

Three decades of nurses' talent retention: a bibliometric analysis

Nurses' talent retention

Ganesh Kannan and Arockiam Kulandai
*Department of Human Resource Management,
St. Joseph's College (Autonomous), Bharathidasan University,
Tiruchirappalli, India, and*

Murali Ramachandran
*Department of Management Studies, St. Joseph's College (Autonomous),
Bharathidasan University, Tiruchirappalli, India and MCC Boyd Tandon
School of Business, Madras Christian College, Tambaram, India*

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Abstract

Purpose – Nurse turnover is perceived to be a major challenge for health-care administrators. The turnover is because of various factors like poor working conditions, low salaries, poor work-life balance and international opportunities. The purpose of conducting a bibliometric analysis on “Nurses’ Talent Retention” is to comprehensively analyze the trends, patterns and research contributions related to this area. By synthesizing and analyzing the existing literature, this study aims to identify key areas for nurse retention, thereby providing a foundation for further research, practical interventions and policy implications.

Design/methodology/approach – This research investigates talent retention practices in nursing from 1989 to 2023 by analyzing 427 documents from 213 sources sourced through Elsevier Scopus. Using the PRISMA framework, the study uses bibliometric analysis using the R studio’s bibliometrix package. Key findings reveal a growing scholarly interest with an annual growth rate of 11.46%, an average document age of 7.93 years and an average citation rate of 43.26. Notably, international collaboration represents 17.56% of co-authorships, indicating the global relevance of the research. The study addresses three main research questions, including factors contributing to nurse retention in the Indian context, and implications for nurse well-being and turnover rates across different health-care contexts and countries.

Findings – The bibliometric analysis of nurse retention highlights several key findings. Magnet hospitals, accredited by the ANCC, demonstrate superior work environments, staffing levels and nurse outcomes, emphasizing the significance of nursing leadership and professionalism. The factors such as resilience, influenced by perceived competence, collaboration and coping strategies, highlight the importance of addressing psychological well-being in retention efforts. Transformational leadership and supportive work environments are associated with increased intentions for nurses to remain in their roles, suggesting the need

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for organizational practices fostering positive workplace cultures. Diversity management initiatives promoting inclusivity correlate with positive organizational outcomes, indicating the potential for diverse and inclusive workplaces to enhance nurse retention.

Practical implications – These findings provide substantial implications for health-care organizations and policymakers. Investing in nursing leadership and nurturing supportive work environments can enhance nurse satisfaction and retention. Implementing diversity management in recruitment practices can create inclusive workplaces, positively impacting nurse retention and organizational outcomes. Mandating staffing ratios may also improve nurse retention and patient care quality. Understanding the economic and organizational costs associated with nurse turnover emphasizes the need for effective retention strategies and healthy work environments.

Originality/value – This study contributes to the understanding of nurse retention dynamics by synthesizing findings from the literature. By highlighting the importance of nursing leadership, resilience and diversity management, it provides valuable insights for future research and practice in the field. The study also emphasizes the economic and organizational costs of nurse turnover, enhancing the urgency of implementing effective retention strategies.

Keywords Home health care, Talent retention, Job satisfaction, Intrinsic and extrinsic characteristics

Paper type Research paper

1. Introduction

1.1 Nursing turnover in a global perspective

A significant number of individuals with medical qualifications are not currently part of the health-care workforce (Karan *et al.*, 2021). Approximately 17.5% of newly employed nurses exit their initial positions within one year of commencing employment (Kovner *et al.*, 2014). There is evidence demonstrating that nurse turnover can negatively impact the quality of patient care (Gibson, 1994).

Health care plays a pivotal role in every country for maintaining the well-being and good health of its community. Both the government and private health sectors are involved in it. Like doctors, nurses are key players in executing health-care systems in any country. However, retaining nurses in health-care centres is quite a challenge, and looking into their job satisfaction is another important area for deliberations.

1.2 Job satisfaction and autonomy

Job autonomy is an important part of professional development in nursing. Job autonomy in nursing means the independence and control nurses have over their decisions and work (Hart and Rotem, 1995). From a global concern of nurse turnover and its potential impact on organizational productivity, it looks to be a researchable concept. It could be seen that the intention of leaving the organization seemed to be high among the nurses in Tigray, Ethiopia, in a specialized hospital. Job autonomy and training opportunities were not given to them (Gebregziabher *et al.*, 2020). The characteristics and attitudes of those who resigned were considered against those who remained. Despite possessing higher education, resigned nurses have shown lower professional autonomy in China (Brook *et al.*, 2021).

