: To identify and reflect on the teaching of nursing management and administration based on the curricular analysis of an undergraduate nursing program at a federal university in southern Brazil.

Methodology: A cross-sectional documentary study analyzed 38 mandatory course unit syllabi and summaries, which were classified as “Specific Nursing Knowledge” or “General Health Sciences Knowledge.”

Results: Fourteen course units (36.8%) included content related to nursing management, accounting for 7% of the total curriculum (281 hours). Most topics focused on human resource management and health system policies, indicating limited emphasis on essential managerial competencies.

Conclusion: A gap exists between the management training provided in undergraduate education and labor market expectations. Strengthening managerial education in nursing programs is essential to improve nurses’ performance in management roles.

Keywords: nursing administration research; health management; nursing, education; teaching; professional competence

Resumo

Enquadramento: A formação em enfermagem desempenha um papel fundamental na preparação dos profissionais para o exercício de funções de gestão; contudo, o ensino nesta área revela-se frequentemente limitado. Este estudo analisa as lacunas existentes num currículo de enfermagem no que respeita à gestão em enfermagem, com o objetivo de melhorar o seu alinhamento com as exigências da prática profissional.

Objetivo: Identificar e refletir sobre o ensino da gestão e da administração em enfermagem, com base na análise curricular de um curso de licenciatura em enfermagem de uma universidade federal do sul do Brasil.

Metodologia: Estudo de análise documental, de natureza transversal, que inclui a análise de 38 planos de ensino e programas de unidades curriculares obrigatórias, classificadas como *Específicas de Enfermagem* ou *Ciências da Saúde Gerais*.

Resultados: Catorze unidades curriculares (36,8%) incluíram conteúdos relacionados com a gestão, correspondendo a 7% da carga horária total do currículo (281 horas). A maioria dos conteúdos abordou a gestão de recursos humanos e as políticas de saúde, evidenciando uma reduzida ênfase no desenvolvimento de competências gerenciais essenciais.

Conclusão: Verifica-se uma lacuna entre a formação em gestão oferecida nos cursos de enfermagem e as expectativas do mercado de trabalho. O reforço da educação em gestão é fundamental para melhorar o desempenho dos enfermeiros no exercício de funções gerenciais.

Palavras-chave: pesquisa em administração de enfermagem; gestão em saúde; educação em enfermagem; ensino; competência profissional

Resumen

Marco contextual: La formación en enfermería desempeña un papel fundamental en la preparación de los profesionales para funciones de gestión, pero la enseñanza en esta área suele ser limitada. Este estudio analiza las lagunas existentes en el plan de estudios de enfermería en relación con la gestión de enfermería, con el objetivo de mejorar su alineación con las exigencias de las prácticas profesionales.

Objetivo: Identificar y reflexionar sobre la enseñanza de la gestión y administración en enfermería a partir del análisis curricular de un curso de grado en enfermería de una universidad federal del sur de Brasil.

Metodología: Estudio de análisis documental, de naturaleza transversal, que analizó 38 planes de enseñanza y programas de unidades curriculares obligatorias, clasificadas como *Específicas de Enfermería* o *Ciencias de la Salud Generales*.

Resultados: Catorce unidades curriculares (36,8 %) incluyeron contenidos relacionados con la gestión, lo que supuso un 7 % de la carga horaria del plan de estudios (281 horas). La mayoría de los temas trataron sobre la gestión de recursos humanos y las políticas sanitarias, lo que demuestra un escaso énfasis en las competencias gerenciales esenciales.

Conclusión: Existe una brecha entre la formación en gestión que se ofrece y las expectativas del mercado. Es fundamental reforzar la formación en gestión para mejorar el rendimiento de los enfermeros en el ámbito de la gestión.

Palabras clave: investigación en administración de enfermería; gestión en salud; educación en enfermería; enseñanza; competencia profesional

Corresponding author

Silvia Cristina Garcia Carvalho

E-mail: silviasilmari@gmail.com

Received: 23.05.25

Accepted: 21.01.26



Escola Superior de
Enfermagem de Coimbra

fct

Fundação
para a Ciência
e a Tecnologia

How to cite this article: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F.; Magalhães, A. M. (2026). Teaching Nursing Management in Undergraduate Education: A Curriculum Analysis at a Public University in Southern Brazil. *Revista de Enfermagem Referência*, 6(5), e41754. <https://doi.org/10.12707/RVI25.63.41754>



Introduction

The scope of nursing practice varies worldwide. In some countries, such as Portugal and the United States of America, nurses are responsible for both bedside care and care management at different levels and across various roles (Rodrigues & Sousa, 2023; Vandresen et al., 2023). Similar to the Spanish model, Brazilian nursing is divided into technician-level and graduate-level professionals, with the nurse, a graduate-level professional, assuming a predominantly managerial role in professional settings (Bär et al., 2024; Silva et al., 2022).

