


A Bibliometric and Visual Analysis of Scoping Reviews in Nursing: A Comparative Study between China and the International Literature

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Abstract

Objective: Conduct global literature metrology and visual analysis of the scope definition review research in the field of nursing, focusing on methodological trends and providing reference for future research. **Methods:** The English and Chinese literature in the Web of Science core collection and the CNKI database as of March 1, 2026 were retrieved, and 1450 and 409 articles were obtained respectively. Use Cite Space 6.3. R1 software conducts co-existence, clustering, sudden detection and time evolution analysis of authors, institutions and keywords to identify global research hotspots and methodological trends. **Results:** International research shows that nursing research methods are mature, with extensive cross-institutional and transnational cooperation, and are widely used in the fields of nursing education, clinical practice, management and technology integration. Although domestic research started late, it has developed rapidly, focusing on the adoption of methodology, evaluation tools and the practice of technology empowerment. There are still problems of regional differences and insufficient cooperation in China. Keyword analysis shows that method innovation, technology integration and evidence-based practice are crucial, and artificial intelligence and interdisciplinary methods are becoming cutting-edge research topics in the world. **Conclusions:** The scope definition and overview of the nursing field has developed steadily around the world, providing a multifunctional method for exploring various topics. Strengthening the rigor of methodology, promoting international cooperation and promoting interdisciplinary research are crucial to

promoting high-quality, globally relevant nursing research and enhancing its influence.

Keywords

Scoping Review, Bibliometric Analysis, Nursing, Nursing Research, Cite Space, Research Hotspots, Visualization Analysis

1. Introduction

As an important part of the medical and health system, nursing plays a crucial role in connecting basic medicine and clinical practice and integrating humanistic care into health services. The development of nursing is closely related to the progress of the national health security system. The National Nursing Development Plan (2021-2025) establishes nursing as an indispensable part of the health sector. The plan emphasizes people-oriented, advocates the provision of nursing services throughout life, and focuses on improving the quality of nursing. The plan also formulated specific goals, including strengthening the construction of nursing disciplines and improving the training and professional development of nursing staff, so as to provide policy support and strategic guidance for the high-quality development of China's nursing industry [1]. At the international level, the World Health Organization (WHO) also recognizes the important contribution of nursing and midwifery services to the achievement of global health goals. In support of nursing development, a nursing officer has been appointed to lead relevant initiatives, and the World Health Assembly has adopted a number of resolutions emphasizing the key role of nursing in primary health care, disease prevention and health promotion [2].

Scope definition review is a literature analysis method that aims to systematically sort out the boundaries of the field, integrate multiple evidence and identify research gaps. It is especially suitable for exploring emerging or interdisciplinary research fields. The application of scope-defined reviews in the field of nursing science has increased significantly, especially in sorting out the evidence of multi-dimensional topics such as nursing practice, educational reform and management innovation [3] [4]. In recent years, there have been discussions on scope-defined overview methods and trends in contemporary academic literature in the field of nursing. For example, Gray *et al.* reported that the scope-defined review is increasingly widely used in nursing research, emphasizing its role in conceptual clarification, evidence combing and identifying research gaps, while emphasizing the necessity of methodological rigor [5].

The scope overview research in the field of nursing at home and abroad has achieved remarkable results in many fields, including clinical nursing, education and training, elderly nursing and chronic disease management. However, existing research often focuses on specific interventions or specific practical issues, while

comprehensive and visual analysis of the overall knowledge structure, emerging trends and research frontiers is still limited. This limitation hinders people's understanding of the broader context of the field to a certain extent, and also limits the coordination of research in cross-topic areas [6]. China's nursing research started late, the development is unbalanced, and the theoretical framework and research methods are still imperfect. Existing analysis shows that this field is still in the formation stage, and the research direction is scattered and lacks systematicity. Policy guidance and standardized methods are needed to improve the quality and influence of nursing research in China [7] [8].

Therefore, using knowledge atlases and visualization tools such as Cite Space to conduct literature measurement analysis of the scope definition and summary of nursing fields at home and abroad, we can systematically identify research hotspots, emerging trends and thematic developments in this field. Such analysis can also provide empirical evidence for domestic nursing scholars, guide them to determine the direction of research, and promote international and cross-institutional cooperation. In addition, the results of the study also provide valuable insights to support the systematic and evidence-based development of nursing disciplines [9] [10].

2. Materials and Methods

2.1. Literature Search and Screening

This study followed the PRISMA guidelines and searched for literature related to scoping reviews in the nursing field from the Web of Science Core Collection (Wo SCC) and China National Knowledge Infrastructure (CNKI) between January 1, 2008, and March 1, 2026. The Wo SCC search strategy was TS = ("nurse") AND TS = ("scope review"), and the CNKI search strategy was (Topic = "nurse" OR "nursing") AND Topic = "scope review". A total of 7,562 records were retrieved. After the initial screening, 5,144 records not relevant to the topic were excluded; after a second screening, 559 records that were not of the target type were removed. Finally, 1,859 records meeting the inclusion criteria were retained, completing the standardized screening process (Figure 1).

2.2. Inclusion and Exclusion Criteria

Inclusion criteria:

- Peer-reviewed studies focusing on scoping reviews in the nursing field;
- Publications with full-text availability.
- Exclusion criteria included:
 - Incomplete or duplicate studies;
 - Non-peer-reviewed publications, including preprints, conference proceedings, mono-graphs, and news articles;
 - Literature unrelated to the research topic.

The literature screening and data extraction were independently conducted by two researchers trained in nursing research methodology. In cases of disagree-

ment, a third senior researcher was invited to arbitrate, and a consensus was reached to ensure the rigor of the screening process. The literature that meets the inclusion criteria is independently reviewed by two researchers, and then imported into Cite Space 6.3. R1 conducts visual analysis. The research time range is from the beginning of the establishment of each database to March 1, 2026. The analysis parameters are set as follows: g index k value = 25, Top N = 50. Pruning strategies include Pathfinder algorithm, slice network pruning and merged network pruning, and all other parameters are set by default. The node types of analysis include authors, countries/regions, institutions and keywords.

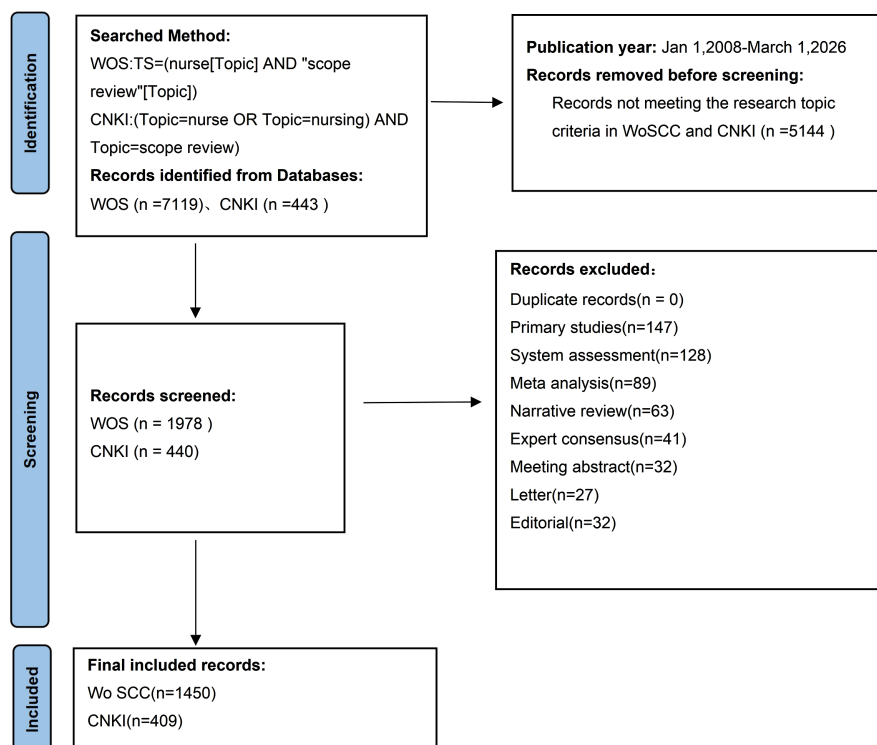


Figure 1. Flowchart of the study.

