Enfermería Global
ISSN 1695-6141
Revista electrónica cuatrimestral de Enfermería
Nº 77
Septiembre-Diciembre 2025
www.um.es/eglobal/

REVIEWS

Analysis of Nursing Research: identifying critical factors for Its strengthening

Análisis de la Investigación en Enfermería: identificación de factores críticos para su fortalecimiento

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https://doi.org/10.6018/eglobal.663271

elocation-id: e663271

Received: 19/05/2025
Accepted: 25/08/2025

ABSTRACT:

Introduction: Research in nursing is paramount for the advancement of healthcare quality and evidence-based practice; however, its developmental trajectory is fraught with challenges. This study endeavors to conduct an analysis aimed at delineating the extant state of nursing research.
Objective: Analyze the key elements reported in the scientific literature that contribute to strengthening nursing research.
Methodology: A qualitative synthesis of the literature, incorporating bibliometric analysis of 666 Scopus documents, was performed. VosViewer was utilized to generate citation and co-citation maps, revealing key stakeholders, primary themes, and collaborative patterns. Subsequent qualitative analysis adhered to PRISMA guidelines.
Results: Since 2000, publications in nursing research have demonstrated consistent growth, reaching a zenith in 2017. The United States and the United Kingdom exhibit the highest levels of productivity and impact. The study identifies three fundamental components of a nursing research ecosystem: competencies, capacities, and existing barriers.
Discussion: The findings underscore the significance of organizational support, mentorship, and transformational leadership in cultivating a research-oriented culture. Limitations in available resources and the effective integration of research with clinical practice were also identified as pertinent issues.
Conclusions: The cultivation of research capabilities within the nursing profession necessitates the implementation of institutional policies that prioritize formal training, mentorship provision, and the

allocation of protected time dedicated to research activities. Such measures will contribute to the mitigation of existing impediments and the fortification of scientific evidence generation. It is recommended that future inquiries explore pedagogical and organizational strategies aimed at addressing these identified needs.

Key words: Nursing Research; Education Nursing; Professional Competence; Support of Research; Resources for Research.

RESUMEN:

Introducción: La investigación en enfermería se configura como un elemento necesario para avanzar en la calidad y en la práctica basada en evidencia, sin embargo, enfrenta desafíos para su desarrollo.
Objetivo: Analizar los elementos clave reportados por la literatura científica que contribuyen al fortalecimiento de la investigación en enfermería.
Metodología: Síntesis cualitativa de la literatura y técnicas de análisis bibliométrico. Se identificaron 666 documentos en Scopus. Con la herramienta VosViewer, se generaron mapas de citación y cocitación, actores claves, temas principales y patrones de colaboración. Posteriormente, siguiendo la metodología PRISMA, se incluyeron 18 artículos que cumplieron con los criterios de inclusión y selección para la síntesis cualitativa.
Resultados: Desde el año 2000, las publicaciones en este campo han mostrado un crecimiento sostenido, alcanzando un pico en 2017. Estados Unidos y Reino Unido lideran en productividad e impacto. Del estudio emergen tres factores críticos para el fortalecimiento de la investigación en enfermería como son las competencias, las capacidades y las barreras para desarrollarla.
Discusión: Los resultados revelan y coinciden en la importancia del soporte organizacional, la mentoría y el liderazgo transformacional para promover una cultura investigativa en la disciplina. También se identificaron limitaciones en recursos y en la integración con la práctica clínica.
Conclusiones: El fortalecimiento de la investigación en enfermería requiere políticas institucionales que promuevan la formación, la mentoría y el tiempo protegido para la investigación. Esto contribuirá a superar barreras actuales y fortalecer la generación de conocimiento. Asimismo, se deben explorar estrategias pedagógicas y organizacionales para abordar estas necesidades.
Palabras clave: Investigación en Enfermería; Educación en Enfermería; Competencia Profesional; Apoyo de la Investigación; Recursos para la investigación.

INTRODUCTION

Nursing research is an essential component for the advancement of the discipline and the quality of care in health systems, as it provides scientific proof to develop evidence-based practices and improve patient outcomes [(1)]. However, the development of research activities among nursing professionals faces various barriers that limit its growth, such as lack of time, insufficient resources, and limited institutional support for conducting research activities [(2)]. In this regard, the findings of Nightingale et al. [(3)] highlight that organizational barriers, combined with lack of training and lack of mentoring in research, are elements that hinder nursing professionals from developing the necessary competencies to lead and participate in research projects.

In this sense, competencies are defined as a set of individual behaviors that include knowledge and skills, that promote successful work performance [(4,5)]. In turn, Silvia Corchon [(6)] defined competency in nursing research as research skills and knowledge, but also a clear interest in it. Other authors indicate that these competencies include the ability to identify problems and formulate research questions, search for and critically review the literature, design and implement research, analyze data, and write research reports [(5,7)], in addition to understanding and applying ethical principles in research [(8)], and effectively communicating findings through scientific writing and other forms of dissemination [(5)].

Moreover, research competence is considered a prerequisite for research capacity [9]. Capacity represents the infrastructure, resources, and support necessary for Nursing professionals to engage in and lead research. According to Chen et al. [1], capacity refers to intrinsic motivation and an organizational culture that values and supports research, offering opportunities for collaboration and networking among researchers and professionals. This suggests that the development of research involves not only individual competencies but also external factors such as time availability, funding, organizational support, cultural values, among others [9].