Beyond direct care, defined as technical and practical actions performed at the bedside (such as procedures), Brazilian nurses are also responsible for a range of indirect care activities, including the management of human, physical, and material resources (Silva et al., 2022). Given the nature of this work, nurses are expected to develop management competencies. These competences include leading multiprofessional teams, making evidence-based decisions, planning and organizing work processes, managing human and material resources, communicating clearly and assertively, and fostering a safe and collaborative care environment (American Association of Colleges of Nursing, 2021).

Although both aspects of care are complementary and fundamental to professional practice, as recognized in the National Curriculum Guidelines (NCG) for undergraduate nursing programs in Brazil, studies indicate weaknesses in undergraduate curricula regarding theoretical and practical knowledge in nursing administration, as well as insufficient education on management competencies required of nurses (Conselho Nacional de Saúde, 2018; Martins et al., 2020; Siqueira et al., 2023).

In light of these considerations and recognizing the need for further studies on this topic, the present study aimed to identify and reflect on the teaching of management and administration in nursing through the analysis of an undergraduate nursing curriculum.

Background

Nursing competencies comprise knowledge, skills, and attitudes that nurses apply to perform functions related to the management of physical, human, and material resources, as well as the organization and coordination of care actions and plans. These competencies contribute to improved routine arrangements, reduced team conflicts, and enhanced safety and quality of patient care (Barros et al., 2023; Caldeira et al., 2023; Elsayed et al., 2024; Fernandes et al., 2022; Filomeno et al., 2024; Leal et al., 2025).

Nurses play essential roles in logistics and human resource management, standing out both in direct care, by supervising and leading nursing teams, and in strategic managerial roles within institutions, where they oversee multidisciplinary teams (Leal et al., 2025). Activities such as staff sizing, allocation, recruitment, training, perfor-

mance evaluation, and continuing education are also part of nurses' routines and are crucial for team development and workflow improvement (Bär et al., 2024).

However, due to insufficient infrastructure and human resources in healthcare institutions, nurses are often burdened with responsibilities related to hospital services, maintenance of healthcare facilities, computers, and information systems. Although these factors are important for the safety and comfort of both patients and staff, they do not fall within the formal scope of nursing practice (Barros et al., 2023; Chularee et al., 2024; Jalilvand et al., 2024). Consequently, this lack of organizational structure results in role deviation among nurses and does not constitute a form of empowerment that supports improved professional performance or enhanced patient outcomes and safety.

Beyond the management of physical resources in conventional healthcare institutions, where nurses are not always structurally empowered, there are contexts in which these professionals perform critical roles in extra-hospital settings, such as environmental and scene control during disasters and mass casualty incidents. In these situations, nurses are responsible for mapping the territory, establishing care structures and flows, and identifying key actors involved in the response (Manfrini et al., 2024). In such cases, nurses' activities involve autonomy and decision-making authority to organize workspaces, demonstrating technical capacity and leadership in these processes (Barros et al., 2023; Manfrini et al., 2024).

It is also important to highlight the fundamental role of nurses in the management and processing of materials, which are essential resources for the safe and appropriate performance of procedures and care delivery. Nurses also play a key role in defining and approving future material acquisitions for institutions, directly influencing cost control and the quality of care (Aydogdu, 2024; Braga et al., 2023). These functions and activities require nurses to apply various management competencies, such as leadership, communication, teamwork, and decision-making skills, which are expected of this professional category (Conselho Nacional de Saúde, 2018). The literature suggests that, considering the curriculum established by the NCG, undergraduate nursing programs should be sufficient to ensure the knowledge required to perform administrative tasks in healthcare institutions, without the need for professionals to hold specific postgraduate degrees (Magnago & Pierantoni, 2020; Rebello et al., 2024).

However, although these competencies are expected in the education of generalist nurses and are recognized in the literature as fundamental for professional practice, a gap persists in the teaching of management and administrative competencies. This gap represents a significant weakness in the preparation of professionals entering the job market (Caldeira et al., 2023; Magnago & Pierantoni, 2020). Furthermore, it directly impacts healthcare systems, resulting in the waste of financial and material resources and compromising the quality and safety of care processes and services (Barros et al., 2023; Magnago & Pierantoni, 2020).

Research question

How is the teaching of nursing management and administration structured in an undergraduate nursing curriculum?