3. Results

3.1. Analysis of Annual Publication Volume

This study ultimately included 1,450 English-language papers and 409 Chinese-language papers. To avoid misleading comparisons between data from partial years and full-year data, the incomplete statistics for January-March 2026 are provided solely for supplementary reference and are not included in the annual trend analysis. In terms of publication trends, English-language literature experienced a slow initial phase from 2008 to 2015, entered a period of steady growth after 2016, and reached a full-year peak of 369 articles in 2025; Chinese-language literature remained absent from 2008 to 2019. In 2020, the first five papers were included, followed by explosive growth from 2020 to 2025, reaching a full-year peak of 175 papers in 2025 (**Figure 2**). Overall, English-language research began earlier and

has a deeper research foundation, while Chinese-language research demonstrates a significant late-mover advantage.

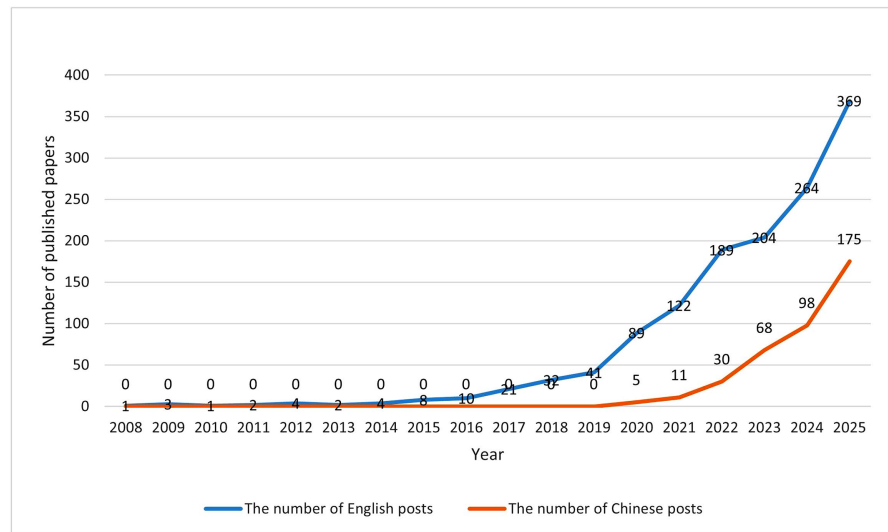


Figure 2. Analysis of annual publication volumes in the field of nursing, both domestic and international, 2008-2026.

3.2. Analysis of Author Co-Occurrence Networks

This study builds an author communal network to identify the core authors in the systematic evaluation of the nursing field and describe their cooperation models. The English data set from the core collection of Web of Science contains 557 authors and is connected through 340 collaborative links (**Figure 3**). The densely connected nodes show that there is a high degree of cooperation between international authors, forming a relatively close network. In contrast, the author co-existing network based on CNKI Chinese literature data set contains 252 authors and 165 collaborative links (**Figure 4**). The sparse connection shows that the cooperation cohesion between Chinese authors is low, and a close core team has not been formed.

In order to identify the core authors, this study applies the Price law. The formula is $N = 0.749\sqrt{n_{\max}}$, of which n_{\max} represents the number of papers published by the highest-producing authors in the field [10]. According to Price's law, the threshold for identifying core authors in the English data set is three papers. A total of 65 authors meet this standard, and a total of 266 articles have been published to define the scope of the nursing field, indicating that they constitute the core research team in this field internationally. Among them, Yosef Iyus is the author with the most papers published, with a total of 16 papers, followed by Mardhiyah Ai and Hikmat Rohman, with 14 and 12 papers respectively. In the Chinese data set, the threshold for core authors is to publish two papers. A total of 91 authors meet this standard and publish a total of 199 papers. Liu Ning is the author with the most published papers in China, with a total of 6 papers, followed by Jin Jingfen, Li Jun, Huang Rong and Zhuang Yiyu, each of whom has 4 articles

(Figure 4). These authors represent the main contributors to the comprehensive research on the definition of the scope of nursing in China.

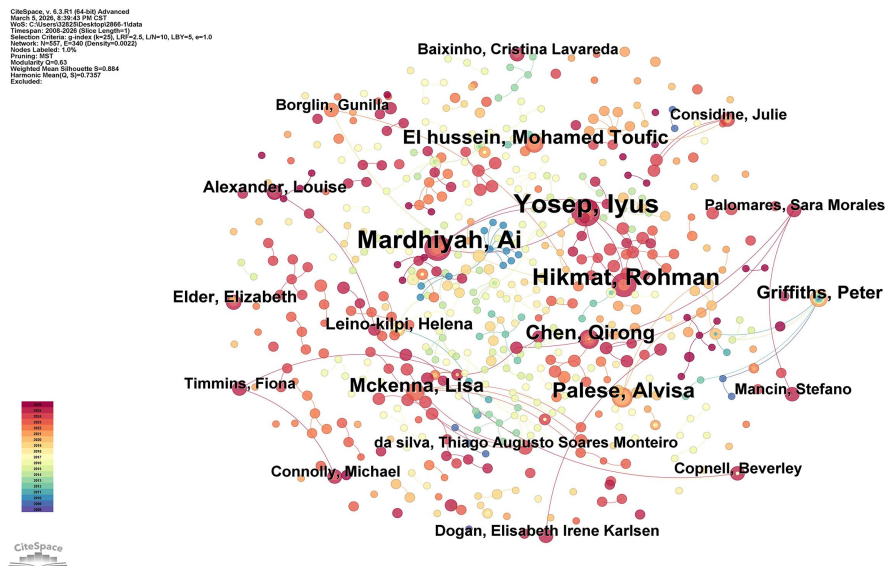


Figure 3. O-authorship network analysis of English-language research in the field of nursing, 2008-2026.

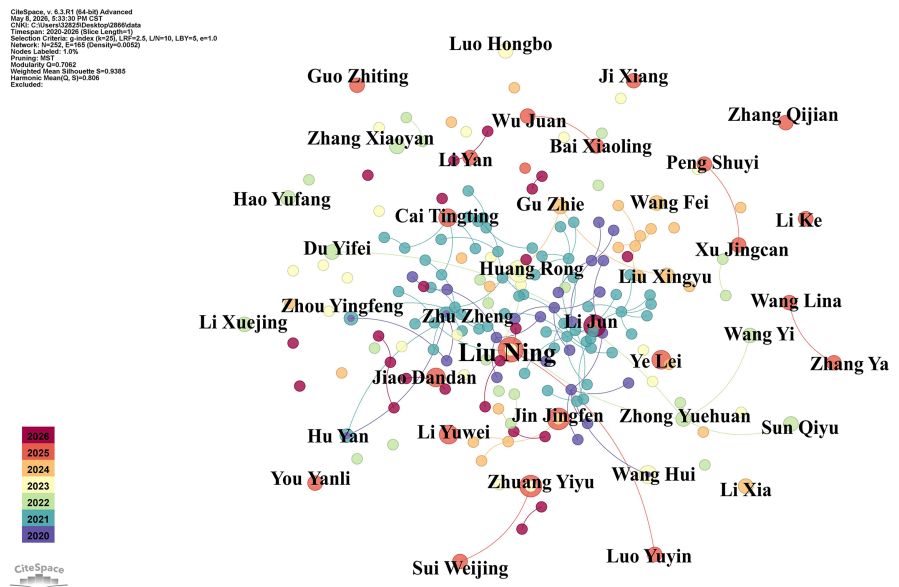


Figure 4. O-authorship network analysis of non-English studies in the field of nursing, 2020-2026.

