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Structural Mapping of Nurse Manager and Nursing Management Research: A Bibliometric Analysis

Aydolu Algın Toros
Department of Nursing, Faculty of Health Sciences, Burdur Mehmet Akif Ersoy University, Burdur, Türkiye;
aydolualgin@hotmail.com

Mehmet Bayansalduz
Faculty of Sport Sciences, Istanbul Topkapi University, Istanbul, Türkiye

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Abstract

Nursing management and nurse manager research has expanded over recent decades, and a comprehensive account of the structural, thematic, and geographic features of this literature can clarify its development. This study analyzed scientific output on nursing management and nurse managers through bibliometric methods, mapping temporal trends, intellectual structure, thematic evolution, and citation impact. Bibliometric analysis was conducted on 7,054 English-language articles retrieved from the Web of Science Core Collection on 3 February 2026. Data were analyzed using the bibliometrix R package via the Biblioshiny interface. Outputs included Bradford's Law journal distribution, keyword frequency and co-occurrence mapping, temporal keyword density, Callon's centrality-density thematic mapping, author and institutional productivity, corresponding author country contributions, and global citation rankings. The literature spanned 1980 to 2026, with a 9.06% annual growth rate and 23,967 contributing authors. Three core journals accounted for 2,501 articles, approximately 35.5% of the dataset: Journal of Nursing Management, Journal of Nursing Administration, and Nurse Leader. The most frequent keywords were "nurses," "leadership," "care," "nursing," and "impact." "Leadership" and "nursing" peaked in density around 2020, while "artificial intelligence" and "mediating effect" emerged by 2025. The United States held the largest corresponding authorship share, followed by China, Canada, Australia, and Iran. Motor themes were "nurses," "impact," and "health." The five most-cited articles addressed quality education, work stress, burnout, and patient safety. Nursing management research has consolidated around a small number of core journals and prolific authors, with its thematic core organized around a leadership-to-outcomes framework.

Keywords: nursing management, nurse manager, leadership, bibliometrics

1. INTRODUCTION

Nurses occupy a central position in healthcare delivery. They maintain continuity of patient care, sustain the longest direct contact with patients, and serve as critical links in patient safety, care quality, and interprofessional communication [1–3]. Their working conditions, professional satisfaction, and organizational commitment directly shape the quality of healthcare services [4, 5]. Because healthcare institutions operate as complex organizational structures requiring high levels of specialization, coordination, and collaboration [6], effective management of nursing workforces is not merely an administrative concern; it is a determinant of clinical outcomes [7, 8]. Nurse managers have responsibilities for planning, organizing, executing, and evaluating nursing services, and they occupy a strategic position within health systems [9]. They integrate clinical knowledge with managerial competencies to ensure effective patient care while supporting nurses' professional development [10]. Research reports that nurse managers who exercise effective leadership can help establish supportive organizational climates, strengthen team communication, and improve care quality [11, 12]. By contrast, inadequate management practices contribute to burnout, job dissatisfaction, and weakened organizational commitment among nursing staff [5, 13, 14].

Apart from administrative processes, nursing management also involves human relations, leadership styles, decision-making mechanisms, and organizational behavior [9, 15]. The quality of management shapes how nurses perceive their professional roles, how valued they feel within organizations, and how actively they participate in care delivery, which positions nursing management at the intersection of individual performance and institutional outcomes [12, 16]. Recent structural transformations in health systems, rising patient expectations, and mounting pressures for efficient resource utilization have expanded and complicated the roles of nurse managers [17, 18]. Such developments increase the importance of scientific inquiry into nursing management and call for examining the organizational, professional, and individual effects of nurse managers through an integrative lens. Against this background, systematically examining the structure, trends, and developmental dynamics of the scientific output on nursing management and nurse managers is of particular significance. The present study aims to analyze this body of literature through bibliometric methods. It maps the temporal evolution of the field, identifies prominent themes and frequently used keywords, and traces research trends to assess the current state of the literature and its potential future directions, addressing the following research objectives:

1. To identify the production patterns and temporal trends in nursing management and nurse manager research, including annual output, growth trajectory, and geographic distribution of corresponding author contributions.

2. To map the intellectual structure of the field by determining the most prolific authors, leading journals, core institutions, and journal distribution according to Bradford's Law.

3. To examine the thematic evolution of the field through keyword frequency analysis, temporal keyword density, co-occurrence networks, and thematic mapping.

4. To determine the most highly cited publications and their thematic characteristics within the field.

2. METHODS

A bibliometric analysis design was employed to map the structural and thematic characteristics of scientific output on nursing management and nurse managers. Bibliometric analysis is a quantitative method that uses established statistical techniques to examine the distributional patterns, relational structures, and temporal trends within a body of literature [19]. The analysis combined two approaches: descriptive bibliometrics, which identifies publication distributions across authors, journals, institutions, and time periods; and evaluative bibliometrics, which examines relational patterns among variables such as keyword co-occurrence, thematic clustering, and citation networks [19].

A literature search was conducted on 3 February 2026 through the Web of Science (WoS) Core Collection database. The search query was constructed as follows:

TS=("nurse manager*" OR "nurse leader*" OR "nurse administrator*" OR "nurse executive*" OR "head nurse*" OR "nursing management" OR "nursing administration" OR "nursing leadership")

The initial search returned 8,604 records. Two inclusion filters were applied sequentially: restricting document type to "article" reduced the dataset to 7,172 records, and restricting language to "English" yielded the final sample of 7,054 articles. No restrictions were placed on publication year, which resulted in a temporal coverage spanning 1980 to 2026. Figure 1 presents the record-selection flow diagram detailing the selection process at each stage. The decision to limit document types to records classified as articles was made to improve consistency within the dataset; this database category does not independently establish the study design of every included publication. Reviews, editorials, letters, and conference proceedings were excluded because they differ in structure, citation behavior, and peer review standards, which could introduce additional heterogeneity into publication counts, citation patterns, and keyword analyses. WoS was selected as

the data source because of its established use in citation analysis and its compatibility with bibliometric software tools [20, 21]. Its use in a previous bibliometric study of artificial intelligence in ophthalmology provides an additional example of this methodological application [22].