Methodology

This documentary analysis study adopted a cross-sectional and descriptive design and aimed to analyze and outline the curriculum of an undergraduate nursing program at a federal university in southern Brazil. Given that case studies involve an in-depth analysis of a phenomenon, process, or activity confined to a specific setting or period, a documentary research approach was adopted. Data were obtained from primary sources in the public domain and collected through a virtual search directly on the university’s website in May 2024 by two researchers. Syllabi and teaching plans (TPs) from the mandatory course units of the undergraduate nursing program were subjected to analysis. Information on semesters, class summaries, workload, practical content, and schedules was extracted and systematically organized in a Microsoft Excel® spreadsheet, following the chronological sequence of the course units in the program. Course units were categorized as “Specific Nursing Knowledge” when they contained content directly related to professional nursing practice and as “General Health Sciences Knowledge” when they included content common to all healthcare professionals. Documents related to elective course units were excluded due to their optional nature. Documents concerning enrollment maintenance, undergraduate thesis development, and mandatory internships were also excluded, as they do not include associated TPs and depend on students’ individual choices, which prevents determining whether nursing man-

agement content was taught. Subsequently, the content defined in the TPs was transcribed, and a descriptive analysis was performed. Topics related to nursing management were identified as those that directly mentioned models, policies, plans, activities, schedules, and administrative and managerial actions executed or experienced by nurses, in accordance with the management competencies established by the NCG (Conselho Nacional de Saúde, 2018). The percentage of course unit workload and the number of credits for each course unit were calculated using simple descriptive statistics to outline the educational profile related to the topic under study. This study is part of a larger research project registered at the submitting institution under CAAE No. 70220717.4.0000.5327 and approved under opinion No. 2.183.123 by the Research Ethics Committee (CEP - *Comité de Ética em Pesquisa*). As this was a documentary study based on publicly available documents, the use of a Free and Informed Consent Form was not required.

Results

A total of 76 documents were identified and evaluated, including 38 course syllabi and 38 TPs, corresponding to the 38 mandatory course units in the nursing program. Of these, 20 course units were classified as “General Health Sciences Knowledge” (52.6%) and 18 as “Specific Nursing Knowledge” (47.4%). Among the course units that addressed content directly related to nursing management and administration, 14 (36.8%) were identified as presenting nursing management topics within the content listed in their syllabi and TPs, as shown in Table 1.

Table 1

Nursing management and administration content identified in the undergraduate nursing curriculum, 2024

Content by Course Syllabus (CS)		Workload in hours
CS1	– Health within the scope of public policies – Health systems – Organization of health services – Regulation of the [Brazilian] Unified Health System (SUS) – Care models – Health surveillance	36:50
CS2	– Medicalization practices in contemporary culture and their relationship with industry, markets, professionals, and public/users/patients/consumers	10:00
CS3	– Professional Practice Law and Professional organizations in Brazilian Nursing – Theoretical and practical aspects of technologies – Nursing Process (Care management)	05:40
CS4	– Professional Practice Law and Professional organizations in Brazilian Nursing – Theoretical and practical aspects of technologies	07:10
CS5	– Mental Health Policies – Psychosocial Care Network	14:00

CS6	– Health Characteristics and Indicators and Health Information Sources – Health surveillance: sanitary, epidemiological, occupational, and environmental – National Immunization Program – Health Policies and the nurse's work process in Primary Health Care (PHC)	12:00
CS7	– Mental Health Policies – Psychosocial Care Network	14:00
CS8	– Study of concepts of epidemiological surveillance and their application and relevance in public health policies and interventions	02:00
CS9	– Health policies and programs specific to the thematic area of the practice field chosen by the student (chronic injuries, diabetes, obesity, etc.)	12:00
CS10	– Bioethics, ethics, and ethical dilemmas in the care of newborns, children, adolescents, and families – Accident prevention in childhood and health indicators – Nursing Care Systematization (SAE) and the Nursing Process in the care of newborns, children, and adolescents	14:00
CS11	– Health Care Networks and Intersectionality in the care of newborns, children, adolescents, and their families – Continuity of care within the Health Care Network	07:00
CS12	– Programmatic Strategies and Practices in Health	07:30
CS13	– Development of Action Plans and Health Intervention Proposals	04:04
CS14	– Introduction to Nursing Administration and Care Management – Theoretical foundations of administration – Structure and philosophy of nursing services – Care organization models – Information and communication technology in nurses' work processes – Ethical aspects in nursing administration – Work process and managerial competencies of the nurse – Satisfaction and user experience – Quality management and safety in healthcare services – Health care and nursing planning – Human resource management in nursing: integration into the work team – Continuing education in health – Interprofessional health teamwork – Leadership in nursing – Change process, conflict management, and negotiation – Nursing supervision – Performance evaluation: competency-based management – Staffing of hospital nursing personnel – Staffing of nursing personnel in PHC – Labor legislation and staff scheduling/organization of work shifts – Administrative communication – Interprofessional communication – Work meetings – Entrepreneurship in nursing – Biosafety – Nursing professional's health management – Financial resource management and nursing auditing – Material resource management	120:00