Aligned with the topic, some reviews related to this article were identified, highlighting barriers such as lack of funding and the changing roles of educators, and identifying key strategies such as the development of infrastructure and the promotion of research cultures [10]. Additionally, Kokol et al. [11] conducted a bibliometric analysis of the research output on the informatics competencies of Nursing professionals.

In consideration of the above, this article aims to analyze the key elements reported in the scientific literature that contribute to strengthening Nursing research and to identify the main authors, countries, journals, and citation patterns through scientometric analysis.

METHOD

The research was structured in two interrelated phases. In the first phase, a bibliometric analysis was conducted based on a literature search. In this phase it was possible to map the trends in scholarly production on the strengthening of Nursing research, identify the main journals, authors, countries, collaboration networks, and especially detect emerging thematic subareas through keyword co-occurrence analysis. In the second phase, based on the literature search carried out in phase one, a qualitative synthesis of the literature was carried out, applying the principles described by the PRISMA statement [12] for the selection of studies included in the synthesis, in order to identify relevant documents and analyze the key elements and factors for strengthening Nursing research.

Selection of Databases

The Scopus database was selected as the primary bibliographic source. This choice is based on its recognition as one of the most prominent sources in the current academic field, due to its extensive coverage—with over 76 million documented records [13,14] — as well as its reach, quality, and accuracy in source indexing [15], making it an important tool for researchers across various disciplines.

Search Strategy

The selection of key terms associated with the field of study resulted from the analysis of previous literature reviews [1,10,11]. Controlled vocabulary in the DeCS and MeSH thesauri was also reviewed. The use of varied terms enriched the literature search. The final search equation covered the following terms, included in titles and keywords:

(TITLE ("research capacit" OR "research skill*" OR "research in nurs*") OR KEY ("research capacit*" OR "research skill*" OR "research in nurs*") AND TITLE (nurs*) OR KEY (nurs*))*

Inclusion Criteria: Table 1 lists the criteria used for the search in the Scopus database.

Table 1. Search parameters.

Characteristics	Criteria
Search within results	Title / Keywords
Time frame	2000 to 2024
Date of search	June 26, 2024
Database	Scopus
Search topic	Strengthening Nursing research
Publication types	Original articles and Reviews

Source: Authors' elaboration (2024).

Data Extraction and Information Synthesis

The overall set of retrieved publications was integrated into the Vosviewer tool, which was used to construct and visualize bibliometric maps. [16] This software allows for the processing of large volumes of data, supports various databases, and presents the subfields and the evolution of the subject area in a clear and accessible manner. [17]

This made it possible to obtain data on various scientific actors such as authors, institutions, journals, and countries, as well as impact indicators and metrics like citation count and h-index, which are essential for the bibliometric approach of the study.

In addition, for the development of the scientific mapping, social and structural interconnections in the research area were assessed by identifying co-citation data of authors and documents, among others. Based on this information, relevant categories in the field and their corresponding related studies were identified, which enabled the construction of prominent subareas of the subject of study. The results were presented using graphs, tables, and interconnection networks.

Subsequently, based on the literature search conducted in phase one, the selection of studies included in the qualitative synthesis of the information was carried out. Eligibility criteria were applied through an initial screening of titles and abstracts, followed by a full-text review by the researchers. Once the articles eligible for synthesis were identified, the lead researcher developed a data extraction matrix that included the following criteria: title, year of publication, DOI, overall objective, findings on the topic of analysis, and study conclusions. Based on the subareas identified through the scientific mapping, the research team conducted the qualitative synthesis of the literature.