Workplace incivility negatively impacts job satisfaction (Khan *et al.*, 2021). Workplace incivility involves low-intensity, impolite behaviours that disrupt norms of respect, destructively impacting job satisfaction by creating a hostile work environment and eroding employees' sense of control and autonomy. Adoption of a self-determination perspective was considered (Jiang *et al.*, 2023), in which the authors sought to find the relation between workplace incivility from multiple sources, i.e. doctors, supervisors, fellow nurses and patients/visitors, and turnover intention. They also explored psychological needs for autonomy, belongingness and competence. Autonomy emerged as the primary mechanism for influencing the relationship of incivility from doctors, supervisors and fellow nurses to turnover intentions.

1.3 Nursing resilience and leadership

Transformational leadership style is one where the leaders will motivate and show a reduced nursing turnover (Suliman *et al.*, 2020). The resilience predictors and perceptions of transformational leadership among registered nurses in Lebanon focus on three private hospitals in an underserved area of South Lebanon. Nurse administrators are encouraged to fortify transformational leadership behaviours to sustain the Lebanese nursing workforce (Abdul Salam *et al.*, 2023). By enhancing job satisfaction through supportive environments and professional development, transformational leadership reduces nursing turnover. It promotes resilience by nurturing adaptability, building strong relationships and empowering nurses to cope with challenges confidently.

1.4 Effect of nursing turnover

Significant factors influencing newly licensed registered nurses (NLRN) were health status, work environment elements, emotional exhaustion, intention to leave and job satisfaction. Peer support and hospital characteristics (size, location and unionization) emerged as the key contributors to NLRN turnover rates. Fostering healthy work conditions and developing targeted strategies and policies to reduce turnover among NLRNs (Bae, 2023). The lack of supply of nursing force created adverse effects on the outcome of the patient's health, which eventually led to the increased workload of the nurses jeopardizing the patient's safety and work-life balance (Tamata and Mohammadnezhad, 2023). It is also noted that work-life conflict is another significant reason that influences nurses to leave their jobs refers to a situation where expectations from the work environment and family clash, which creates problems in maintaining a harmonious situation leading to a desire to leave (Mousavi *et al.*, 2023).

1.5 Rural health-care challenges

Despite incentive packages, there seems to be a constant challenge of high nurse turnover in rural health-care settings in Ghana. The authors found a lower level of resilience and rural fit among nurses showing high turnover intentions. Workload management, financial incentives, fitting the nurses into the rural settings and prospects for professional development enhance nursing retention in the rural setup. However, the turnover intention in the USA is based on the nurses' characteristics and not the nature of ruralism (Andreyeva *et al.*, 2023). It is not only found in Ghana but in other countries. At times, retaining nurses in rural settings is tough. It could be seen in India; wherein rural areas constitute a significant portion of the population living in India. High nurse turnover in rural health-care systems poses challenges such as staff shortages, compromised patient care continuity, increased costs and potential impacts on patient outcomes (Baernholdt and Mark, 2009).

1.6 Turnover issues in the home health-care market

Globally, the population is ageing, leading to an increased demand for health-care services for older adults. This trend is driving the shift towards advanced home health care, where registered nurses play a crucial role (Lillsjö *et al.*, 2023). Despite the obvious attraction to this nursing field, home health-care workers face numerous challenges. The work they perform is both physically and emotionally demanding, often in precarious work environments. Challenges include poor working conditions, low wages, a lack of job dignity and financial strain (Zoeckler, 2018). Job dissatisfaction is common, leading to an intention to leave the job and seek alternative employment. Experienced dissatisfaction is often due to a lack of autonomy and a safe working environment, making retention a significant challenge. Job satisfaction, defined as a positive affective orientation for employment (Mueller and McCloskey, 1990), is complex for home health-care nurses. Intrinsic characteristics, such as autonomy, group cohesion and organizational

values, and extrinsic characteristics, including stress, workload, control of work hours and activities, salary and benefits, perceived job opportunities and real job opportunities, play key roles (Boswell, 1992; Lynch, 1994; Moore and Katz, 1996; Ellenbecker, 2001). Understanding these job satisfaction characteristics presents challenges for both organizations and nurses. Registered nurses continuously strive towards the safety of the patients in the home health-care setup (Lindberg *et al.*, 2023).