The analyzed nursing program comprises a total workload of 4,001 mandatory hours, distributed as follows: 3,105 hours of compulsory theoretical-practical course units, 896 hours of practical activities defined by the university, and 90 elective hours consisting of extracurricular activities chosen by the students. Although the program spans 10 semesters, the last two (9th and 10th) are exclusively allocated to clinical internships.

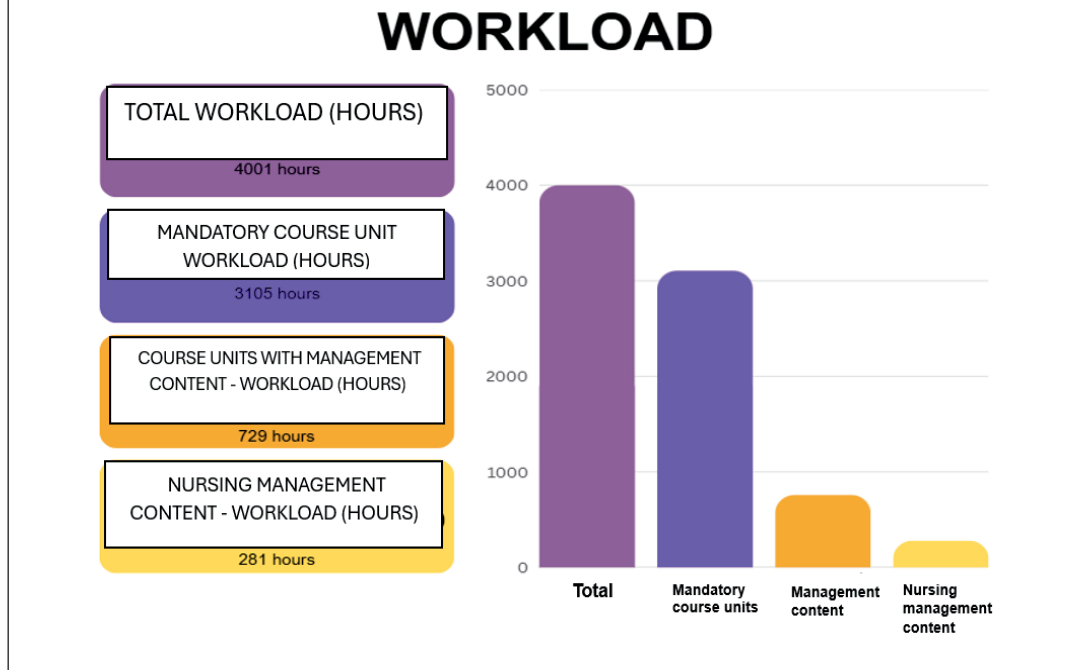
Therefore, coursework is organized throughout the first eight semesters and nursing management and administration course units are offered progressively. Course syllabus (CS)1 and CS2 are taught in the 1st semester, CS3 and CS4 in the 2nd, and CS5 and CS6 in the 3rd

semester, primarily focusing on primary health care. From the 4th semester onward, the emphasis shifts toward hospital inpatient settings: CS7 in the 4th semester; CS8 and CS9 in the 5th semester; CS10 and CS11 in the 6th semester; CS12 and CS13 in the 7th semester; and CS14 in the 8th semester.

Regarding the distribution of management and administration content, 72.3% of the workload is concentrated in the latter stages of the program, with 45.1% specifically focused on the hospital context. Overall, nursing management and administration account for 7% of the program's total mandatory workload, as shown in Figure 1.