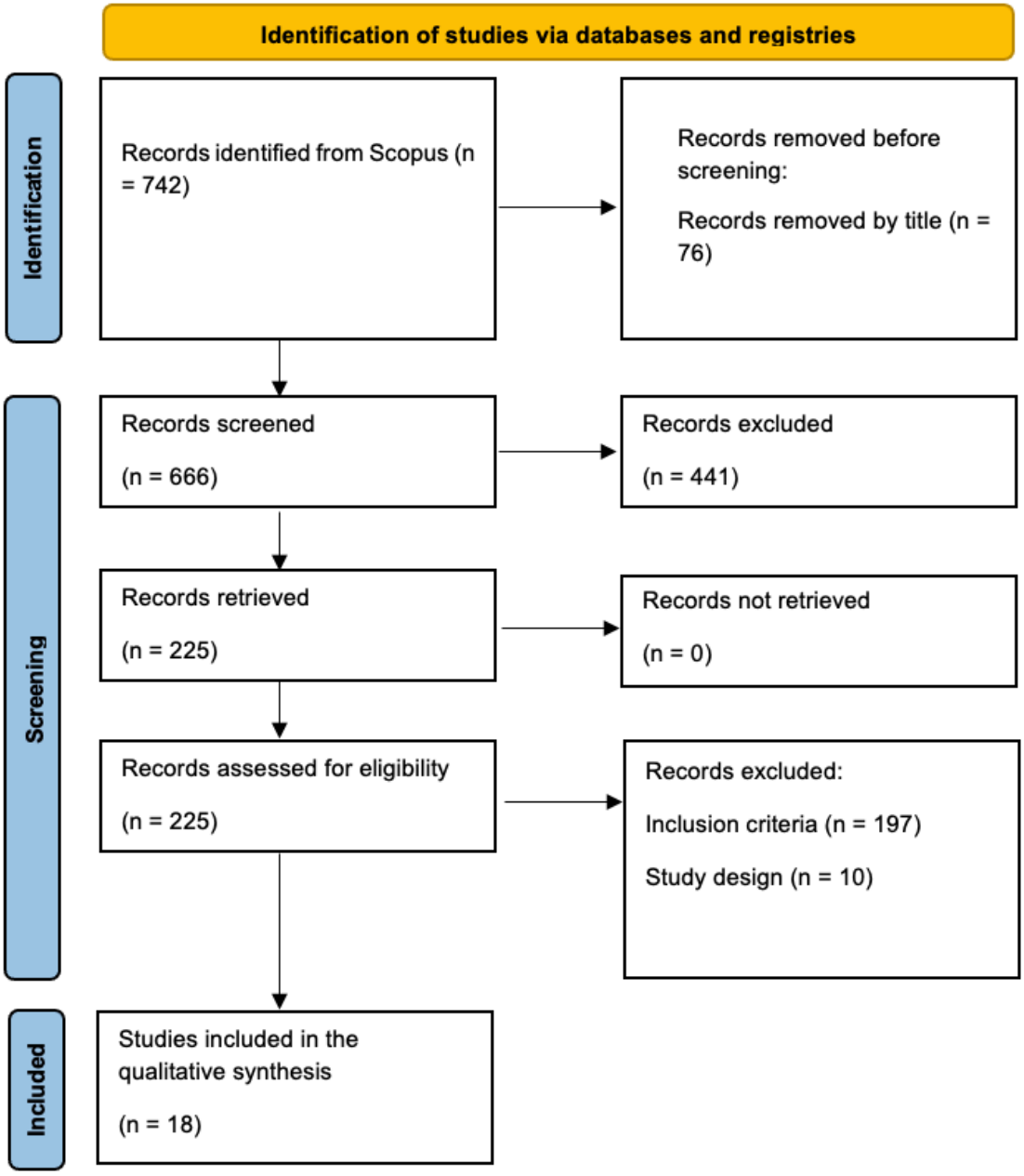
RESULTS

As a result of the search process in the Scopus database and in accordance with the criteria described in Table 1, a total of 742 documents were retrieved during the months of June and August 2024. Following an initial title screening, 666 documents were examined using bibliometric analysis and scientific mapping techniques (Figure 1).

Subsequently, a second screening by title and abstract was carried out, the eligibility criteria were applied to the documents, and a total of 225 articles were obtained. These articles were analyzed in full text to validate their eligibility, resulting in 18 eligible studies. The documents were thoroughly analyzed in full text and were included in the qualitative synthesis of the literature.

On the other hand, among the publications examined (n=666), 81.7% were published in English, while the remaining 18.3% were mainly in German, French, Portuguese, and Spanish. In contrast, 100% of the 18 articles included in the qualitative synthesis were published in English (Figure 1).

Figure 1: Flowchart. PRISMA 2020 model

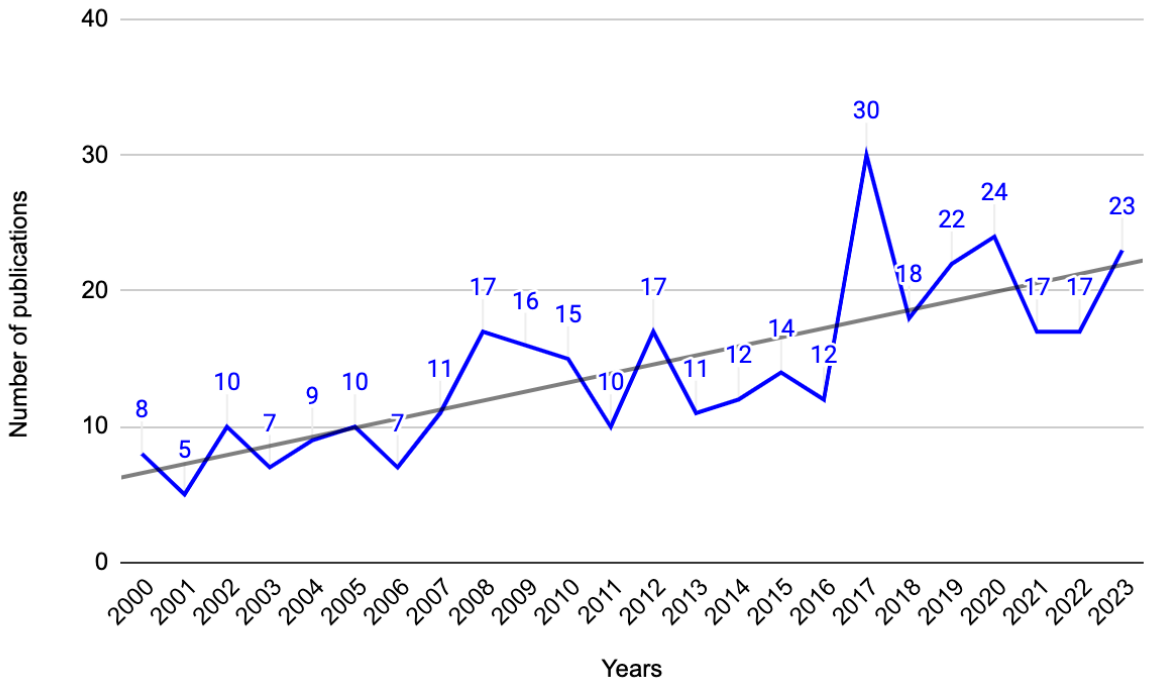


Bibliometric Analysis

For this phase, 666 documents were analyzed. Figure 2 shows the trend in publications on the topic from the year 2000 to 2023. It is worth mentioning that the number of publications identified for the year 2024 corresponds to the first six months of the year; therefore, the 2024 results were not included in the publication trend analysis.