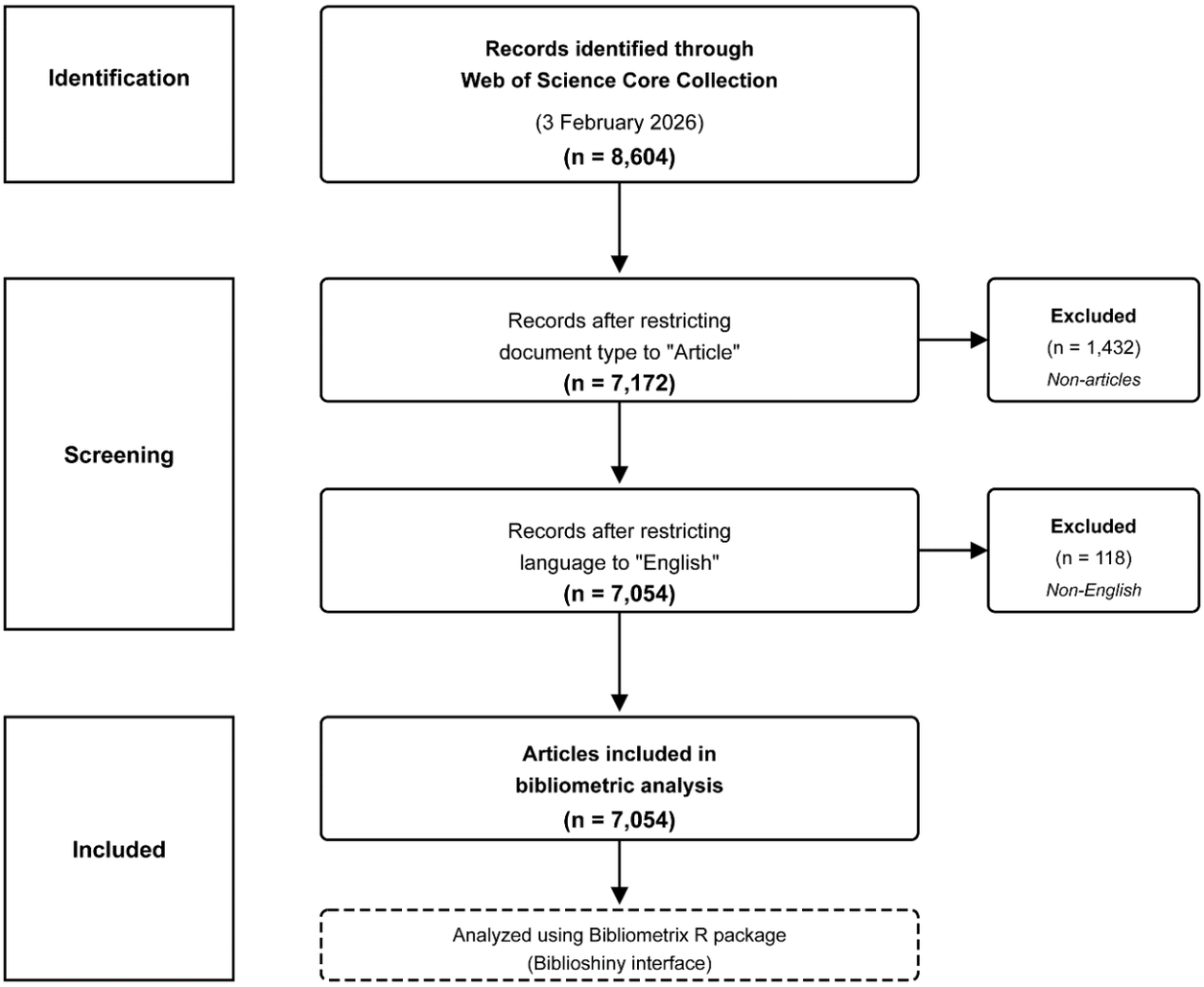


Figure 1. *Record-Selection Flow Diagram*

Exported WoS records were converted into an R data frame and analyzed using the bibliometrix R package [23] through its Biblioshiny web interface (Version 4.2.0) [24]. Social network analysis techniques were applied to identify core sources, key contributors, and relational patterns among bibliometric variables [25]. The analysis generated the following outputs: annual scientific production trends, Bradford's Law journal distribution, word cloud and keyword frequency analysis, temporal keyword density mapping, author productivity timelines, corresponding author country contributions, keyword co-occurrence networks, thematic mapping based on the density-centrality framework by Callon et al. [26], and global citation rankings.

3. RESULTS

The dataset parameters are summarized in Table 1. The analysis covered 7,054 articles published between 1980 and 2026, produced by 23,967 authors. Single-authored articles accounted for 759 of these. The annual growth rate of 9.06% signals sustained expansion, and the corpus drew on 154,920 references in total.