Figure 1

Mandatory course unit workload and management and nursing management content in the nursing program, 2024

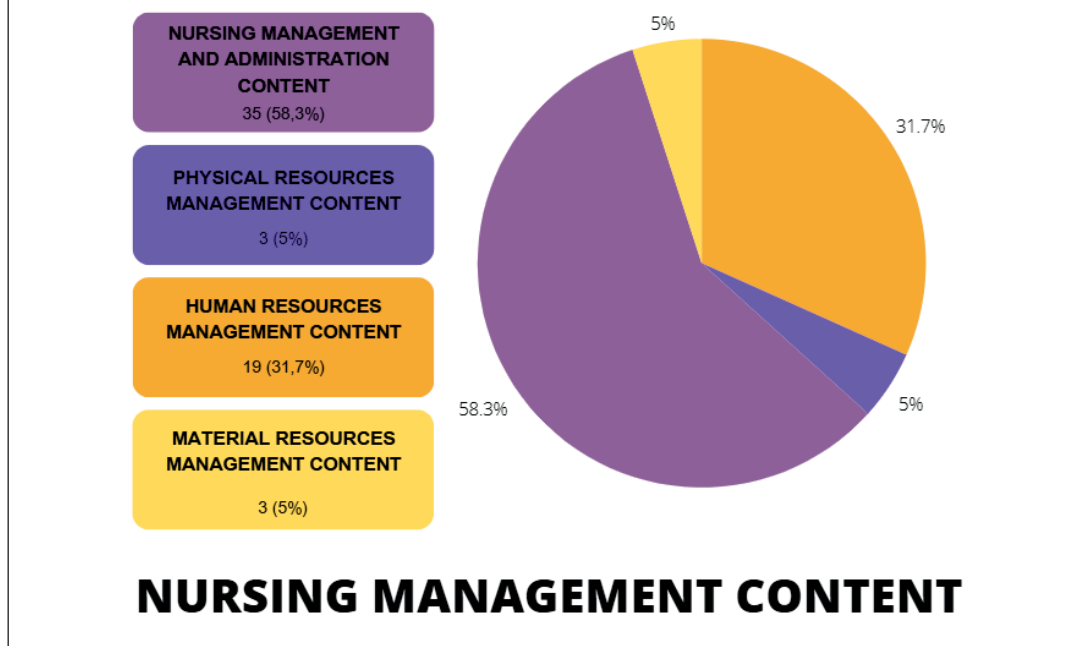


Regarding the contents taught in the course units, a total of 60 content entries related to nursing management and administration were identified in the syllabi and TPs. Of these, 3 (5.0%) pertained to physical resource management, 3 (5.0%) to material resource

management, 19 (31.7%) to human resource management, and the majority, 35 (58.3%), to healthcare system structural policies and topics common to care management and health services management, as shown in Figure 2.

Figure 2

Nursing management and administration content listed in course syllabi and teaching plans, 2024



Discussion

This study highlights a clear gap between the management competencies required in nursing practice and the limited space these competencies occupy in undergraduate curricula. With only 7% of course unit workload dedicated to management-related content, the training provided falls short of preparing nurses for responsibilities that dominate professional practice, reinforcing fragmented understandings of managerial work. These findings underscore the need to strengthen management education in nursing programs.

Although the scientific literature and the Brazilian education system recognize management competencies as fundamental to the development and consolidation of nursing professionals, as explicitly stated by the NCG, weaknesses persist in the theoretical and practical teaching of the knowledge, skills, and attitudes that constitute these competencies. These weaknesses observed both in the institution evaluated and in others result in an insufficient response to current labor market demands (Elsayed et al., 2024; Magnago & Pierantoni, 2020). Nursing administrative and managerial activities are known to account for a substantial portion of nurses' daily work, reaching up to 75% of professional functions in some practice settings (Galiano et al., 2024; Trevilato et al., 2023). In comparison, the findings of this study show that only 7% of undergraduate course unit workload is allocated to teaching content related to nursing management and administration, indicating a lower emphasis on theoretical management preparation than the labor market requires. Nursing practice includes activities often considered "invisible," as described by Oliveira et al. (2022), particularly those related to human resource management. The application of staffing instruments, organization of work shifts and on-call schedules, continuing education initiatives, and the organization and systematization of work processes within teams demand time, knowledge, and technical capacity from nurses who must also coordinate, supervise, and manage their teams. Furthermore, the undervaluation of management actions performed by nurses, often perceived as bureaucratic, contributes to curricula that prioritize direct care knowledge, which is more technical and practical, to the detriment of content focused on indirect care activities, such as administrative tasks (Leal et al., 2025).

The findings of this study indicate a gap in nursing education and training, corroborating the study by Araújo et al. (2020), which shows that nursing students continue to perceive management as a "bureaucratic job" that distances nurses from direct care. This perception raises important questions, such as: Why do nursing students fail to understand management as an intrinsic component of their work? Why is nursing administration predominantly taught in the final course units, rather than being developed from the beginning of the educational process? How does this curricular organization influence the perceived value of management activities?

This reduced teaching workload may contribute to a fragmented understanding of nursing service management

and direct patient care, despite both being essential for achieving comprehensive health care.