On the other hand, the trend line shows growth in publications on the topic, with a significant increase in 2017 (n=30) compared to 2016 (n=12). An annual growth rate of approximately 5% was observed, and it is noteworthy that 30% (n=103) of the articles were published in the last five years. However, 2017 remains the year with the highest number of publications within the observation window. Finally, it was found that recent years show a slight decline compared to the 2017 peak, but the number of publications appears to be rising again, with 23 publications recorded in 2023 (Figure 2).

Figure 2: Trend in publications (2000–2023) according to the analysis of 666 selected articles



Source: Authors' elaboration (2024).

Featured Authors

Table 2 describes the main authors with the highest number of publications on the subject of study. In addition, the number of citations and h-index of the authors is reported, allowing the identification of featured researchers in the area of interest.

Table 2: Featured authors in the study of Nursing research competencies and capacities

Author	Number of publications	Citations	H-Index	Affiliation
Barbara Green	5	232	10	Swansea University
Jeremy Segrott	4	193	20	Swansea University
Mike Mcivor	2	135	2	Swansea University
Debra Jackson	3	133	57	University of Technology Sydney (UTS)
Lars Wallin	2	106	39	Dalarna University
Meridean L. Maas	2	95	29	University of Iowa College of Nursing
Bob Heyman	2	66	24	University of Huddersfield
Angela Grange	2	65	10	Bradford Institute for Health Research
Pamela M. Ironside	3	64	22	University of Wisconsin-Madison
Allison P. Squires	2	64	23	New York University

Source: Authors' elaboration (2024).

Barbara Green was identified as the most prominent author, with 5 publications and 232 citations. The three leading authors—Barbara Green, Jeremy Segrott, and Mike Mcivor—share the same affiliation and have collaborated on several publications in the field. However, authors Debra Jackson and Lars Wallin report the highest h-index scores—57 and 39 respectively—compared to the other authors.

Featured Journals

Table 3 presents the ranking of the featured journals highlighted in the subject of analysis. It also highlights impact indicators such as the Scientific Journal Rankings (SJR), the h-index reported in SJR, and the journal's quartile classification. Additionally, the country of origin of the journal, the number of documents, and their citation counts are provided, allowing for the identification of relevant journals in the field of interest.

Table 3: Ranking of featured journals in the study of Nursing research competencies and capacities

Ranking	Journal	Quartile / H-Index / SJR 2023	Documents	Citations
1	Nursing Research (United State)	Q1/104/0.75	27	110
2	Nursing Times (United Kingdom)	Not registered	19	39
3	Journal of Research in Nursing (United Kingdom)	Q1/40/0.93	17	180
4	Texto e Contexto Enfermagem (Brazil)	Q2/28/0.34	17	98
5	Journal of Advanced Nursing (United Kingdom)	Q1/178/1.22	15	454

Ranking	Journal	Quartile / H-Index / SJR 2023	Documents	Citations
6	Nurse Education Today (United Kingdom)	Q1/101/1.09	14	316
7	Nursing Outlook (United States)	Q1/71/1.07	14	138
8	Journal of Nursing Management (United Kingdom)	Q1/95/1.49	11	197
9	Revista Brasileira de Enfermagem (Brazil)	Q2/34/0.43	11	36
10	Journal of Clinical Nursing (United Kingdom)	Q1/124/1.24	9	237