Table 1. *Overview of Bibliometric Dataset Characteristics*

Parameter	Value
Timespan	1980-2026
Documents	7,054
Authors	23,967
Single-authored documents	759
Annual growth rate (%)	9.06
References	154,920

The five most prolific authors, journals, and institutions are presented in Table 2. Joyce J. Fitzpatrick led individual author output with 31 publications, followed by Jaynelle F. Stichler (n = 27). The remaining three positions were held by Zhang (n = 23), Tarja Kvist (n = 22), and Leodoro J. Labrague (n = 22). The two highest author counts exceed those of the remaining three authors, although these modest differences alone do not establish the concentration of productivity across the entire author population. Among journals, three outlets accounted for a disproportionate share of the literature: Journal of Nursing Management (n = 1,127), Journal of Nursing Administration (n = 785), and Nurse Leader (n = 589). The combined output of these three journals exceeded the remaining two top-five journals by a factor of more than five, a concentration pattern consistent with the Bradford's Law analysis reported below. Institutionally, output was distributed across both Western and East Asian universities, with Central South University (n = 178) and Ohio State University (n = 173) leading, followed by Sichuan University (n = 160), Case Western Reserve University (n = 155), and the University of Eastern Finland (n = 151).

Table 2. *Top Five Authors, Journals, and Institutions by Publication Count*

Author	n	Journal	n	Institution	n
Joyce J. Fitzpatrick	31	Journal of Nursing Management	1,127	Central South University	178
Jaynelle F. Stichler	27	Journal of Nursing Administration	785	Ohio State University	173
Zhang	23	Nurse Leader	589	Sichuan University	160
Tarja Kvist	22	BMC Nursing	270	Case Western Reserve University	155
Leodoro J. Labrague	22	Journal of Advanced Nursing	217	University of Eastern Finland	151

Note. Author n = total publications in the dataset; Journal n = articles published in that journal within the dataset; Institution n = publications with at least one author affiliated with that institution.

Changes in annual publication output from 1980 to 2026 are illustrated in Figure 2. From 1980 through 1990, output was near zero, with fewer than 10 articles per year. A modest increase occurred in the early 1990s, reaching approximately 25 to 30 articles by 1993 to 1995, followed by a return to lower levels around 2000 to 2004. A sustained upward trend began around 2005, with output rising from about 100 articles in 2006 to over 200 by 2010 and around 280 by 2015. A minor dip occurred around 2017 to 2018, after which growth resumed and accelerated. Output reached roughly 620 articles by 2021, dipped to around 530 in 2023, then rose sharply to about 850 in 2025. The 2026 data point drops to near zero, reflecting the data collection date of 3 February 2026 rather than a decline in production.

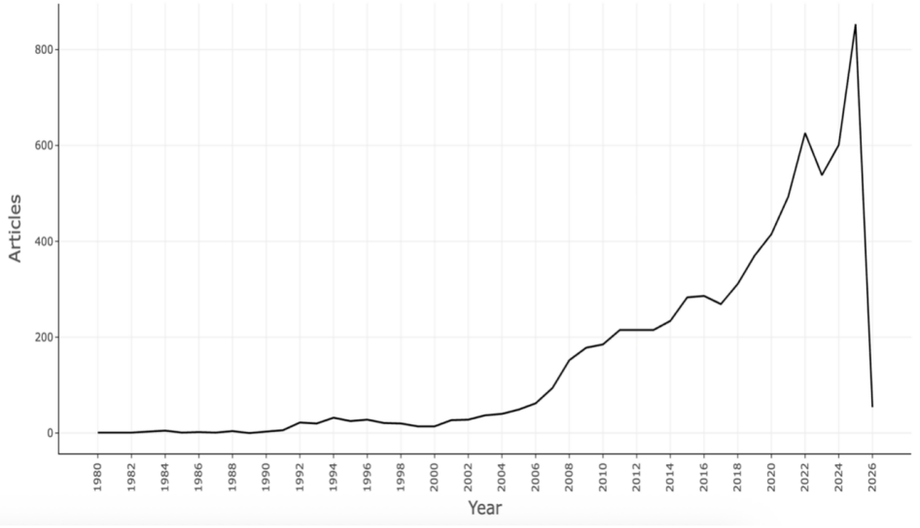


Figure 2. *Annual Scientific Production (1980-2026)*

Bradford's Law analysis identified three core journals that together accounted for approximately 35.5% of publications in the field (Figure 3). These core-zone journals were Journal of Nursing Management, Journal of Nursing Administration, and Nurse Leader. The steep concentration in Zone 1 indicates that a small number of specialized outlets serve as the primary publication venues, while the remaining literature disperses across a large number of peripheral journals.