In professional practice, this gap translates into a weakness recognized by the labor market (Alnajjar & Hashish, 2024; Leal et al., 2025). Limited exposure to management education results in limited application of management knowledge in practice, which not only reflects fragile curricular structures but also substantially affects healthcare systems. These effects include financial resource waste, reduced patient safety in care processes, and negative impacts on institutional quality indicators (Fernandes et al., 2022; Leal et al., 2025; Trevilato et al., 2023). In primary health care, this weakness becomes even more evident, as the managerial content taught in undergraduate programs, such as human resource allocation, task and service organization, and other nursing administrative processes, is largely oriented toward hospital settings. This orientation limits the applicability of management knowledge for primary health care and hinders the integration of theory into practice in this context (Assad et al., 2021).

At the international level, evidence also points to weaknesses in undergraduate nursing curricula regarding management competencies, reinforcing the need to invest in nurses' professional development to optimize services, increase economic efficiency, improve care quality, and promote healthier work environments (Vandresen et al., 2023).

In response to these challenges, international guidelines emphasize the urgency of strengthening management and leadership competencies during undergraduate training. The World Health Organization (WHO, 2025) highlights that investment in leadership development for nurses is essential to ensure high-quality care and efficient health service management. Leadership development programs should be expanded, particularly in low-income countries to provide contextualized training that addresses competencies required across diverse care settings. According to WHO (2025), resource mobilization is needed to overcome persistent barriers, such as limited funding, insufficient representation of senior nurses in policy-level positions, and inadequate exposure to leadership within education and training curricula. Incorporating these recommendations into nursing programs aligns with global efforts to develop a more competent, confident, and resilient nursing workforce capable of responding to the increasingly complex demands of healthcare systems. Considering the NCG and the competencies expected in nurse training, it is necessary to reflect on educational strategies to address this gap, both for students currently enrolled in undergraduate programs and for professionals already graduated and active in the labor market who may lack these competencies (Conselho Nacional de Saúde, 2018; Santos et al., 2023; Vleminckx et al., 2024).

The conclusions of this study are based on the analysis of a single undergraduate nursing program, which limits their generalizability. Other limitations should also be acknowledged, namely the absence of an evaluation of clinical practice courses and the exclusive use of publicly available documents. Nevertheless, the results reveal struc-

tural patterns that are consistent with those documented in other nursing programs. Recognizing these limitations reinforces the relevance of addressing the curricular gaps identified, given their implications for the quality of nursing education and professional practice.

Conclusion

The development of nurses' management competencies, including knowledge, skills, and attitudes related to decision-making, effective communication, leadership, continuing education, and the management of physical, human, and material resources, directly influences resource optimization, workflow efficiency, and patient safety. This study demonstrated that these competencies are minimally incorporated into undergraduate nursing curricula, revealing a significant pedagogical gap. This finding is consistent with the curriculum analysis, which showed that planning, organization, and management of material and human resources are seldom emphasized in nursing education.

Consequently, insufficient integration of management training contributes to limited recognition of these essential activities, which are often perceived as "bureaucratic" or secondary to direct patient care. The findings indicate that the low incorporation of management-related content in nursing education contributes to a limited perception of nurses' roles as managers and leaders. Strengthening management education within undergraduate programs may enhance graduates' preparedness, reinforce professional identity, and promote a more comprehensive understanding of the managerial dimensions inherent to nursing practice.

Author contributions

Conceptualization: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Data curation: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Formal analysis: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Funding acquisition: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Investigation: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Methodology: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Project administration: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Resources: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Software: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Supervision: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Validation: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Visualization: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Writing – original draft: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Writing – review and editing: Carvalho, S. C., Paixão, M. L., Schneider, D. S., Dal Pai, D., Inchauspe, J. A., Gonçalves, G. F., Magalhães, A. M.

Funding

This study was supported by the Coordination for the Improvement of Higher Education Personnel (CAPES) through master's and doctoral scholarships.

Acknowledgments

The authors express their sincere gratitude to the Federal University of Rio Grande do Sul for serving as a second home and for providing a safe and stimulating environment for the scientific development of girls and women.