3.3. Co-Occurrence Analysis of Institutional Networks

The cooperation between institutions shows an obvious geographical distribution pattern. In the English data set, the cooperative network that defines and summarizes the scope of nursing is mainly concentrated in English-speaking countries, including Australia, the United States and Canada. The institutions with the most

papers published are La Trobe University (41), the University of Adelaide (38), Monash University (37), the University of Toronto (29) and Deakin University (27). Among the top ten institutions, more than 80% are located in Western countries; however, the cluster of high-yield institutions also includes significant contributions from China (Figure 5 and Table 1).

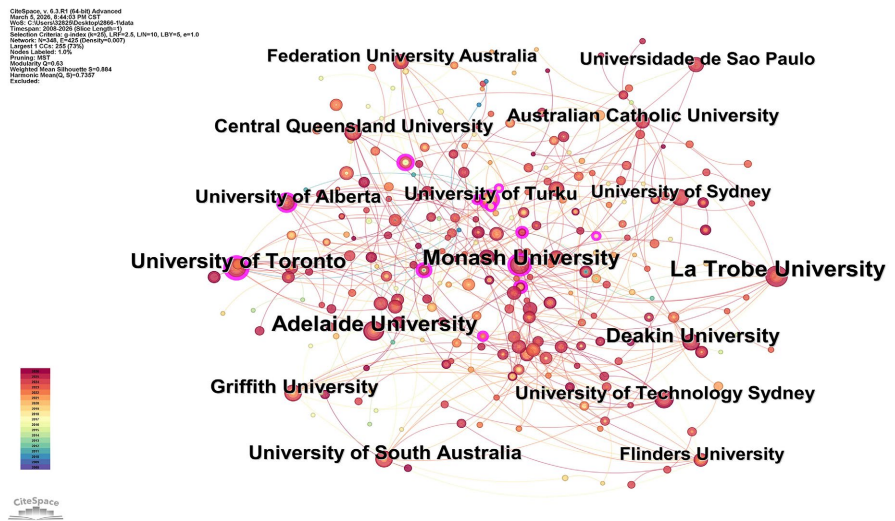


Figure 5. O-occurrence analysis of English-language institutional networks in the nursing field, 2008-2026.

Table 1. Top 10 institutions by number of published papers in review articles on the scope of nursing in English, 2008-2026.

Rank	Frequency	Centrality	Year	Organization
1	41	0.09	2012	La Trobe University
2	38	0.01	2016	Adelaide University
3	37	0.11	2016	Monash University
4	29	0.21	2010	University of Toronto
5	27	0.01	2019	Deakin University
6	23	0.03	2018	Griffith University
7	22	0	2022	Universitas Padjadjaran
8	22	0.01	2016	University of South Australia
9	21	0.1	2016	University of Alberta
10	20	0.08	2018	Central Queensland University

In the Chinese data set, the main contributors are the School of Nursing of Lanzhou University (12 papers), the School of Nursing of Zhejiang University of Traditional Chinese Medicine (11 papers), the School of Xiangya Nursing of Central South University (9 papers), the School of Nursing of Henan University of Science and Technology (9 papers) and the School of Nursing of Anhui University of Traditional Chinese Medicine (8 Paper) (Figure 6 and Table 2).

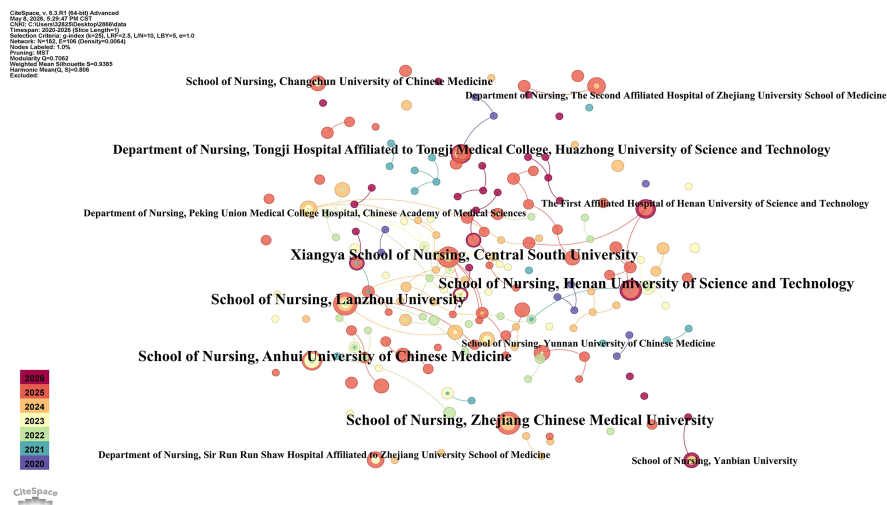


Figure 6. O-occurrence analysis of non-English institutional networks in the nursing field, 2020-2026.

Table 2. Top 10 institutions by number of published papers in review articles on the scope of non-English nursing research, 2020-2026.

Rank	Frequency	Centrality	Year	Organization
1	12	0.01	2022	School of Nursing, Lanzhou University
2	11	0	2023	School of Nursing, Zhejiang University of Traditional Chinese Medicine
3	9	0	2023	Xiangya School of Nursing, Central South University
4	9	0	2021	School of Nursing, Henan University of Science and Technology
5	8	0	2022	School of Nursing, Anhui University of Chinese Medicine
6	7	0	2025	The First Affiliated Hospital of Henan University of Science and Technology
7	7	0	2020	Department of Nursing, Tongji Hospital Affiliated to Tongji Medical College, Huazhong University of Science and Technology
8	6	0.01	2022	Department of Nursing, Peking Union Medical College Hospital
9	6	0	2023	Department of Nursing, Sir Run Run Shaw Hospital, Affiliated to Zhejiang University School of Medicine
10	6	0	2024	Department of Nursing, The Second Affiliated Hospital of Zhejiang University School of Medicine

3.4. Keyword Analysis

3.4.1. Keyword Co-Occurrence Network Analysis

Keywords can concisely summarize the research focus of the article and help identify high-frequency words and high-central words, thus promoting the analysis of the research hotspots of the definition of the scope of nursing.

In the English data set, the keyword co-occurrence network contains 442 nodes and 639 connections. The core keywords are “scope definition overview”, “nursing education”, “nursing”, “evidence-based practice” and “system evaluation”, indicating

(1973): $T = (\sqrt{1 + 8I} - 1)/2$, where I represents the frequency of the keyword with the highest frequency. Keywords with a frequency greater than or equal to T are classified as high-frequency words [11]. The minimum occurrence frequency of high-frequency words in Chinese literature is 26.4 (only keywords with frequency ≥ 27 are defined as high-frequency), while in English literature it is 28.6 (only keywords with frequency ≥ 29 are defined as high-frequency). **Table 3** lists the frequent high-frequency keywords. In English literature, the frequency and centrality of keywords such as “scope review”, “nursing education” and “nursing” are relatively high, reflecting the core research topics of the international scope review of nursing. In Chinese literature, the top three keywords of central intensity are “scope review” (0.94), “nursing” (0.7) and “nurse” (0.29), which shows that the domestic scope review mainly focuses on nursing practice and its influencing factors (**Table 3**).

Table 3. High-frequency keywords in the overview of the scope of the nursing field, 2008-2026.