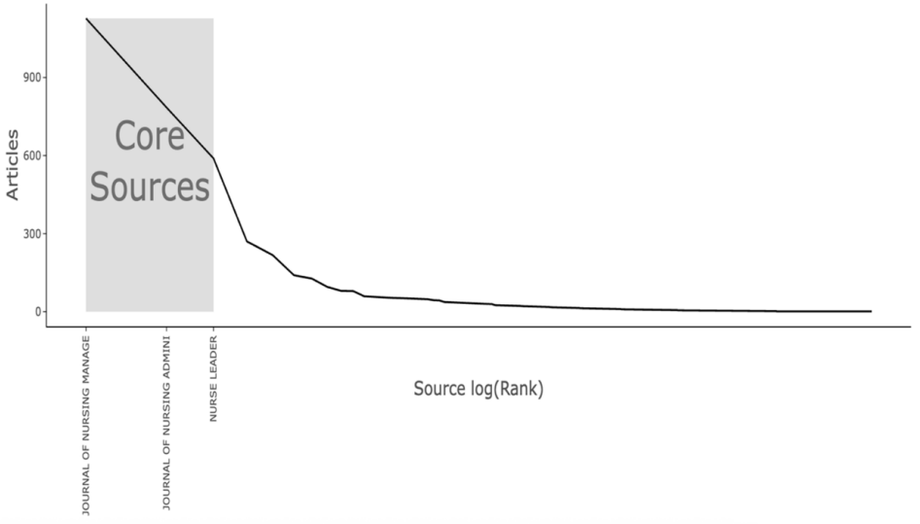


Figure 3. *Bradford's Law Journal Distribution*

The word cloud in Figure 4 displays the 50 most frequently used keywords, scaled by frequency. The largest terms are "leadership" and "nurses," followed by "care," "nursing," "management," and "impact." A second frequency tier includes "health," "work," "burnout," "job-satisfaction," "outcomes," "quality," "nursing leadership," "patient safety," and "perceptions." The third tier splits across four thematic clusters: organizational factors such as "empowerment," "retention," "turnover," "culture," "hospitals," and "performance"; research approaches including "qualitative research," "model," "scale," and "evidence-based practice"; specific constructs such as "transformational leadership," "stress," "communication," and "satisfaction"; and contextual markers including "covid-19," "nurse manager," "nurse managers," "education," and "implementation." "Leadership" appears at higher frequency than "management," and "nursing leadership" and "transformational leadership" both appear as separate terms, indicating that leadership-related vocabulary occupies a larger share of the keyword space than explicitly administrative terminology.



Figure 4. *Keyword Word Cloud (Top 50 Terms)*

The temporal distribution of keyword usage intensity in Figure 5 reveals successive waves in the field's research vocabulary. The earliest terms, appearing before 2005, included "redesign," "aids," and clinical terms such as "mechanical ventilation" and "hemodialysis." These reflect a period when nursing management research was anchored in unit-level clinical operations and procedural contexts. A second wave emerged between 2007 and 2014, characterized by terms such as

"magnet," "excellence," "practice guidelines," "staff nurses," "research utilization," and "intensive-care units." This cluster corresponds to the period when the Magnet hospital recognition model and evidence-based practice frameworks dominated the nursing management agenda, shifting attention from bedside procedures toward organizational design and performance standards. A third wave, spanning roughly 2014 to 2020, introduced "collaboration," "change management," "patient mortality," "empowerment," "retention," and "quality." The core terms "leadership" and "nursing" reached their peak density around 2020. "Burnout," "health," and "care" also clustered in this period. The most recent layer, concentrated in 2024 and 2025, contains two types of terms. Substantive terms include "artificial intelligence," "mental health," "diversity," and "covid-19." Methodological terms include "mediating effect," "latent profile analysis," and "cross-sectional study." "Qualitative research" also appears in this period.