References

- Alnajjar, H. A., & Hashish, E. A. (2024). Exploring the effectiveness of the Career Guidance and Counseling Program on the perceived readiness for the job market: A lived experience among nursing students. *Frontiers in Public Health*, 12. <https://doi.org/10.3389/fpubh.2024.1403730>
- Assad, S. G., Valente, G. S., Santos, S. C., & Cortez, E. A. (2021). Formação e prática do enfermeiro na gestão da atenção primária: Perspectivas da Teoria de Schön. *Revista Brasileira de Enfermagem*, 74(3), e20200461. <https://doi.org/10.1590/0034-7167-2020-0461>
- Araujo, M. O., Santos, S. N., Mascarenhas, N. B., & Freitas, T. O. (2020). Nursing students' perception about the senses and meanings of nurses' management work. *Brazilian Journal of Health Research*, 22(1), 35–42. <https://doi.org/10.21722/rbps.v22i1.21469>
- American Association of Colleges of Nursing. (2021). *The essentials: Core competencies for professional nursing education*. <https://www.aacnursing.org/Portals/0/PDFs/Publications/Essentials-2021.pdf>
- Aydogdu, A. L. (2024). Nurses' perceptions of nursing management: A metaphorical analysis. *Collegian*, 31(5), 333–345. <https://doi.org/10.1016/j.colegn.2024.06.005>
- Bär, K. A., Lima, B. D., Martelle, G. M., Silva, S. C., Santos, M. R., & Costenaro, R. G. S. (2024). Percepção dos enfermeiros sobre o processo de enfermagem e sua relação com a liderança. *Revista Brasileira de Enfermagem*, 77(1), e20230371. <https://doi.org/10.1590/0034-7167-2023-0371>
- Barros, A. C., Menegaz, J. C., Santos, J. L., Polaro, S. H., Trindade, L. L., & Meschial, W. C. (2023). Conceitos de gestão e gerência