Rank	Non-English keywords	Frequency	Centrality	English keywords	Frequency	Centrality
1	Scope review	361	0.94	Scoping review	422	0.88
2	Nursing	168	0.7	Nursing education	118	0.26
3	Nurse	37	0.29	Nursing students	70	0.19
4	Factors	30	0.18	Nursing care	69	0.15
5	-	-	-	Nurse practitioner	33	0.05
6	-	-	-	Long-term care	29	0.08

3.4.2. Keyword Cluster Analysis

Keyword cluster analysis is used to organize research topics in a specific period. The cluster number is inversely proportional to the cluster size. The smaller the number, the larger the cluster scale.

The analysis of the Cite Space cluster tree shows that there are nine clusters in the English literature, covering the application of scope-defined review in nursing education, nursing practice, specialist nursing and implementation science. Nine clusters have also been identified in the Chinese literature, reflecting the research hotspots in the fields of nursing education, pediatric nursing, symptom management, mobile medical care and evaluation index development.

The modularity (Q) of the English cluster diagram is 0.63, and the weighted average contour coefficient (S) is 0.884. The modularity Q of the Chinese cluster diagram is 0.7062, and the contour coefficient S is 0.9385. These values show that the cluster results of the visual analysis of the scope definition of the nursing field have satisfactory reliability and distinguishing ability. However, the limited cross-linking shows that the scope review of research in the field of nursing is still relatively scattered, indicating that there is the potential for broader interdisciplinary integration and exploration of other research directions in future research (**Figure 9** and **Figure 10**).

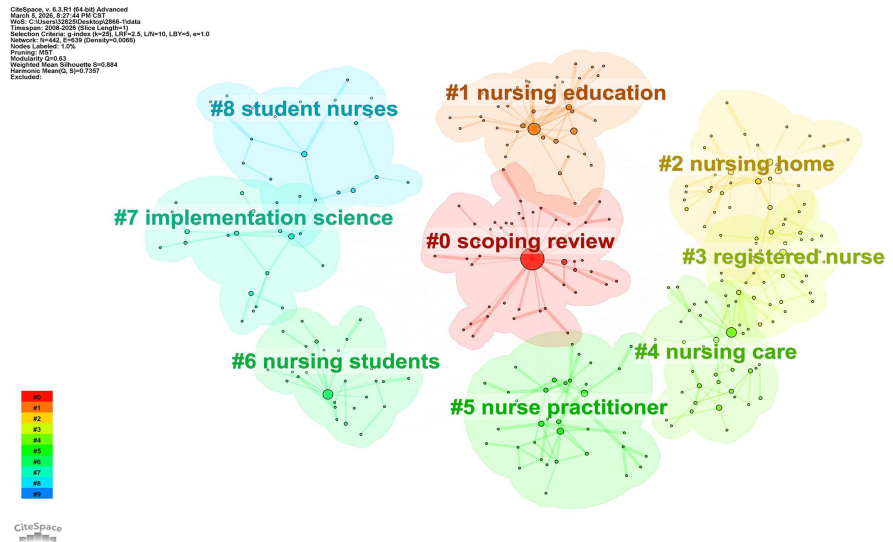


Figure 9. Cluster analysis of English keywords in the nursing field, 2008-2026.

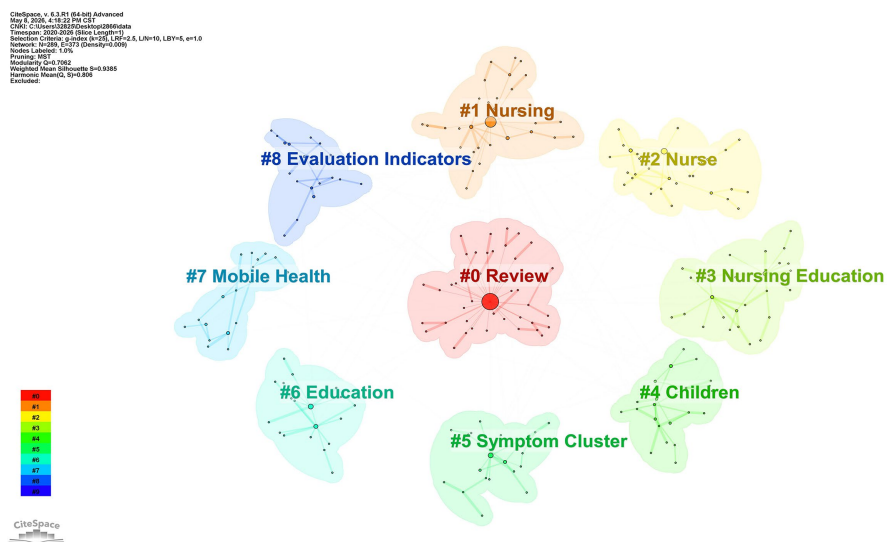


Figure 10. Network visualization of non-English keyword clusters in nursing research, 2020-2026.

3.4.3. Keyword Burst Analysis

This study uses keyword outbreak detection (the shortest duration = 2; the top 25 keywords cited the most in the past 20 years) to identify the emerging research frontiers in the nursing field review. This method can detect keywords with a sudden increase in the frequency of references, thus highlighting the transfer of research hotspots. In the visual chart, the red bar chart represents the duration of the citation surge, and the blue line represents the entire analysis cycle.

In English literature, keywords such as “professional ability” (intensity 4.75), “nursing education” (intensity 3.14) and “moral dilemma” (intensity 2.62) have shown a high increase in citation intensity in recent years. It is expected that by

2026, the search volume of keywords such as “nursing”, “nursing home” and “nursing staff” will continue to grow. These trends are related to factors such as the development of nursing staff, technological innovation and changes in the global demographic structure [12] [13] (Figure 11).

Top 25 Keywords with the Strongest Citation Bursts

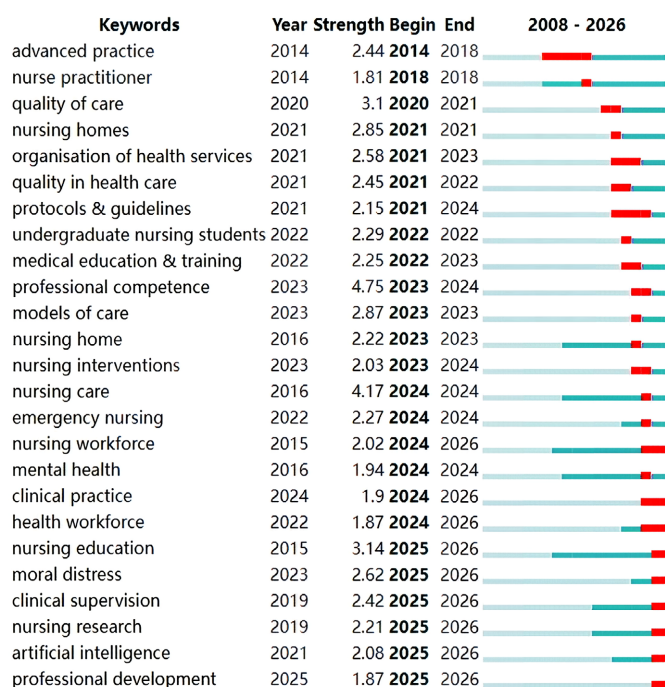


Figure 11. Analysis of emerging English keywords in the nursing field, 2008-2026.

In Chinese literature, the search volume of keywords such as “assessment tools” (intensity 1.89), “traditional Chinese medicine nursing” (intensity 1.56) and “elderly” (intensity 1.99) is expected to continue to increase until 2026. This trend shows that domestic nursing research hotspots are mainly affected by the development of clinical evaluation systems, unique nursing practices and the nursing needs of specific groups. In addition, keywords such as “cancer” (intensity 1.04), “stroke” (intensity 2.08) and “nursing management” (intensity 1.45) have maintained high research interest in recent years (Figure 12).