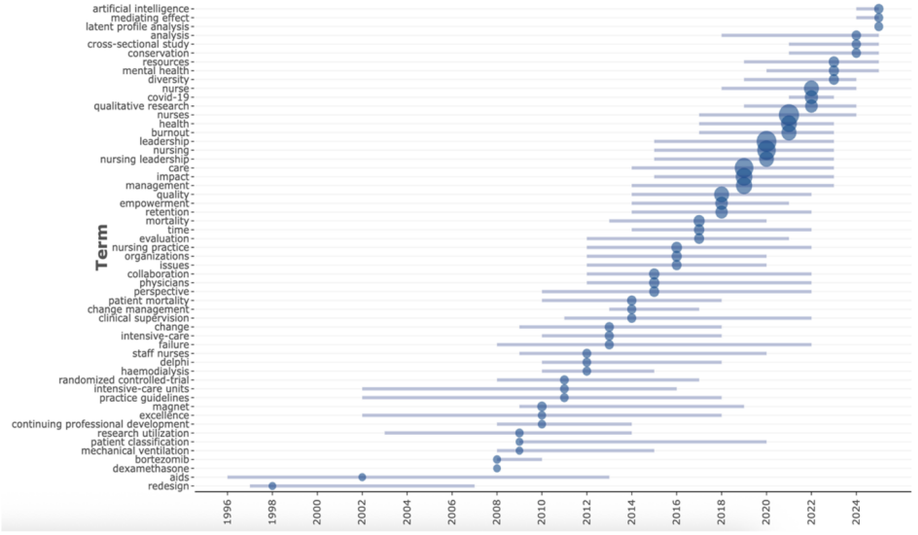


Figure 5. *Temporal Keyword Density Map*

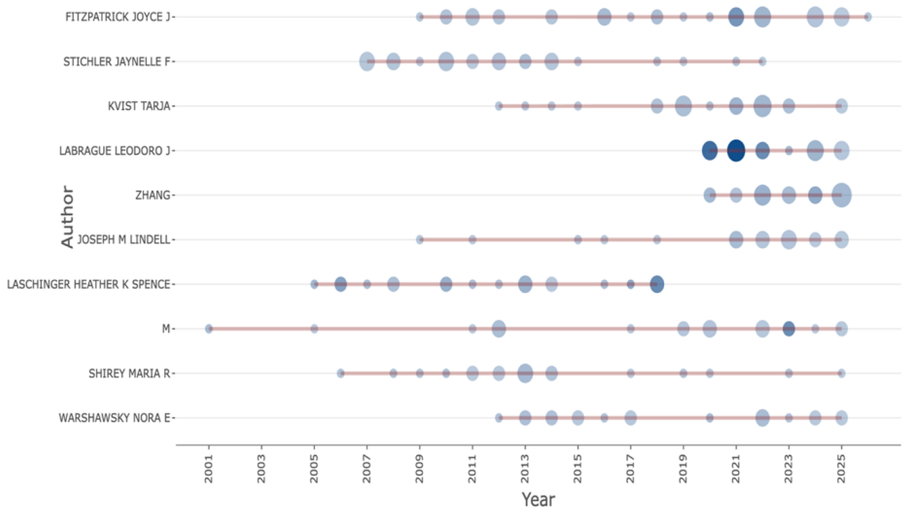


Figure 6. *Top Author Productivity over Time*

The publication timelines of the ten most prolific authors are shown in Figure 6. Joyce J. Fitzpatrick published steadily from 2007 to 2026, with peak output around 2019 to 2021. Jaynelle F. Stichler was active between 2006 and 2022, with output concentrated in 2008 to 2010 and declining after 2015. Stichler's peak period overlaps with the prominence of "magnet," "excellence," and "practice guidelines" in the keyword density analysis (Figure 5). Heather K. Spence Laschinger published consistently from approximately 2005 to 2018, peaking around 2017. She is also represented in Table 3, with Laschinger and Leiter [27] ranking among the five most-cited articles. Leodoro J. Labrague shows the most concentrated pattern: publications beginning around 2018 with high volume in 2019 to 2021. Tarja Kvist published from 2011 to 2026 with gradually increasing output density toward the 2020s. Maria R. Shirey was active primarily from 2006 to 2015, overlapping temporally with Stichler's productive period. Nora E. Warshawsky and M. Lindell Joseph

both maintained steady output from approximately 2011 and 2005 onward, respectively. Across the ten authors, earlier contributors (Stichler, Shirey, Laschinger) reached peak output before 2018, while more recent contributors (Labrague, Kvist, Warshawsky) concentrated their highest output in 2019 or later.

Corresponding author contributions by country are presented in Figure 7, distinguishing single-country publications (SCP) from multiple-country publications (MCP). The figure displays 22 countries. The United States held the largest share by a wide margin, with approximately 3,000 documents, followed by China, Canada, Australia, and Iran. The United Kingdom, Finland, and Korea occupied the next tier, each contributing between 100 and 200 documents. The SCP-to-MCP ratio varied across countries. The United States and China produced predominantly single-country publications, with MCP accounting for a small proportion of their total output. Among mid-range contributors, Saudi Arabia, Canada, and Australia showed larger MCP proportions relative to their total document counts. The lower-output countries (Jordan, Spain, South Africa, Ireland, Norway) displayed mixed patterns, though small absolute numbers limit the reliability of proportional comparisons at that range. The geographic distribution extends across North America, East Asia, Europe, the Middle East, Africa, and Oceania, with 22 countries represented among the top corresponding author contributors.

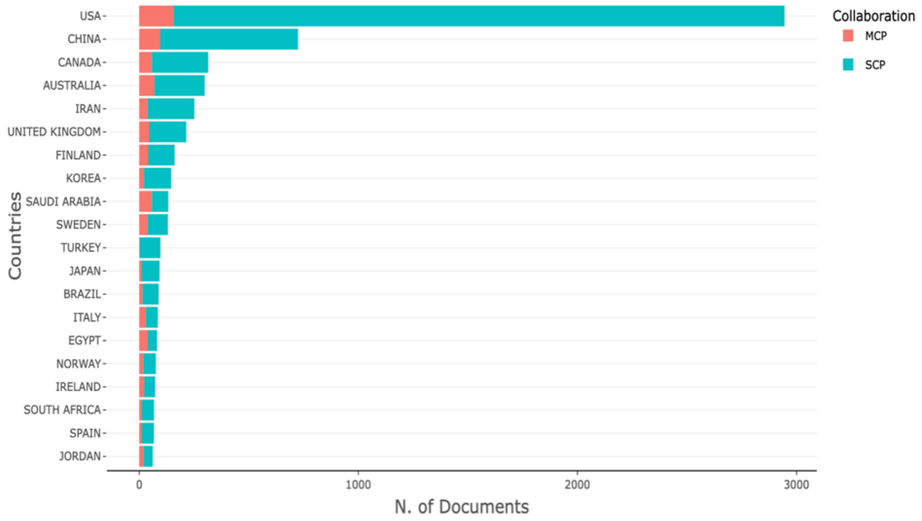


Figure 7. *Corresponding Author Country Contributions (SCP and MCP)*

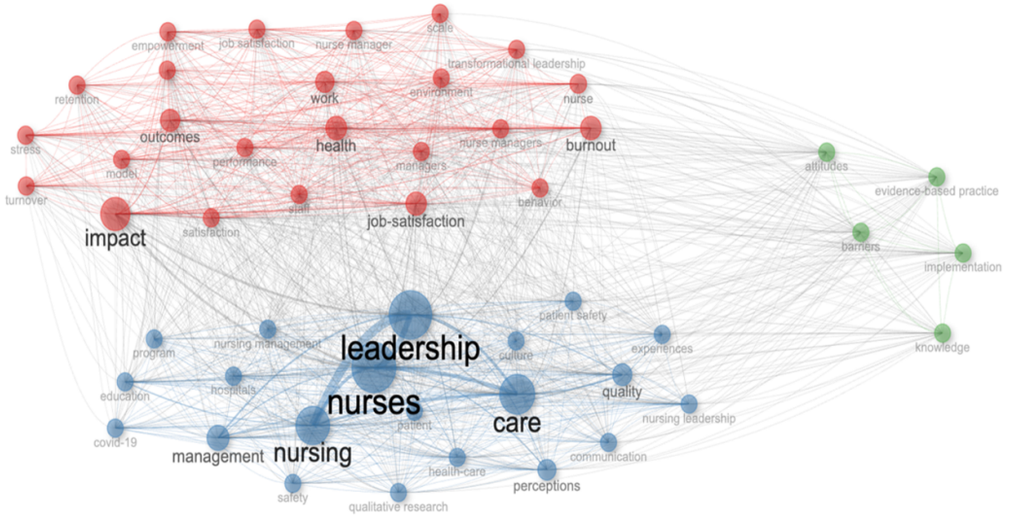


Figure 8. *Keyword Co-occurrence Network*

The keyword co-occurrence network (Figure 8) displays three color-coded clusters. The largest cluster, shown in blue in the center-lower region, contains "leadership," "nurses," "nursing," "care," "management," "quality," "communication," "patient safety," "culture," "perceptions," "hospitals," "education," "covid-19," "safety," "health-care," and "qualitative