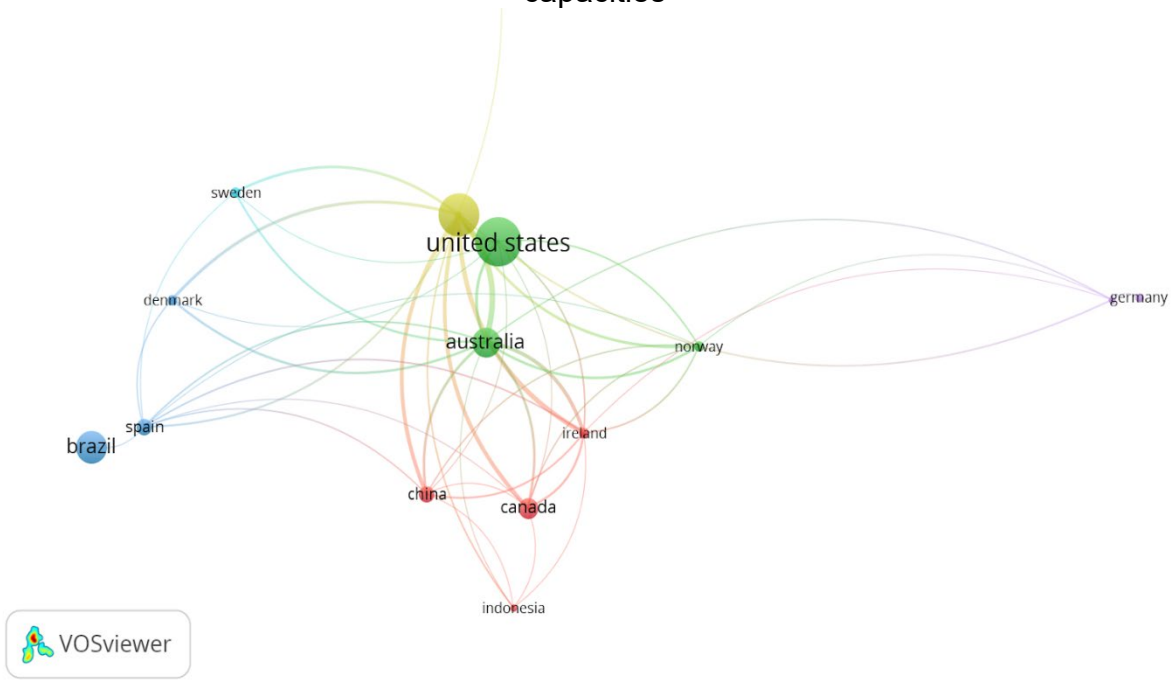
Source: Authors' elaboration (2024).

The journal *Nursing Research* from the United States stands out, with a total of 27 records. However, the *Journal of Advanced Nursing* from the United Kingdom stands out for having the highest h-index and citation count, with 15 records, an h-index of 178, and a total of 454 citations. Additionally, 60% of the journals are from the United Kingdom, of which 50% are ranked in Q1, followed by the United States with 20%, and finally, South America is represented by two journals from Brazil, both classified as Q2.

Featured Countries

Figure 3 presents the featured countries based on author affiliation in studies analyzing the development of research among Nursing professionals.

Figure 3: Network of countries leading research on Nursing competencies and capacities



Source: Authors' elaboration (2024) using VosViewer.

Additionally, the geographical distribution of documents in the field of study was analyzed, identifying the United States as the leading contributor, with 109 documents and 1,144 citations. The United Kingdom follows with 85 documents, which have the highest citation count at 1,882, and stands out for demonstrating the strongest international collaboration. In third place, Brazil shows a total of 49 documents produced.

It is worth noting that European nations produce the most impactful research on the topic, led by the United Kingdom (n=85), followed by Spain (n=13), Ireland (n=6), France (n=6), Norway, Denmark, and Sweden (n=5), as well as Germany and Portugal (n=4). Meanwhile, in Latin America, scientific output is led by Brazil (n=49), followed by Mexico (n=3), with Brazil ranking third among the countries with the highest scientific production in this field of study.

Leading Publications

Table 4 presents the most relevant articles based on the number of citations. In this regard, Fleming et al. [18], in their article "Hermeneutic research in Nursing: developing a Gadamerian-based research method," they highlight the importance of distinguishing between phenomenology and hermeneutics, and of advancing Nursing knowledge through a hermeneutic approach based on five key steps grounded in Gadamer's hermeneutic philosophy. Along these lines of philosophical contributions, McEvoy et al. [19] propose that a critical realistic approach advances Nursing research and enables a deeper understanding of studied phenomena, which is essential for comprehending evidence-based interventions and promoting their effective implementation in clinical practice.

Table 4: Top cited publications on Nursing research competencies and capacities

Position	Title/reference	Citations	Keywords
1	Hermeneutic research in Nursing: developing a Gadamerian-based research method [18].	342	Gadamer, gaining understanding, hermeneutics
2	Challenges and strategies in developing Nursing research capacity: A review of the literature [10]	125	Nursing research, Research capacity, Nursing education
3	Knowledge translation and implementation research in Nursing [20].	104	Nursing, Knowledge translation, Implementation research, Interventions
4	Critical realism: a way forward for evaluation research in Nursing? [19].	104	Critical realism, Nursing, evaluation research, retroduction, theory driven programme evaluation, policy evaluation
5	Vulnerable story telling: narrative research in Nursing [21].	83	narrative research, storying, emotional experience, vulnerability, power relations, effect of culture
6	Issues in Conducting Research in Nursing Homes [22].	75	Not registered