3.4.4. Analysis of the Timeline of Keywords

Keyword timeline analysis reveals the time evolution and stage pattern of comprehensive research in the field of nursing. In international literature, the application of nursing review methodology is becoming more and more extensive, and the application of scope review in nursing education and clinical practice is also increasing. In addition, the application of artificial intelligence in nursing practice and education has become a growing trend, especially in clinical decision-making support, quality improvement and educational efficiency improvement [14] [15] (Figure 13).

Top 25 Keywords with the Strongest Citation Bursts

Keywords	Year	Strength	Begin	End	2020 - 2026
Tool	2020	1.61	2020	2023	
Systematic Review	2020	1.29	2020	2021	
Training	2021	1.26	2021	2023	
Evidence-Based Practice	2021	1.14	2021	2022	
Education	2022	3.15	2022	2023	
Bachelor	2022	1.37	2022	2023	
Postoperative	2022	1.22	2022	2022	
Ethical Dilemma	2022	1.22	2022	2022	
Intensive Care Unit	2022	1.16	2022	2022	
Patient Safety	2023	1.65	2023	2024	
Health Education	2023	1.55	2023	2023	
Competence	2023	1.08	2023	2023	
Nursing Home	2023	1.08	2023	2023	
Nursing Student	2023	1.08	2023	2023	
Advanced Practice Nurse	2023	1.08	2023	2023	
Cognitive Impairment	2023	1.08	2023	2023	
Randomized Controlled Trial	2023	1.08	2023	2023	
Stroke	2024	2.08	2024	2024	
Nursing Management	2024	1.45	2024	2024	
Prediction Model	2022	1.24	2024	2024	
Chronic Disease	2021	1.1	2024	2024	
Older Adults	2024	1.99	2025	2026	
Assessment Tool	2021	1.89	2025	2026	
Traditional Chinese Medicine Nursing	2025	1.56	2025	2026	
Cancer	2025	1.04	2025	2026	

Figure 12. Analysis of non-English keywords in the nursing field, 2020–2026.

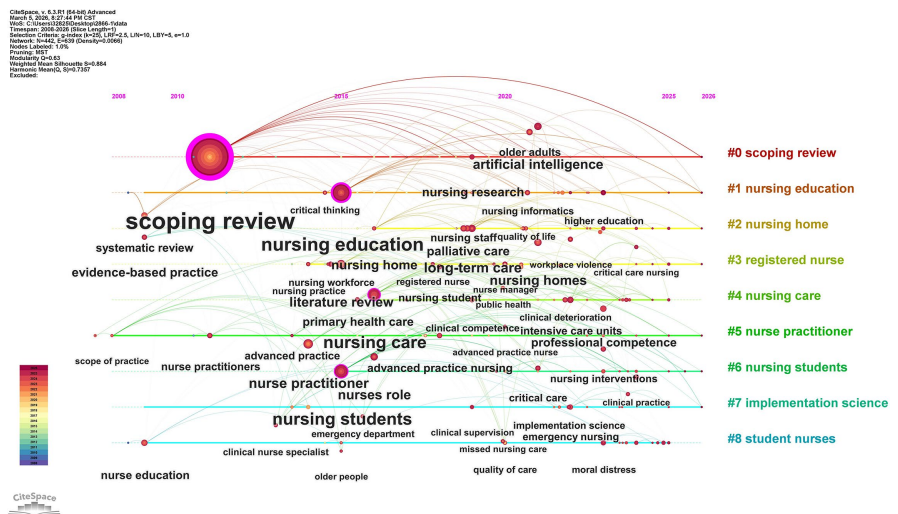


Figure 13. Timeline analysis of English keywords in the scope of nursing research, 2008–2026.

Domestic research shows obvious geographical characteristics, mainly focusing on the fields of elderly care, assessment tools, traditional Chinese medicine nursing and remote medical services, showing that China continues to pay attention to the integration of elderly nursing, the standardization of nursing practice and technological innovation. For example, a review of the scope of assessment tools shows that domestic nursing research has been gradually promoting the systematic cataloging and methodological standardization of clinical assessment tools, including assess-

ment tools for cancer-related cognitive disorders. This trend reflects the actual need for reliable and locally adaptable assessment tools in nursing practice [16].

In addition, the analysis of the research trend of traditional Chinese medicine nursing using Cite Space shows that this field has experienced significant growth in the past decade. It is worth noting that applied research has increased significantly, paying special attention to chronic diseases of the elderly and rehabilitation nursing [17]. A study on the telemedicine experience and needs of elderly patients in China emphasizes that with the increasing popularity of telemedicine technology under the background of population aging, the attitudes, obstacles and needs of the elderly towards continuous telemedicine services have become important concerns of empirical research [18] (Figure 14). In general, the development of comprehensive research on the scope definition of nursing reflects the continuous integration of patient-centered nursing, evidence-based practice and emerging technologies in this discipline.

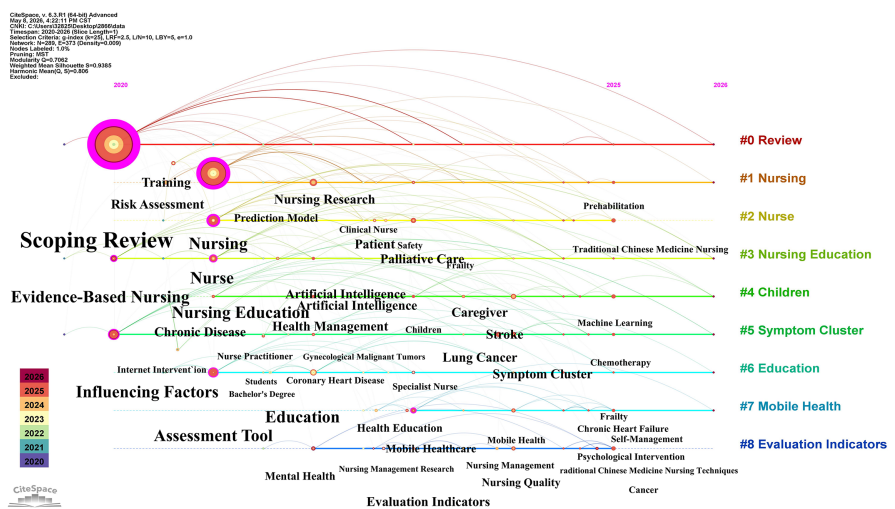


Figure 14. Timeline analysis of non-English keywords in the nursing field, 2020-2026.

3.4.5. Analysis of the Keyword Heatmap

Keyword heat map analysis presents the clustering mode and research hotspot evolution of keywords in the scope definition review of nursing fields at home and abroad in a visual way. In the English literature, “scope definition review” is still the core keyword, highlighting the continuous influence of scope definition review in international nursing research. Clusters such as nursing education, nursing homes and registered nurses show periodic peaks, indicating that the research focus changes over time. These models show that topics such as nursing education innovation, long-term nursing practice and the professional ability of registered nurses have attracted the attention of the academic community at different times [19] [20]; the recent peaks of clusters such as “implementation science” and “nursing students” show that nursing education and practice are increasingly adopting standardized educational policies. Slightly, integrate technology applications and improve the education ability of patients. At the same time, the application of ar-

tificial intelligence (AI) in nursing education highlights its potential in promoting knowledge acquisition, clinical training and improving educational efficiency [21] [22] (Figure 15).