research." Node size indicates that "leadership," "nurses," "nursing," and "care" are the highest-frequency terms in this cluster. A second cluster, shown in red in the upper-left region, groups "impact," "outcomes," "health," "work," "environment," "burnout," "job-satisfaction," "nurse manager," "empowerment," "retention," "stress," "turnover," "performance," "transformational leadership," and "scale." The node for "burnout" is positioned between this cluster and the blue cluster, functioning as a bridge term. A third, smaller cluster, shown in green on the right side, contains "evidence-based practice," "barriers," "implementation," "knowledge," and "attitudes." This cluster connects to the blue cluster primarily through "care" and "quality" but is positioned at the network's periphery. The strongest visible links connect "nursing" to "leadership," "nurses" to "care," and "leadership" to "nurses." Thick inter-cluster links connect "burnout" and "job-satisfaction" in the red cluster to "nurses" and "leadership" in the blue cluster.

The thematic map in Figure 9, constructed via Callon's centrality-density framework [26], positions keyword clusters along two axes: centrality on the horizontal axis, indicating relevance to the field, and density on the vertical axis, indicating internal coherence of the cluster. The map contains two clusters. The niche themes and basic themes quadrants are empty. The motor themes quadrant, upper-right with high centrality and high density, contains a single cluster: "nurses," "impact," and "health." The emerging or declining themes quadrant, lower-left with low centrality and low density, contains "leadership," "care," and "nursing." These three terms are the most frequently occurring keywords in the dataset (Figure 4) and the most densely connected nodes in the co-occurrence network (Figure 8), yet they occupy the quadrant associated with low thematic coherence. In Callon's framework, high frequency combined with low density indicates broad usage across multiple research lines without tight integration into a single cluster. The absence of themes in the niche (upper-left) and basic (lower-right) quadrants indicates that the field's keyword structure is polarized between one well-integrated cluster and one diffuse cluster, with no intermediate thematic formations.

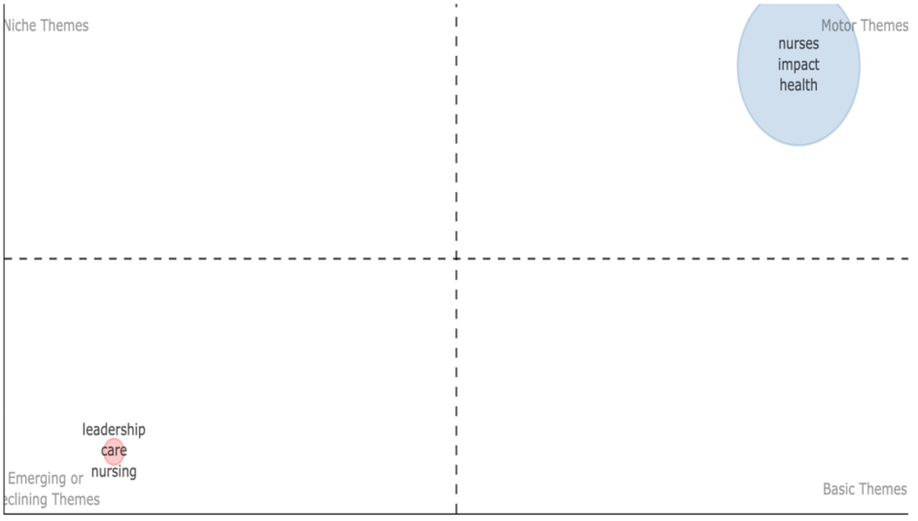


Figure 9. *Thematic Map*

The five articles with the highest global citation counts in the dataset are listed in Table 3. Citation counts ranged from 492 to 760. The top-cited article, Cronenwett et al. [28], addressed quality and safety education for nurses. Three of the five most cited articles [27, 29, 30] focused on burnout, work environment, or patient safety, indicating that these interconnected themes have generated the highest citation impact in the field. Mo et al. [31], the second-most cited article, addressed work stress during the COVID-19 pandemic, reflecting the surge of crisis-related nursing management research.

Table 3. *Top Five Globally Cited Articles*

Title	Authors	Citations	DOI
Quality and safety education for nurses	Cronenwett et al. [28]	760	10.1016/j.outlook.2007.02.006
Work stress among Chinese nurses to support Wuhan in fighting against the COVID-19 epidemic	Mo et al. [31]	618	10.1111/jonm.13014
Burnout syndrome in critical care nursing staff	Poncet et al. [29]	495	10.1164/rccm.200606-806OC
High level of burnout in intensivists	Embriaco et al. [30]	494	10.1164/rccm.200608-1184OC
The impact of nursing work environments on patient safety outcomes: The mediating role of burnout/engagement	Laschinger & Leiter [27]	492	10.1097/00005110-200605000-00019

4. DISCUSSION

The concentration of publication output among a small number of authors, journals, and institutions indicates that nursing management research has developed a consolidated intellectual structure. The five leading authors had publication counts ranging from 22 to 31, with Joyce J. Fitzpatrick and Jaynelle F. Stichler producing more articles than the remaining three authors in this group. This ranking can be considered in relation to Lotka's Law, which describes an uneven distribution of scientific productivity across authors, although the five leading counts alone do not constitute a statistical test of that distribution [32]. The difference between the top two authors and the cluster at 22–23 publications is modest. Assessing whether sustained engagement or short periods of intensive publication explain these rankings requires the author timelines, rather than the ranking alone, to be considered.