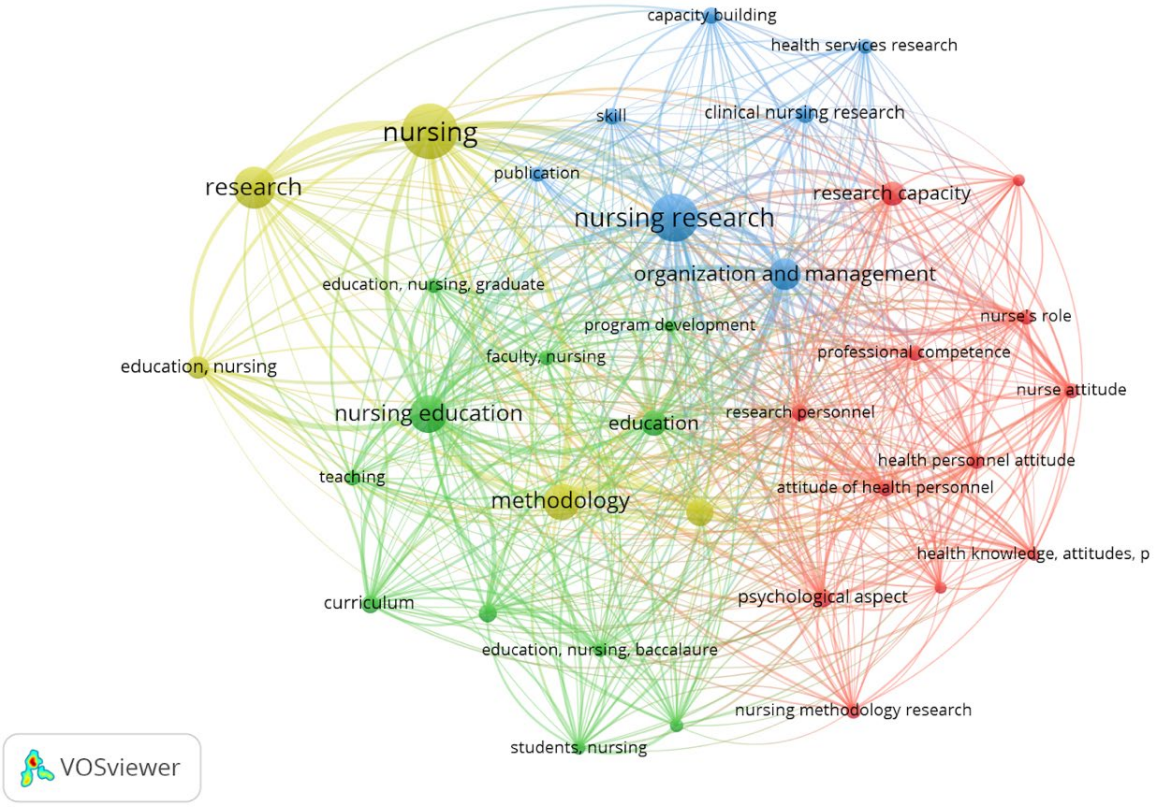
Position	Title/reference	Citations	Keywords
7	Focus groups as a tool for critical social research in nurse education [23].	75	Not registered
8	Mapping the organizational culture research in Nursing: a literature review [24].	70	Literature review, Nursing, organizational behaviour, organizational culture, research utilization
9	Research partnerships: collaborative action research in Nursing [25].	66	Not registered
10	Status of epidemiology in the WHO South-East Asia region: burden of disease, determinants of health and epidemiological research, workforce and training capacity [26].	64	Epidemiology, South-East Asia region, research capacity, training capacity, social determinants, workforce

Source: Authors' elaboration (2024).

Main Research Themes

Figure 4 describes the co-occurrence among the prominent publications. This network reported keywords related to the topic, as well as the relationships among them.

Figure 4: Co-occurrence network of keywords identified in publications on Nursing research competencies and capacities



Source: Authors' elaboration (2024) using VosViewer.

Based on the bibliometric process carried out and the keywords with the greatest weight, three main subareas emerged within the field of study. The identified subareas are described as: competencies, capacities, and barriers (Figure 4).

Research capacity, Professional competence, Research personnel, Nurse attitude, Nurse´s role, Nursing education, program development, Nursing research, Organization and management, Clinical Nursing research, Capacity building, Research design, Education Nursing.

Subsequently, and based on the results of the qualitative synthesis conducted for the studies retrieved in the literature review (n=18), a research agenda is proposed to guide future studies, which should focus on exploring differences in Nursing research competencies, capacities, and barriers across different healthcare systems and cultural contexts, as well as on evaluating the effectiveness of specific interventions to promote a robust research culture within the profession (Table 5).

Table 5: Proposed research agenda derived from the qualitative literature synthesis

Field	Theme	Reference
Education	Evaluation of the impact of mentorship programs on the research capacity of novice nurses.	(3).
Capacities	Effective strategies for integrating research into daily Nursing clinical practice.	(27)
	Evaluation of research infrastructure models to enhance Nursing research capacity.	(28).
Barriers	Motivational factors in Nursing participation in clinical research programs.	(1).
Capacities /Education	Strengthening research capacity; fostering interprofessional collaboration, enhancing data collection, structural frameworks and governance; and promoting practice-based Nursing research.	(29).

Source: Authors' elaboration (2024).

DISCUSSION

It was possible to identify three relevant subareas that highlight important aspects for the promotion of Nursing research and are configured as key factors in the development and strengthening of research in this discipline. The identified subareas were: competencies, capacities, and barriers.

First, the development of individual competencies stands out as a way to strengthen the research role of Nursing professionals. In this regard, Ferreira et al. [30] point out that graduate Nursing programs contribute to the development of specific research skills, such as understanding the research process, searching databases, conducting literature reviews, and evaluating the quality of scientific articles. Gonzalez de la Torre et al. [31], for their part, mention that the historical advancement of nursing as a discipline and profession promoted basic training in research and the development of new knowledge in the field.

On this matter, the creation of specialization degrees, master's, and doctoral studies has become a strategy for the development of research skills among nursing professionals. In this regard, Legua et al. [32] state that these training programs play a fundamental role in the personal and intellectual growth of these professionals and, in turn, strengthen the quality of health care. These findings reveal the importance of the educational component in enhancing and promoting research competencies, as well as in generating and disseminating new knowledge within the discipline.