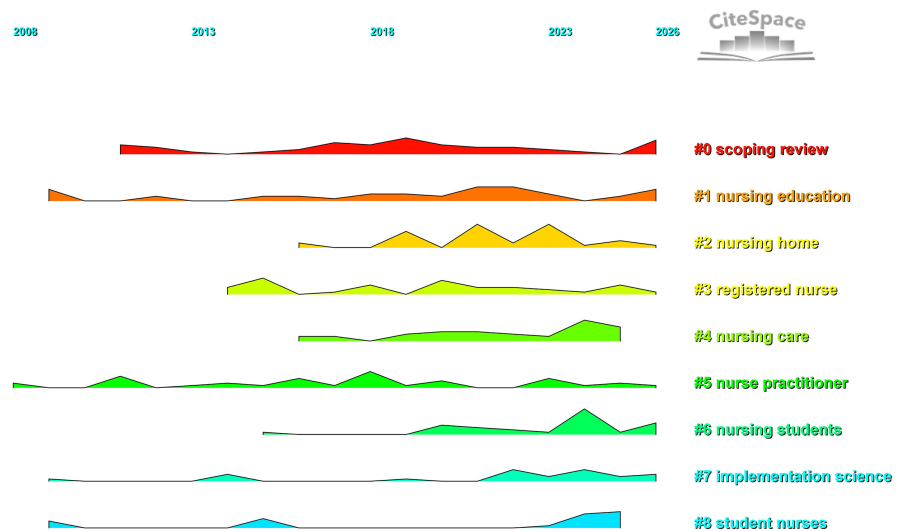


Figure 15. Hill-plot analysis of English keywords summarizing the scope of the nursing field from 2008 to 2026.

In domestic literature, themes such as “review”, “nursing”, “nurse” and “nursing education” are still prominent, indicating the rapid application of scope-defined review methods in the domestic nursing research field [23] [24]; “pediatric nursing”, “symptomatic management”, “mobile medical care” and “evaluation indicators” and other themes. The emergence shows that pediatric nursing, core nursing capacity evaluation and intelligent/mobile medical services are emerging research frontiers. Empirical studies show that the corresponding tools and models can improve the accessibility, convenience and patient satisfaction of nursing services for the elderly, and also help promote the development of the nursing quality evaluation framework [25]-[27] (Figure 16).

In general, the scope review of nursing at home and abroad shows that the development trend of nursing is to emphasize educational innovation, integration of technology application and improvement of clinical practice.

3.4.6. Keyword Timeline

The keyword timeline depicts the time evolution and theme change of the scope definition review in domestic nursing research (Figure 17). The research results show that scope-defined review, evidence-based nursing, nursing assessment and systematic evaluation have always occupied a central position. In recent years, research has paid more and more attention to chronic disease management, nursing education, intelligent nursing, palliative treatment and multidisciplinary nursing intervention. Empirical studies show that nurse-led self-care interventions and chronic disease management strategies can improve the quality of life and healthy behavior of the elderly. In addition, educational initiatives, remote follow-up, risk

assessment and technical intervention have been widely used in clinical nursing practice [28]; artificial intelligence (AI) has shown great potential in nursing education and clinical decision-making support, which can enhance knowledge acquisition, improve learning effect and improve clinical monitoring efficiency [29]. Evidence-based support is provided for the scope review of topics such as palliative treatment, nursing for elderly patients with multiple chronic diseases, and inflammatory bowel disease, and emphasizes the significant contribution of interdisciplinary nursing intervention to improving patients' functional status, quality of life and treatment compliance [30]-[33]. In general, the overview of the scope of nursing practice in China shows that nursing practice is developing in the direction of patient-centered nursing, evidence-based practice, technology application integration and multidisciplinary collaboration.

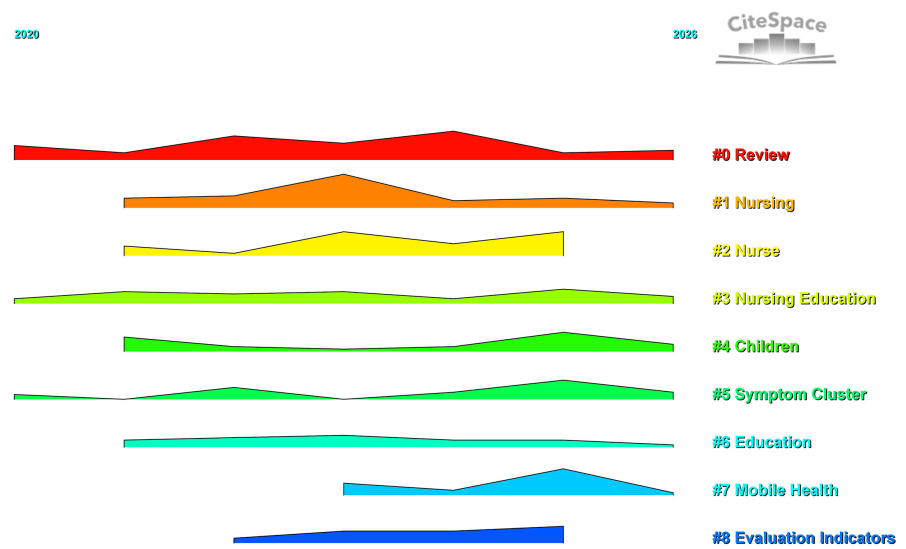


Figure 16. Timeline visualization of non-English keyword clusters in nursing research, 2020-2026.

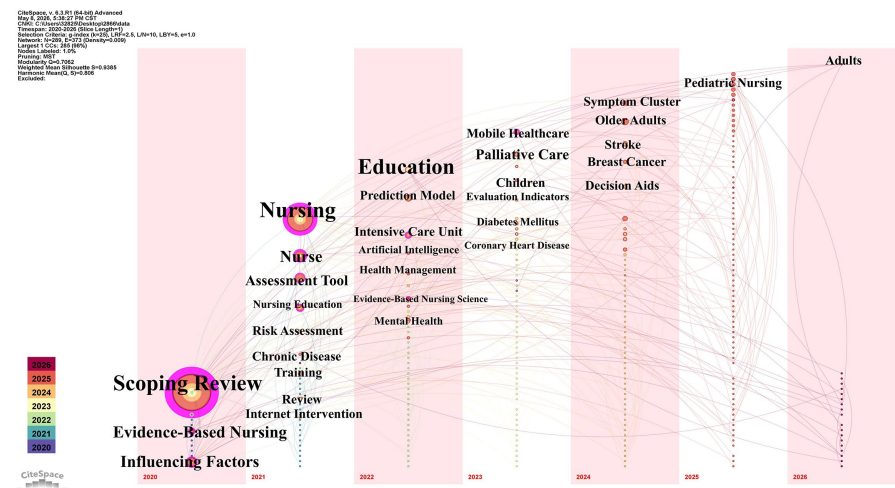


Figure 17. Time-zone analysis of non-English keywords in an overview of the scope of the nursing field, 2020-2026.

3.4.7. Co-Citation Analysis

This study adopts co-citation network analysis to systematically identify the core knowledge base and academic inheritance of the scope of the nursing field at home and abroad (Figure 18). In the common citation network, Tricco AC (2018) and Peters MDJ (2020) have the largest and most closely connected nodes, indicating that these two documents are the foundational works of the scope overview methodology. They provide important guidance for research design, implementation programs and reporting standards, and represent a widely adopted methodological framework in international nursing research.

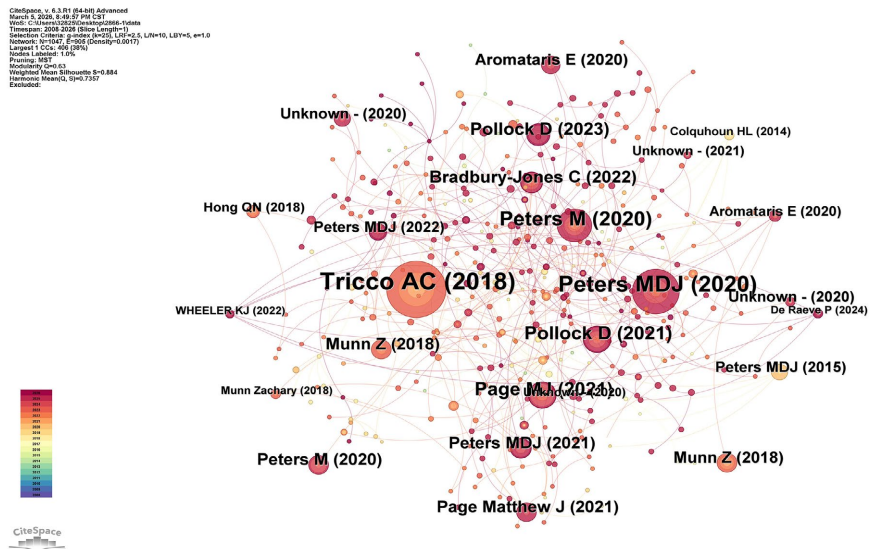


Figure 18. Citation analysis of English-language literature on the scope of the nursing field, 2008-2026.