2. Review of related papers

Table 2

3. Research methodology

Using the keywords “Talent retention”, “Employee retention”, “Nurse Retention”, “Healthcare Employee retention” and “Home health care”, a total of 485 documents from 213 sources, sourced through Elsevier Scopus using Boolean operators in the advanced search option (see Table 2). Using the PRISMA framework, records were systematically screened. After filtering the database, a refined set of 427 papers was included for the bibliometric analysis, which provides a comprehensive view of published works to identify trends and research gaps (Murali and Mohamed Jasim, 2022). Apart from this, Table 1 presents a review of related papers, including a selection of key studies tabulated to highlight their relevant findings and methodologies. The analysis was systematically carried out using the bibliometrix – package to arrive at a meaningful insight after analyzing a large volume of papers and the findings (Aria and Cuccurullo, 2017).

3.1 Inclusion and exclusion criteria

This research examines talent retention practices in the nursing profession through scholarly articles published from 1989 to 2023. Using the Boolean “OR” operator, the authors fetched a wide range of relevant studies across the components of “Talent Retention”, “Home Health Care” and “Employee Satisfaction”. This approach ensured inclusivity in the search, enabling retrieval of articles containing any specified term within each component.

The search terms included keywords such as “talent retention” OR “employee retention” OR “staff retention” OR “workforce retention” OR “nurse retention” OR “healthcare employee retention”, along with “home health care” OR “home care” OR “home nursing” and “employee satisfaction” OR “job satisfaction” OR “work satisfaction”.

The authors applied rigorous inclusion and exclusion criteria to select the final set of papers. Inclusion criteria were peer-reviewed journal articles on nurse retention, published between 1989 and 2023 and written in English. Exclusion criteria were literature reviews, case studies, theoretical studies and papers not directly related to nurse retention. Through meticulous reviews, the authors refined the set to 427 papers. Figure 1 shows the entire selection process followed the PRISMA framework, ensuring systematic and transparent reporting (Page *et al.*, 2021).

3.2 The rationale of the data analysis

Various data representation styles were used to clearly convey the bibliometric analysis results. Network visualizations, generated by VosViewer, illustrated the relationships and clusters between key concepts and keywords. Trend analysis graphs represented the increasing scholarly interest in nurse retention over the years, highlighting growth patterns. Citation impact charts compared the relevance and influence of earlier works with more recent publications. geographic maps showed country-specific scientific production,

Title	Authors	Summary
"Predicting registered nurse job satisfaction and intent to leave"	(Larrabee <i>et al.</i> , 2003)	The paper identifies factors like hardiness, transformational leadership and collaboration influencing nurse attitudes, emphasizing the role of nurse empowerment in job satisfaction
"A meta-analysis of studies of nurses' job satisfaction"	(Zangaro and Soeken, 2007)	The meta-analysis examines the relationships between job satisfaction and variables such as autonomy, job stress and nurse-physician collaboration. Findings indicate that job satisfaction is most strongly correlated with job stress, followed by nurse-physician collaboration and autonomy
"Implications of the California nurse staffing mandate for other states: Nursing and home care"	(Aiken <i>et al.</i> , 2010)	The paper suggests that mandated staffing ratios positively impact nurse retention and patient care outcomes, providing insights for other states considering similar legislation
"Best practices of formal new graduate nurse transition programs: An integrative review"	(Rush <i>et al.</i> , 2019)	The paper emphasizes the importance of practical skill development, formal training for preceptors and organizational support during the post-hire period for new graduate nurses
"Moral distress in nursing: Contributing factors, outcomes and interventions"	(Burston and Tuckett, 2013)	The paper highlights the importance of addressing moral distress at both personal and organizational levels and emphasizes the need for interventions to mitigate its impact on the nursing workforce
"Impact and determinants of nurse turnover: A pan-Canadian study"	(O'Brien-Pallas <i>et al.</i> , 2010)	Higher turnover rates correlate with deteriorated mental health, lower job satisfaction and an increased likelihood of medical errors. The study emphasizes the critical need for nurse retention strategies to promote high-quality patient care in Canadian hospitals
"Resilience in the operating room: Developing and testing of a resilience model"	(Gillespie <i>et al.</i> , 2007)	Investigating resilience in operating room nurses, this study identifies perceived competence, collaboration, control, self-efficacy, hope and coping as factors contributing to resilience
"The promise of diversity management for the climate of inclusion: A state-of-the-art review and meta-analysis"	(Mor Barak <i>et al.</i> , 2016)	The study suggests that human service organizations should focus on developing policies and practices that foster a climate of inclusion beyond increasing diversity representation
"Preserving organizational resilience, patient safety, and staff retention during COVID-19 requires a holistic consideration of the psychological safety of healthcare workers"	(Rangachari and L. Woods, 2020)	The "stoic approach" of limited worker support is critiqued, and the paper discusses the potential impact on organizational resilience, patient safety and staff retention Missed nursing care due to inadequate time or resources is common in nursing

(continued)