The author productivity analysis suggests that the field's leading contributors fall into distinct publication-period profiles. Earlier contributors such as Stichler, Shirey, and Laschinger reached peak output before 2018 and worked primarily during the organizational excellence and empowerment era. Heather K. Spence Laschinger, whose work on empowerment and work environments produced one of the five most-cited articles in the dataset [27], published consistently from 2005 to 2018. More recent contributors, namely Labrague, Kvist, and Warshawsky, concentrate their output from 2019 onward, spanning the period before, during, and after the acute pandemic phase, when crisis leadership and technology adoption received increasing attention. Whether the conceptual foundations established by the earlier generation are being built upon or replaced is a question that co-citation analysis could address in future research.

The Bradford's Law analysis reinforces structural consolidation at the journal level. Three core journals, Journal of Nursing Management, Journal of Nursing Administration, and Nurse Leader, absorbed a share of the literature that exceeded the combined output of the fourth and fifth-ranked journals by a factor of more than five. This degree of concentration signals that the field has matured beyond a dispersed, emerging phase into one with well-defined publication venues. It also carries a practical implication: researchers seeking to maximize visibility for nursing management studies have a clear set of target journals, though this concentration may simultaneously create gatekeeping effects that shape which methodological and thematic approaches gain prominence.

Institutional output was distributed across universities in the United States, China, and Finland. The presence of two Chinese universities (Central South University and Sichuan University) among the top five indicates substantial Chinese institutional participation in this dataset. Jiang et al. [22] provide a comparison from artificial intelligence research in ophthalmology, although that discipline-specific study cannot establish a general trend across all Chinese health services research. The positioning of the University of Eastern Finland alongside established U.S. programs at Ohio State and Case Western Reserve University indicates that nursing management research is not monopolized by any single national tradition, though U.S. and Chinese institutions collectively dominate output volumes.

The annual production data reveal a field that moved through distinct developmental phases. Output was near zero through 1990, with fewer than 10 articles per year. A brief increase in the early 1990s reaching roughly 25 to 30 articles did not sustain itself, and production returned to low levels in the following decade. The true inflection point occurred around 2005, after which growth accelerated consistently, increasing substantially across successive periods and reaching its highest reported annual count at approximately 850 articles in 2025. The temporal keyword density analysis shows four successive waves that align with this production trajectory. The earliest wave was characterized by clinical and procedural terms such as redesign, aids, mechanical ventilation, and hemodialysis, reflecting a period when management research was anchored in unit-level clinical operations. A second wave, coinciding with the late 2000s and early 2010s, introduced magnet, excellence, practice guidelines, staff nurses, and research utilization, corresponding to the period when Magnet hospital recognition and evidence-based practice frameworks shaped the field's agenda. A third wave brought organizational behavior and systemic terms: collaboration, change management, patient mortality, empowerment, retention, and quality. The core terms leadership and nursing peaked in density around 2020, coinciding with pandemic-era crisis management and workforce coordination. The most recent wave introduced artificial intelligence, mediating effect, latent profile analysis, and cross-sectional study, which implies both substantive expansion into technology-assisted management and methodological maturation toward person-centered analyses and indirect pathway models.

Minor dips in production around 2017 and 2023 did not interrupt the overall upward trajectory. The later dip may reflect a delayed pandemic effect, as research priorities temporarily shifted toward epidemiological and clinical studies. The subsequent recovery suggests that the pandemic ultimately reinforced interest in nursing management by elevating crisis leadership, workforce resilience, and system sustainability as research priorities. Stichler's peak output directly overlaps with the second keyword wave, when magnet, excellence, and practice guidelines were the field's dominant terms, linking her productivity to the organizational excellence era. Fitzpatrick's later peak aligns with the third-wave emphasis on leadership, burnout, and health outcomes. These parallel trajectories suggest that individual author productivity is at least partly shaped by the thematic cycles visible in the keyword data, though personal research agendas undoubtedly play a role.

The keyword, co-occurrence, and thematic map analyses converge on a layered picture of the field's conceptual structure, but they also reveal an internal tension. The co-occurrence network organized the field's vocabulary into three clusters. The central cluster groups leadership, nursing, and care terms alongside clinical practice and research methodology. A second cluster connects workforce outcomes to organizational mechanisms: burnout, job satisfaction, empowerment, retention, turnover, and transformational leadership. A third, peripheral cluster contains evidence-based practice, implementation, and knowledge-attitude terms. The peripheral placement of this implementation science cluster indicates that while evidence-based practice is present in the literature, it remains loosely coupled with the field's management and leadership core. Burnout functions as a bridge term, connecting the leadership-care vocabulary to the workforce outcomes vocabulary.

The keyword frequency analysis supports a leadership-centered reading of the field. Leadership appears at higher frequency than management, and both transformational leadership and nursing leadership appear as separate high-frequency terms, indicating that leadership-related vocabulary occupies a larger share of the keyword space than explicitly administrative terminology.

The thematic map (Figure 9), however, introduces a complication. The motor themes were "nurses," "impact," and "health," confirming that the field's most structurally integrated research cluster centers on the effects of management practices on nurses and health outcomes. But leadership, care, and nursing, despite being the most frequent keywords and the most densely connected co-occurrence nodes, occupy the emerging or declining themes quadrant. In Callon's framework [26], this combination of high frequency and low density indicates terms used broadly across heterogeneous contexts rather than forming a tightly integrated cluster. The implication is that these terms may function more as general descriptors than as components of well-defined research programs. Leadership appears across studies of transformational, authentic, servant, crisis, and clinical leadership, each of which may operationalize the term differently. Such fragmentation would produce exactly the pattern observed: high frequency, low thematic density.