In addition, literature such as Munn Z (2018), Aromataris E (2020) and Bradbury-Jones C (2022) also constitute an important co-citation cluster, respectively in updating the system review method, expanding nursing applications and promoting practical. It plays a key supporting role in practice and transformation. The closely intertwined co-citation relationship between these core documents reflects the high degree of methodological consistency, practicality and academic continuity in this field.

In addition, the emergence of nodes representing recent publications, including Hong QN (2018), WHEELER KJ (2022) and De Reeve P (2024), shows that the comprehensive research of the scope of nursing continues to incorporate new methodological progress and practical experience. contribute to the sustainable development of the discipline.

4. Discussion

4.1. Overview and Analysis of the Current State of the Domestic Nursing Field

4.1.1. Domestic Research Began Late and Methodological Quality Can Be Improved

Although domestic nursing research shows a continuous growth trend year by

year, there is still a significant gap compared with the mature international nursing research system, because domestic research starts significantly later than in other countries. Cite Space's visual cluster diagram shows that the highly cited nodes in domestic nursing research are mainly concentrated in the past ten years, which reflects that its research starts late and accumulates less data, resulting in its lagging behind the early international research in time.

International studies on the scope review method in the field of nursing show that the scope review is a key method of evidence synthesis. They are used to sort out existing evidence, define the scope of literature and identify knowledge gaps. These reviews also require rigorous method design, systematic data extraction and high-quality reports to ensure their reliability and validity [34]. Previous studies have found that there is inconsistency between the methodological rigor and the quality of the report in the scope of the nursing field. Many reviews fail to fully follow guidelines such as PRISMA-ScR (PRISMA Scope Overview Extension Guide), resulting in insufficient transparency and irregular data processing. These shortcomings will ultimately affect the reliability of the conclusion of the review [35] [36]. These findings show that China's scope review needs to improve methodological rigor and standardize reporting. For example, in a domestic nursing review study, Xiong Xingyu and others reviewed the scope of ICU nursing quality evaluation indicators based on the Arksey and O'Malley frameworks. Although the review partially integrates existing research, the number of studies included is limited (18 articles), and the index construction method mainly relies on literature review and expert Delphi method. This shows that domestic review research can be further strengthened through more in-depth research, broader sample coverage and more robust theoretical framework construction [37]. This empirical study shows that although the scope review of the nursing field in China increasingly emphasizes evidence-based and systematic methods, there are still shortcomings in evidence synthesis, comprehensiveness of evaluation indicators and methodological standardization.

The analysis of the co-citation network further reveals that the cooperation between top domestic authors is limited, and the research results are concentrated in a few high-level institutions, which restricts the overall influence of the domestic nursing research community to a certain extent. The visual analysis of the practical research of evidence-based nursing also shows that although research hotspots are gradually emerging, the cooperation between institutions is still insufficient and the research topics are still scattered.

In a word, improving the rigor of research design, the quality of literature review, the robustness of research methods, and strengthening the construction of research teams and promoting inter-institutional cooperation are key issues that must be solved to promote domestic nursing research.

4.1.2. Regional Development Imbalances: Research Resources Concentrated in the Eastern Coastal Regions

The output of domestic nursing research shows a significant regional imbalance.

Visual analysis of institutional distribution shows that the eastern coastal provinces represented by Beijing, Shanghai and Guangdong occupy a dominant position in terms of the number of papers published and the proportion of highly cited papers, while the research activities and output quality in the central, western and northeast regions are relatively low. This pattern reflects the concentration of research resources in economically developed areas.

The empirical analysis of Wang Jiayi and others using Dagumgini coefficient decomposition and nuclear density estimation further shows that between 2011 and 2022, China's nursing human resources showed significant regional differences. There is an obvious gradient between regions, and the output level decreases in order: eastern > western > central > northeast. Interregional differences are the main factors causing overall variability, accounting for about 40.61% of the total variability [38]. These findings reflect the uneven distribution of nursing resources between regions and are consistent with the concentration of research outputs in the eastern coastal provinces. Studies on the differences in the spatial distribution of nursing personnel in China also found that the density of nursing resources in the eastern region is significantly higher than that in the central and western regions.

Deng Jing *et al.* analyzed the nursing staff data using the Dagumgini coefficient and nuclear density estimates, pointing out that although the national nursing staff is generally increasing, the gap between the eastern and central regions is still the largest. These results show that the eastern region has more caregivers and there is a significant imbalance within and between regions, which may be attributed to differences in regional economic development levels, educational resources and medical service needs [39]. Data from primary medical institutions all over China show that the density of nurses in the eastern region is higher than that in the western region. This difference is especially significant in primary medical institutions, including community nursing institutions [40]. The analysis of the Gini coefficient of Chinese community nursing human resources also reveals significant geographical differences. The difference between the east and the west is particularly significant, which indirectly reflects that the nursing resources in the eastern provinces are more concentrated [39].

Keyword cluster analysis further shows that the nursing research topics in the eastern region cover many hot areas, including nursing management, geriatric nursing and ICU nursing. In contrast, the breadth and depth of research topics in the central and western regions are relatively limited. The visual analysis of evidence-based nursing practice research also reveals that there are significant differences in research outputs between different institutions, and no national cooperation network has been established. This structural imbalance may hinder the balanced development of the overall quality of nursing research and the resources of disciplines [41]. To address these differences, it is recommended to establish a national nursing research cooperation network to promote cross-regional sharing of high-quality research resources. In addition, the use of distance learning plat-

forms and online research cooperation tools can improve the participation of research activities in the central and western regions and primary medical institutions. These measures help to ease regional disparities and strengthen overall research capacity.

4.1.3. The Domestic Nursing Review Research Is Presenting a New Development Trend of Evidence-Based Orientation

In recent years, systematic evaluation has received more and more attention in domestic nursing research as a research method. Its scope of application has been extended to many fields, including the evaluation standards of nursing theory, the applicability of clinical practice guidelines, discharge evaluation tools and ICU nursing quality indicators. Literature metrology and visualization analysis show that the number of systematic evaluation articles published in China's core nursing journals has increased significantly, especially since 2020. However, the overall quality of methodology still needs to be improved, and the standardization in key areas such as program registration, methodological framework application and retrieval strategy still needs to be further improved [42].

The analysis of the frequency of keywords shows that the frequency of keywords such as "system evaluation", "evidence-based nursing" and "geriatric care" has increased significantly in the past five years. This increase shows that domestic nursing research attaches increasing importance to evidence-based methods and evidence synthesis. The observed pattern is consistent with the growth of China's scope overview publications [43]. Visual analysis based on the timeline shows that highly cited publications mainly focus on topics such as nursing quality improvement, ICU nursing management, chronic disease nursing path and nursing education methods. This model shows that domestic nursing research is shifting from traditional, single-dimensional and practice-oriented research to research on scope review and methodology standardization. For example, Xue Nan *et al.* (2026) used the Arksey & O'Malley scope review framework to systematically synthesize the theoretical evaluation standards in the field of nursing. They included 75 articles and classified the current development stage and application characteristics of theoretical evaluation standards according to the dimensions of internal consistency, logical clarity, practicality and testability. The author observes that the current research mainly focuses on the classical evaluation criteria, while the development of systematic and localized tools is still limited [44]. A review of the scope of evidence-based practice in clinical nursing was included in 22 studies and evaluated the quality of their methodology and the use of evidence. The review found that most studies did not systematically evaluate the quality of evidence. These findings show that the domestic review still needs to be further improved in terms of methodological rigor and standardized reporting in the field of evidence-based practice [45].