Table 1.
Review of related papers

Title	Authors	Summary
“Registered nurse burnout, job dissatisfaction, and missed care in nursing homes”	(Aarons <i>et al.</i> , 2012; White <i>et al.</i> , 2019)	homes and is associated with RN burnout and job dissatisfaction. Improved work environments are crucial for enhancing care quality and nurse retention
“Organizational configuration of hospitals succeeding in attracting and retaining nurses”	(Stordeur and D’Hoore, 2007)	Attractive hospitals exhibited better risk exposure, emotional demands, relationships with nursing management and higher job satisfaction and commitment. Organizational characteristics play a crucial role in nurse attraction and retention
“Scoping the common antecedents of job stress and job satisfaction for nurses (2000-2013) using the job demands-resources model of stress”	(McVicar, 2016)	The study highlights the potential of stress interventions to improve job satisfaction and emphasizes the urgent need for increased resilience and improved job resources to address job satisfaction problems in nursing

Table 1.**Table 2.**
Boolean keyword
used in the Scopus
advanced search

Component	Terms
Talent retention	“talent retention” or “employee retention” OR “staff retention” OR “workforce retention” OR “nurse retention” OR “healthcare employee retention”
Home health care	“home health care” or “home care” OR “home nursing”
Employee satisfaction	“employee satisfaction” or “job satisfaction” OR “work satisfaction”
Source: Authors’ own work	

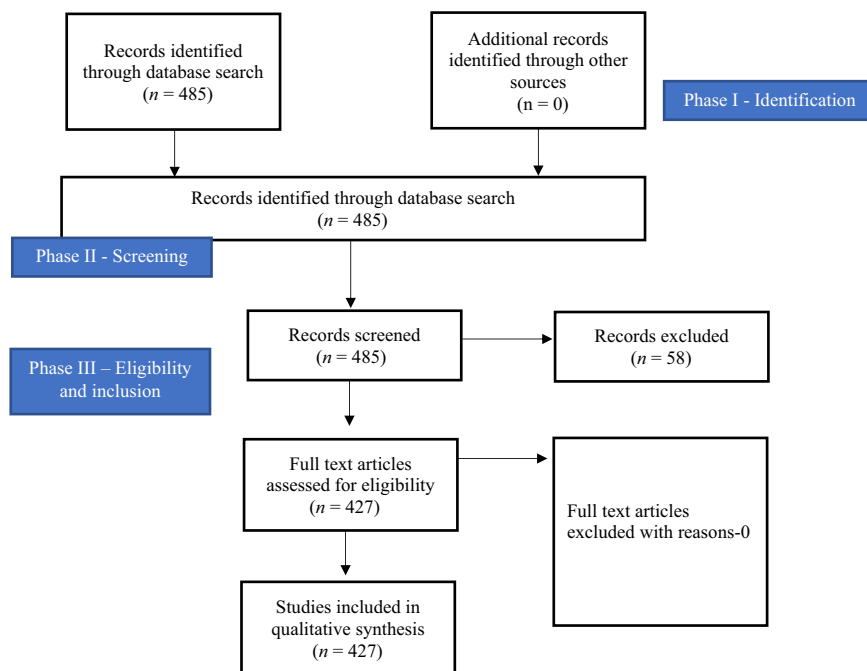
highlighting global contributions to the field. Each style was chosen to enhance clarity, making complex data easily understandable for readers.

3.3 Research questions

- RQ1.* What trends and shifts in focus can be observed in the scholarly articles related to the nurses’ retention over the period?
- RQ2.* What factors contribute to the retention of nurses in the Indian context?
- RQ3.* What are the implications for nurse well-being and turnover rates in different health-care contexts and countries?

3.4 Overview of the articles included in the bibliometric analysis

The bibliometric analysis examines talent retention in health care nurses from 1989 to 2023, incorporating 427 documents from 213 sources. The field demonstrates an annual growth rate of 11.46%, indicative of increasing scholarly interest. The documents, with an average age of



Source: Adapted from page *et al.* (2021)

Figure 1. PRISMA chart visualizing the Scopus record screening and filtering process