The most-cited articles reinforce the thematic priorities identified through keyword analysis. Four of the five top-cited publications addressed burnout, work stress, patient safety, or work environment quality, indicating that the field generates its greatest citation influence when it addresses the conditions under which nurses work and the consequences for patients. The inclusion of Mo et al. [31] among the top-cited articles further underscores the field's responsiveness to crisis contexts.

Corresponding author data reveal a geographically concentrated but internationally distributed production landscape. The distribution in Figure 7 displays 22 countries spanning North America, East Asia, Europe, the Middle East, Africa, and Oceania. The United States held the largest share by a wide margin (approximately 3,000 documents), consistent with the country's long-established infrastructure for nursing education, leadership research, and health services funding. China's second-place position (approximately 700 documents) reflects the broader expansion of Chinese biomedical and health sciences research output, which has accelerated across disciplines since approximately 2010. The growth of nursing management publications from China may be linked to national healthcare reform initiatives and increasing investment in hospital management research, though this interpretation would require corroboration through policy analysis beyond the scope of bibliometric data.

Canada and Australia each contributed approximately 300 documents, consistent with these countries' orientations toward patient safety, evidence-based healthcare, and collaborative research cultures. Iran's presence in the top five (approximately 250 documents) is a more recent development. Vakilimofrad et al. [33] documented a general increase in Iranian nursing research output and international collaboration, and the present findings suggest that this growth extends into the management subdomain. The SCP-to-MCP ratio varied across countries in ways that warrant attention. The United States and China produced predominantly single-country publications, with MCP accounting for a visibly small proportion of their total output. Among mid-range contributors, Saudi Arabia, Canada, and Australia showed larger MCP proportions relative to their document counts. Countries with smaller absolute output but higher MCP proportions may be contributing to the field's internationalization in ways that raw corresponding author counts do not fully capture.

5. LIMITATIONS AND IMPLICATIONS

The analysis relied exclusively on Web of Science, excluding journals indexed only in Scopus, PubMed, or regional databases, which may underrepresent contributions from countries whose nursing outlets are not WoS-indexed. The restriction to English-language articles excluded research published in Chinese, Spanish, Portuguese, and Farsi, potentially altering both the geographic distribution and the thematic landscape. Bibliometric analysis captures structural patterns in published literature but cannot assess the quality, methodological rigor, or practical impact of individual studies. The temporal coverage ending in early 2026 means that 2026 publication counts cover only part of the year, while 2025 counts may remain affected by indexing delays. The apparent peak in 2025 should therefore be interpreted cautiously until database coverage for that completed calendar year has stabilized.

For research, the thematic map's placement of "leadership," "care," and "nursing" in the emerging or declining quadrant, despite their high frequency, points to a need for greater conceptual precision. Scholars could benefit from specifying which leadership construct is under investigation, whether transformational, authentic, servant, or clinical,

rather than using "leadership" as a catch-all descriptor. The co-occurrence network's peripheral placement of evidence-based practice and implementation science terms identifies a second gap: connecting management research more explicitly to implementation frameworks could strengthen the field's applied relevance. Trending keywords such as mediating effect and latent profile analysis indicate that the field is already moving toward more sophisticated analytical approaches. Mediation and moderation analyses that test specific pathways between leadership practices, nurse outcomes, and patient care indicators would provide more actionable evidence than correlational studies. Cross-national comparative designs are a further priority, because the geographic concentration of output in a small number of countries raises the question of whether findings from U.S. or Chinese healthcare contexts transfer to structurally different health systems.

For practice, the centrality of leadership as the dominant conceptual frame suggests that leadership development programs for nurse managers should be treated as infrastructure investments rather than discretionary training. The four-wave keyword evolution also indicates that the competencies expected of nurse managers are expanding, from clinical operations through organizational excellence and workforce resilience to technology-assisted decision-making. Leadership development curricula that do not reflect this trajectory risk preparing managers for a previous era. Building digital literacy and technology governance competencies into nurse manager education is a practical implication suggested by the observed shift in research vocabulary, although bibliometric patterns alone cannot establish the effectiveness of any particular educational intervention.

6. CONCLUSION

The bibliometric analysis mapped 7,054 articles published between 1980 and 2026 to characterize the structural, thematic, and geographic features of nursing management and nurse manager research. The field has consolidated around a small number of core journals, prolific authors, and leading institutions. Its thematic core is organized around a leadership-to-outcomes framework, though the thematic map reveals that leadership, care, and nursing function as broad descriptors across diffuse research lines rather than as components of a tightly integrated cluster. Four successive keyword waves trace the field's evolution from clinical operations through organizational excellence and workforce resilience to technology-assisted management. Knowledge production is concentrated in the United States and China, with the displayed corresponding author distribution including 22 countries across several world regions. These patterns indicate a field entering a period of methodological diversification, though its evidence base remains geographically uneven and its core terminology may require sharper conceptual definition.

Author Contributions

Both authors contributed equally to this work and approved the final version of the manuscript.

Conflict of Interest

The authors declare no conflicts of interest.

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Data Availability

The bibliographic records analyzed in this study were retrieved from the Web of Science Core Collection on 3 February 2026. Access to the underlying database is subject to the provider's access and licensing conditions. The search strategy, selection criteria, and aggregate findings are reported in this article.

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