In short, the number and scope of domestic nursing review studies are expanding, reflecting that research methods are gradually shifting from traditional empirical methods to systematic research based on evidence-based frameworks and

methodological standards. However, there is still significant improvement in methodological design, reporting transparency and evidence evaluation. In the future, the scope review and systematic review of the domestic nursing field should focus on strengthening methodological training, strictly follow guidelines such as PRISMA-ScR, improve retrieval and screening strategies, and promote program registration and the disclosure of key research elements, so as to improve the quality and overall influence of research.

4.2. Analysis of the Current Status of Scoping Reviews in the International Nursing Field

4.2.1. Early Adoption, Standardized Methods

Citation analysis shows that the highly cited scope definition review is mainly published in top nursing journals in North America, Europe and other regions, covering key areas such as evidence-based nursing, chronic disease management and elderly care. These reviews usually follow internationally recognized methodological guidelines, including the PRISMA Extended Guidelines (PRISMA-ScR) and the Joanna Briggs Institute (JBI) guidelines for scope-defined reviews to ensure the rigor and repeatability of the method, thus improving the transparency of evidence and Reliability.

For example, Yatsu and Saeki (2022) made a scope-defined review of global nursing research topics. They systematically searched the international nursing literature from 2016 to 2018, analyzed a total of 133 articles, and identified six main topics, including the concept of global nursing, environmental health, infectious diseases and the shortage of nursing staff. The study focuses on important trends and emerging topics of global nursing research, and uses the PRISMA guidelines to organize and analyze the literature, thus providing a comprehensive and systematic perspective on the development of global nursing research [46]. A typical example of a scope-defined review in international nursing literature is a review of nursing interventions in neonatal intensive care units. The study follows the scope-defined review framework of the Joanna Briggs Institute (JBI) and integrates the evidence of existing systematic evaluation. This method helps to identify effective nursing intervention strategies and evaluate the quality of evidence, thus providing an important evidence-based basis for the clinical practice of neonatal intensive care [47]. A latest systematic evaluation entitled “Nurse Sleep” examines the sleep-related research of nursing staff. The evaluation adopts the Joanna Briggs Institute (JBI) method and follows the PRISMA-ScR reporting standard. It systematically sorts out the research involving nurses from many countries. Research results show that the international community is increasingly concerned about the health and working conditions of nursing staff [48].

4.2.2. Scope Reviews Are Widely Used and Have a Well-Established Body of Knowledge

The international nursing scope review is not only applied to basic nursing practice, but also covers many fields such as nursing education, patient safety, chronic

disease management and comparative research. For example, Kim *et al.* (2025) conducted a scope review of patient safety education projects in nursing education and included 27 relevant studies. The review evaluates the results and development trends of existing projects, and finds that the content of the project mainly focuses on the evaluation of knowledge, skills and attitudes. The author emphasized that future research should expand the evaluation indicators and methodological standards of patient safety education, highlighting the key role of scope review in promoting nursing education and patient safety research [49].

In the field of nursing research methodology, McKenna and Sommers (2025) carried out a comparative methodology study based on scope review. They systematically retrieved and analyzed 101 nursing studies using comparative analysis methods. The review shows that the comparative method is widely used in nursing research to evaluate different types of studies, including cross-border comparison, cross-institutional comparison and multi-topic comparison. These findings are important for understanding the progress of international nursing practice and methodology. The study also follows the PRISMA-ScR Methodology Reporting Guidelines, emphasizing the practicality of scope-defined reviews in cross-thematic comparative research [50]. These scope-defined reviews have established a systematic knowledge framework in the fields of nursing education, patient safety and comparative methods, contributing to the integration of global nursing evidence and the progress of interdisciplinary research. They also provide a valuable roadmap for domestic nursing research, guiding how to use the scope-defined overview method to solve complex problems including chronic disease nursing, ICU nursing and nursing education intervention.

4.3. Comparison and Insights from Scope Reviews in the Nursing Field at Home and Abroad

Based on comprehensive visual analysis, domestic nursing research mainly focuses on clinical practice, nursing management and service model innovation, focusing on core themes such as nursing quality, patient satisfaction and elderly nursing. These trends are highly consistent with global nursing research. In contrast, international nursing research has shown significant advantages in theoretical development, information technology integration and interdisciplinary method innovation, and has made more in-depth explorations in the fields of digital health, artificial intelligence-assisted nursing and remote nursing practice. For example, Sara Jayousi and others carried out a scope-defined review, systematically summarizing the framework for the role of information and communication technology (ICT) in global care and patient health management. The study emphasizes how ICT can change the nursing service process, improve the accuracy and accessibility of nursing, and provide evidence-based support for contemporary nursing research and practice [51].

The comparison of keyword centrality and emergence intensity shows that domestic research hotspots are less central and influential than international coun-

terparts, which shows that there is room for improvement in improving research depth and global influence. The international overview of nursing informatics shows that artificial intelligence, mobile medical care and big data analysis have become key themes, promoting major innovations in nursing education and practice. For example, Manal Kleib *et al.* provide a scope-defined review of digital health education and training interventions in undergraduate and postgraduate nursing programs. The study emphasizes that technical literacy and innovative education models are crucial to improving modern nursing ability, and makes a detailed assessment of the current situation and limitations of existing educational methods [52].

China's nursing industry is gradually improving its digital ability and promoting evidence-based nursing practice. In domestic clinical practice, the implementation of evidence-based nursing and the development and research of evaluation tools have attracted more and more attention. The analysis of the research on nursing informatics in China in the past 20 years shows that the key areas include mobile nursing technology, the application of electronic health records in clinical quality management, and the cultivation of information literacy. It is suggested that this field should draw on useful international experience while promoting practices that are in line with their own actual situation [53]. The comparison of the author's cooperation network shows that the domestic network is mainly regional, and the degree of cross-institutional and interdisciplinary integration is limited. In contrast, international networks present a global integration and interdisciplinary structure, reflecting a stronger ability to establish international cooperation and promote global care priorities and best practice sharing. These differences show that domestic nursing research needs to strengthen inter-agency, interdisciplinary and international cooperation to improve the quality of research and academic influence.

Drawing on international best practices in evidence-based nursing, digital health and interdisciplinary cooperation is conducive to expanding research topics and deepening the integration of nursing theory and practice. In addition, policy initiatives, educational reform and the construction of research platforms can improve the information literacy, technical ability and international cooperation skills of nursing staff. These measures will enable key institutions to strengthen global partnerships, transform visual trends into clinical practice and nursing decision-making support, better respond to future nursing challenges, and promote the comprehensive development of the nursing discipline.

5. Conclusion

This study adopts documentary metrology and visualization methods to review the achievements of nursing research at home and abroad in the past 20 years. The study found that domestic nursing research has developed rapidly in the fields of clinical practice, nursing management and elderly nursing, but it faces challenges such as limited cooperation and concentrated research topics. International nurs-

ing research is strong in theory, technology integration and interdisciplinary innovation, and has extensive global cooperation. The limitations of this study include the use of only CNKI and Web of Science databases, and possible omissions in manual screening. Future research should use more databases and multi-center data to better identify research trends and provide comprehensive guidance for nursing development.

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Conflicts of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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