However, in addition to educational opportunities, attitudes toward research have an impact on the enhancement of competencies or skills in the field. The literature defines attitudes toward research as a cognitive and methodological factor that influences the conduct of research. Furthermore, these can be understood as a system of beliefs, feelings, and dispositions toward research on the part of a discipline or professionals. Nevertheless, this attitude is not innate and largely depends on the conditions implemented during the educational process and the professional's career path [32].

Ferreira et al. [30] point out the existence of a “gap between theory (knowledge generated through research) and practice (use of evidence),” and agree that it is essential to guide and align research practice with professional practice. In this regard, a study conducted by Chen et al. [33] involved research experts who guided Nursing professionals in integrating theory with practice to conduct clinical research, which supported skill development, engagement in research projects, and the building of a better experience throughout the process—thereby strengthening both competencies and attitudes in Nursing professionals.

Chironda et al. [34] identified in their study that Nursing professionals maintained a close relationship with patients and their families; however, their involvement in workplace research was limited. The authors suggest that this may be due to the fact that many professionals lack research knowledge, confidence, and access to research resources. This finding aligns with what was reported by Corchon et al. [9], who observed positive attitudes toward research among Nursing professionals, but noted that the lack of research knowledge and skills served as a limiting factor for conducting research within the discipline.

In the study by Ramsay et al. [35], the importance of research training is emphasized, with a focus on online teaching strategies. While these methodologies are useful for improving the understanding of research terminology, they do not necessarily foster sustained interest in research. On the contrary, a study conducted with virtual training initiatives reported favorable outcomes in its implementation. Additionally, study participants reported identifying benefits during their time in the program and a significant improvement in their research skills [33].

In addition to the above, the authors observed that structured and comprehensive training programs yielded better results than fragmented, topic-specific sessions. Therefore, there is a clear need to explore various pedagogical strategies that increase interest in research among professionals [33]. Moreover, in order to develop research competencies, it is necessary to promote training that encompasses cognitive elements and specific research skills, such as self-regulation, tolerance to uncertainty, critical thinking, openness, and curiosity about new questions or problems to be investigated [32].

Similarly, Thompson et al. [36] identify the importance of nursing professionals being trained in advanced quantitative methods, considering a context where health research is increasingly focused on data analytics and the use of large volumes of data. Likewise, Iriarte et al. [37] consider it essential to provide resources and tools to help train more nursing professionals in the use of available statistical techniques and their proper application, including the use of different research designs.

On the other hand, Legua et al. [32] argue that conducting various types of research, whether quantitative or qualitative in approach; integrative reviews; case studies; narratives; translation, adaptation, and validation of instruments; among other research-oriented activities, allows professionals to increase the opportunity to enhance their scientific understanding and professional performance. Moreover, these contributions facilitate the dissemination of knowledge generated in the field of nursing and health, which supports disciplinary development and growth.

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In this context, it is worth highlighting the conceptual framework proposed by Chen et al. [1] to foster the enhancement of research competencies in Nursing, which includes *competence*—in terms of knowledge and training in research skills—*motivation*, *infrastructure* that encompasses financial, institutional, and political support, and *collaboration* as a strategy that enhances teamwork and, consequently, research outcomes. This approach conceptualizes the idea of building a research ecosystem that promotes research activities and outcomes in the field of Nursing.

Previous paragraphs highlight the importance of building individual competencies. However, the framework presented by Chen opens the discussion to the concept of research capacities, since research requires not only individual knowledge and skills, but also a structure that relies on an organizational and supportive environment.

In line with the above, authors such as Balay-odao [38] and Da Silva Souza [39] agree that a research-oriented organizational culture significantly influences the quality and productivity of research outcomes, as well as the behaviors and attitudes of researchers. They also highlight that a strong and research-focused environment fosters the advancement of the discipline, driving innovation and supporting evidence-based decision-making. Therefore, alongside knowledge, practical skills, and professional identity, institutions have the responsibility to provide the means and infrastructure necessary to strengthen research within the discipline [32].

Moreover, enhancing capabilities points to the need for research strategies to promote the implementation of research findings in the daily practice of Nursing professionals, and for organizations to support research through education, mentoring, and leadership[40]. In this regard, the findings suggest the importance of fostering organizational environments and cultures that encourage critical thinking and research capacity among their members [3].

According to Jiang et al. [41], factors such as educational level, organizational support, and professional position contribute to professionals feeling more prepared to take on research roles. Consequently, “Plans to develop health professionals’ research skills are relevant because they affect a strong institutional culture that promotes an environment in the organisation to produce knowledge and interaction and collaboration with other organisations.” [39].

According to Corchon et al. [9], it is essential for healthcare and educational institutions to collaborate in creating environments that support Nursing research, including the allocation of financial resources, access to information technologies, and the promotion of policies that encourage research and the publishing of findings. In this regard, the literature emphasizes that understanding and assessing the improvement of research skills among professionals, as well as identifying successful strategies to enhance research performance, are essential aspects within institutional planning.

In turn, the study by O'Brien et al. [42] identified that transformational leadership plays a decisive role in promoting a supportive and motivating environment for building a strong research culture in nursing teams, leading to greater participation in research projects. These findings support Da Silva Souza et al. [39], who emphasize the importance of mentoring as a relevant factor in the development of research skills and competencies. They also emphasize that mentoring is a successful strategy that strengthens the integration of these research skills into clinical practice, which is currently a gap.