- do cuidado de enfermagem: Revisão de escopo. *Revista Brasileira de Enfermagem*, 76(1), e20220020. <https://doi.org/10.1590/0034-7167-2022-0020>
- Braga, F. A., Lins, S. M., Christovam, B. P., & Souza, O. A. (2023). Gestão da qualidade na pandemia de COVID-19: Plano de ação da enfermagem. *Revista Brasileira de Enfermagem*, 76(suppl 1), e20220272. <https://doi.org/10.1590/0034-7167-2022-0272>
- Braga, F. A. C. de O., Lins, S. M. de S. B., Christovam, B. P., & Souza, O. A. B. de. (2023). Quality management in the COVID-19 pandemic: nursing action plan. *Revista Brasileira de Enfermagem*, 76(suppl 1). <https://doi.org/10.1590/0034-7167-2022-0272>
- Conselho Nacional de Saúde. (2018). *Resolução Nº 573, de 31 de janeiro de 2018*. <https://l1nk.dev/H39TJ>
- Caldeira, A. P., Renoir, S., Sá, V. C., & Santos, Y. (2023). Impacto da gestão de enfermagem qualificada no processo do cuidado. *Revista JRG de Estudos Acadêmicos*, 6(13), 764-782. <https://doi.org/10.5281/zenodo.8038917>
- Chularee, S., Tapin, J., Chainok, L., & Chiaranai, C. (2024). Effects of project-based learning on entrepreneurship skills and characteristics of nursing students. *Nursing and Health Sciences*, 26(3), e13160. <https://doi.org/10.1111/nhs.13160>
- Elsayed, M., Ibrahim, E., Abdelaalem, M. M., & Abdelhady, M. (2024). Effect of authentic leadership and mindfulness educational program on nursing managers' competencies: A quasi-experimental study. *BMC Nursing*, 23, article 346. <https://doi.org/10.1186/s12912-024-01976-z>
- Fernandes, J. D., Cordeiro, A. L., Teixeira, G. A., Silva, R. M., & Silva, G. T. (2022). Legislação e qualidade da educação em enfermagem no contexto da pandemia de COVID-19. *Revista Brasileira de Enfermagem*, 75(3), 20210825. <https://doi.org/10.1590/0034-7167-2021-0825>
- Filomeno, L., Forte, D., Di Simone, E., Di Muzio, M., Tartaglini, D., Lommi, M., & Ivziku, D. (2024). Systematic review and psychometric properties analysis of first-, middle-and top-level nurse manager's core competencies instruments. *Journal of Nursing Management*, 2024(1), e2655382. <https://doi.org/10.1155/2024/2655382>
- Galiano, M. A., Elisa, M., Guerrero, W. J., Muñoz, M. F., Ortiz, A., Sebastián, J., Lozano, M. G., & Sundt, A. L. (2024). Technological innovation for workload allocation in nursing care management: An integrative review. *F1000Research*, 12, 104. <https://doi.org/10.12688/f1000research.125421.3>
- Jalilvand, M., Raeisi, A. R., & Shaarbafchizadeh, N. (2024). Hospital governance accountability structure: A scoping review. *BMC Health Services Research*, 24(1), 47. <https://doi.org/10.1186/s12913-023-10135-0>
- Leal, L. A., Henriques, S. H., Cruchinho, P. J., Silva, I. G., Gleriano, J. S., & Cassiano, C. (2025). Matriz de competências socioemocionais no ensino de enfermagem: Concepções de discentes de graduação. *Revista Latino-Americana de Enfermagem*, 33, e4483. <https://doi.org/10.1590/1518-8345.7489.4482>
- Magnago, C., & Pierantoni, C. R. (2020). A formação de enfermeiros e sua aproximação com os pressupostos das Diretrizes Curriculares Nacionais e da Atenção Básica. *Ciência & Saúde Coletiva*, 25(1), 15-24. <https://doi.org/10.1590/1413-81232020251.28372019>
- Manfrini, G. C., Rodrigues, J., Schlindwein, H., Mendes, M., Schuantes, M., Augusto, E., & Possato, M. (2023). Atuação de equipes de saúde na gestão de riscos de desastres. *Texto & Contexto Enfermagem*, 32, e20220322. <https://doi.org/10.1590/1980-265x-tce-2022-0322en>
- Martins, A. C., Vieira, M. A., Lima, C. A., Domenico, E. B. (2020). Diretrizes curriculares nacionais do curso de graduação em enfermagem: Implicações e desafios. *Revista de Pesquisa Cuidado é Fundamental*, 12, 1099-1104. <https://doi.org/10.9789/2175-5361.rpcfo.v12.8001>
- Oliveira, J. L., Cucolo, D. F., Magalhães, A. M., & Perroca, M. G. (2022). Além da classificação do paciente: A face "oculta" da carga de trabalho da enfermagem. *Revista da Escola de Enfermagem da USP*, 56, e20210533. <https://doi.org/10.1590/1980-220X-RE-EUSP-2021-0533pt>
- Rebello, P. D., Sabrina, Lima, J., Baixinho, C. L., Costa, A., & Miranda, M. (2024). Análise qualitativa sobre a atuação e as experiências dos enfermeiros na gestão hospitalar frente à COVID-19. *Ciência & Saúde Coletiva*, 29(8), e05052024. <https://doi.org/10.1590/1413-81232024298.05052024EN>
- Rodrigues, M. R., & Sousa, M. F. (2023). Integralidade das práticas em saúde na atenção primária: Análise comparada entre Brasil e Portugal por meio de revisão de escopo. *Saúde em Debate*, 47(136), 242-252. <https://doi.org/10.1590/0103-11042022313616>
- Santos, L. C., Silva, F. M., Domingos, T. S., Andrade, J., & Spiri, W. C. (2023). Liderança e comportamento empoderador: Compreensões de enfermeiros-gerentes na atenção primária à saúde. *Acta Paulista de Enfermagem*, 36, eAPE00051. <https://doi.org/10.37689/acta-ape/2023ao00051>
- Silva, G. T., Varanda, P. A., Santos, N. V., Silva, N. S., Salles, R. S., Amestoy, S. C., Teixeira, G. A., & Queirós, P. J. (2022). Gestão e liderança na percepção de enfermeiros: Um caminhar à luz da burocracia profissional. *Escola Anna Nery*, 26, e20210070. <https://doi.org/10.1590/2177-9465-ean-2021-0070>
- Siqueira, D. S., Padilha, C. D., & Silva, E. F. (2023). O papel do enfermeiro na gestão em enfermagem: Uma revisão integrativa. *Revista Científica RECISATEC*, 3(3), e33262. <https://doi.org/10.53612/recisatec.v3i3.262>
- Trevilato, D. D., Martins, F. Z., Schenider, D. D., Oliveira, J. L., Pai, D., & Magalhães, A. M. (2023). Atividades do enfermeiro de centro cirúrgico no cenário brasileiro: Scoping review. *Acta Paulista de Enfermagem*, 36, eAPE01434. <https://doi.org/10.37689/acta-ape/2023ar001434>
- Vandresen, L., Pires, D. E., Trindade, L. L., Ribeiro, O. M., Martins, M. M., & Mendes, M. (2023). Desafios de enfermeiros gestores no trabalho em hospitais Brasileiros e Portugueses: Estudo de métodos mistos. *Texto & Contexto Enfermagem*, 32, e20230059. <https://doi.org/10.1590/1980-265X-TCE-2023-0059pt>
- World Health Organization. (2025). *State of the world's nursing 2025: Investing in education, jobs, leadership and service delivery*. <https://www.who.int/publications/i/item/9789240110236>