Having a support structure in place for research processes can help nursing professionals to overcome organizational and personal barriers that limit their participation in research projects. Therefore, support promotes greater engagement in research. In line with the above, Corchon et al. [9] and Nightingale et al. [3], reiterate that having competent research mentors may be the most efficient way to train others in research skills.

Similarly, Chen et al. [33] emphasize the relevance of implementing specific strategies, including “establishing research training club for nurses, to foster mutual encouragement, ignite research motivation and ultimately enhance research capacity.” Therefore, the aforementioned strategies and others that may arise in the future should seek to improve collaboration between academics and professionals. This would also help to reduce the existing gap between research and practice and, in turn, promote research in the nursing discipline.

As the third emerging subarea of the review, some barriers that hinder the development and strengthening nursing research were identified. These barriers are multiple and complex, and, in addition, affect both professional growth and the evolution of the discipline and science of nursing itself. In this regard, the lack of time and available resources for nurses to engage in research stand out, limiting opportunities for project development and strengthening research skills [2,43]. In line with this, Jiang et al. [41] identified a considerable proportion of professionals who reported low self-efficacy, a factor that limits their ability to undertake research projects and is linked to a lack of organizational support and the need for continuing education programs to strengthen confidence in these competencies.

However, according to the literature reviewed, these barriers can be addressed by institutions through strategies such as mentoring, research assistance or research

managers, and access to specialized journals to increase literature consultation, among others. Undoubtedly, these strategies promote professional growth and encourage the participation of new professionals in the field of research, who, without adequate support during the incorporation of research tasks, may fall into exhaustion that limits their participation in these scenarios [38,40].

Additionally, Gary et al. [44] highlight the lack of professional regulations in some countries, where the value of the nursing research role is not fully recognized, which diminishes the impact of advanced training and limits the application of acquired skills in clinical settings. As a result, in both academic and hospital work environments, research is generally not promoted through financial incentives or the allocation of protected work time, but rather becomes an additional task on top of existing responsibilities [43].

In turn, the low participation of Nursing professionals in research has been associated with a lack of trust in research conducted by underrepresented disciplines such as Nursing, which limits both engagement and research output in the field [34,45]. This may affect professionals' motivation to develop research competencies, which is fostered by the creation of a cultural environment that values Nursing research [31] and based on a system that rewards productivity and research outcomes [38]. These barriers highlight the need for a robust organizational structure that promotes a research culture in Nursing through institutional support, mentorship, and associated policies.

Based on the analysis conducted, it was observed that publishing results and transferring knowledge support the advancement of scientific research and its impact on practice. Therefore, it is necessary to emphasize the importance of effective communication and the involvement of strategic leaders within research teams to promote the creation of collaborative networks, contribute to the accessibility to necessary research resources and foster internal and external discussion spaces that enrich research processes [40].

Finally, as Baixinho et al. [46] point out, the challenges related to the integration of research findings into practice stem from methodological and ethical barriers, but also from communication issues and the lack of a scientific culture geared toward collaborative work. They also highlight that scientific output should not be limited to academic impact in specialized journals, but should instead be incorporated into practical settings where both professionals and users can benefit from advances in knowledge [46]. However, according to Da Silva Souza et al. [39], the effective transfer of knowledge also relies on transdisciplinarity and intersectoral collaboration, which supports Bonilla et al.'s [47] assertion that interaction between academic, business, and governmental sectors is a key strategy to enhance knowledge transfer.

Likewise, the literature points out that institutions that prioritize Nursing research foster innovation and adaptability in response to the dynamic conditions of healthcare [38].

Despite the contributions of this study, it is important to acknowledge its limitations, including geographic restrictions and limited data access in various contexts, which may constrain the generalizability of the findings. It was also identified that this line of research does not show a growth trend, suggesting the need to analyze specific problem areas to advance the development of research competencies within the Nursing discipline.

CONCLUSIONS

Key factors for the development of research include lack of time, the need for institutional support and mentorship, as well as the importance of developing specific skills in quantitative and analytical methods.

Different studies and authors point out that the lack of resources and organizational support limits nurses' opportunities to participate in research projects. This highlights the need for institutional strategies that integrate research activities into professional practice, which could enhance disciplinary knowledge and the delivery of evidence-based care.

In addition, the various studies analyzed consider the creation of mentoring programs and the allocation of dedicated time for research to be important, as this could help enhance commitment and research competencies among nursing professionals.

The need to strengthen the organizational research culture in nursing within different institutions is highlighted. In addition, fostering strategic leadership that provides mentorship, infrastructure, and financial resources promotes a favorable environment for strengthening research and helps mitigate barriers related to lack of time, knowledge, and recognition.

Likewise, it is necessary to highlight intersectorality in various projects relevant to the discipline that enable the improvement of communication processes and the transfer of results to both the scientific and general community by nursing professionals.

Finally, it is important to point out the limitations derived from the present study, including restricted access to data in different geographic contexts, which may limit the generalizability of the results. It was also identified that this line of research does not show a growth trend in the study and publication of new knowledge, which may suggest that it is necessary to deepen or delimit the analysis of specific issues for the development of research competencies within the discipline of Nursing.

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