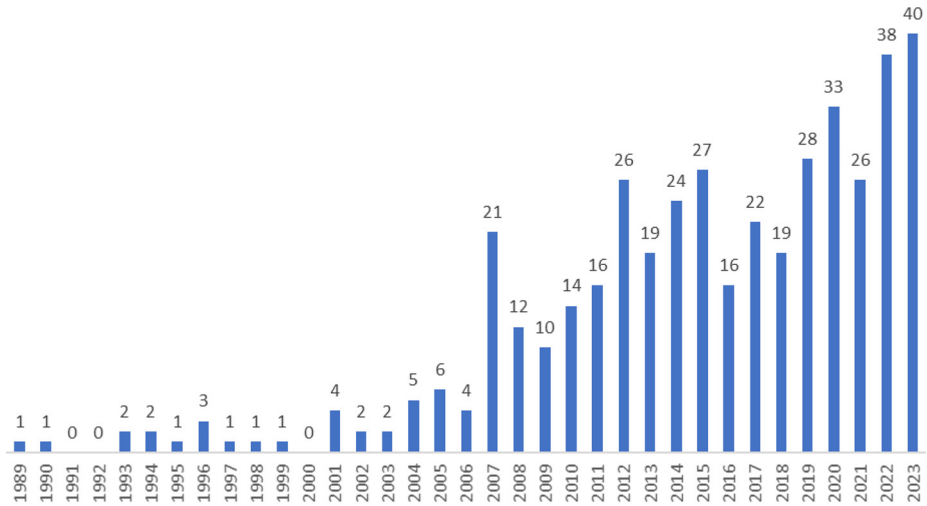
7.93 years, collectively receive an average of 43.26 citations each, reflecting their substantial impact. The analysis also identifies 1,291 Keywords Plus and 1,134 Author's Keywords, providing insights into prevalent themes. Furthermore, international collaboration constitutes 17.56% of co-authorships, emphasizing the global nature of research on talent retention in this specific health-care domain.

4. Data analysis and visualization of the papers included for the bibliometric analysis

Figure 2 illustrating the number of articles addressing nurses' satisfaction and retention has shown a consistent upward trend, rising from 21 in 2007 to 40 in 2023. This reflects a growing interest in this field to address the issue of shortage of nurses and the imperative to enhance their working conditions. Despite a slight dip in 2008, the trend indicates an expanding focus on the critical issues of nurses' job satisfaction and retention as there has been a steady increase over the years, a significant surge between 2012 and 2023.

The data presented in Figure 3 represents the average citations of the articles on nurses' job satisfaction and retention revealing noteworthy trends. Notably, articles from 1998 garnered an exceptionally high average of 526 citations, reflecting their stable impact. While there has been fluctuation in publication volume over the years, with a peak in 2007, recent years (2022 and 2023) show a decline in citation impact, possibly because the document is very new. This analysis provides insights into the sustained relevance of earlier work and the evolving trends in recent research on nurses' job satisfaction and retention.

Figure 2.
Annual scientific
production of nurses
retention articles



Source: Authors' work

Figure 4 provides the summary of most relevant sources for articles on nurses' job satisfaction and retention are the "Journal of Nursing Management" with 28 articles, followed by the "Journal of Advanced Nursing" with 22 articles. Other significant sources include "Home Health Care Management and Practice" (12 articles), "Gerontologist" (ten articles), "Journal of Applied Gerontology" (nine articles), "Journal of Nursing Administration" (nine articles), "Journal of Clinical Nursing" (eight articles), "Home Health Care Services Quarterly" (seven articles), "Home Healthcare Nurse" (seven articles) and the "International Journal of Nursing Studies" (seven articles). These journals collectively contribute substantially to the literature on this topic.

As depicted in Figure 5, the most locally cited sources in the literature on nurses' job satisfaction and retention include Aiken, Ellenbecker and Castle, with 169, 151 and 125 citations, respectively. These authors' extensive contributions suggest their significant impact on shaping the discourse in the field. Other influential local sources include Bakker, Schaufeli and Maslach, each with substantial citation counts, indicating their prominence in discussions related to nurses' job satisfaction and retention. Flynn, Laschinger, Buchan and O'Brien-Pallas also emerge as key contributors, reflecting their local influence on this important topic.

Table 3 highlights the H-index, a measure of the local impact of sources in the domain of nurses' job satisfaction and retention, indicates the notable influence of several journals. The *Journal of Nursing Management* stands out with an H-index of 17 and a g-index of 28 since 1995, showcasing permanent impact. Similarly, the *Journal of Advanced Nursing* has made substantial contributions since its initiation in 2001, reflected in its h-index of 14 and 22 g-index. Journals like *Gerontologist* maintain a consistent impact, beginning in 2004 with an H-index of 10. The *International Journal of Nursing Studies*, initiated in 2010, is emerging as a significant contributor with an H-index of 7.

The list of most relevant authors in the domain of nurses' job satisfaction and retention is demonstrated in Figure 6. It shows that Ellenbecker has contributed significantly to 11 articles. Zhang follows with six articles and authors like Baumann, Aiken, Kim, Manthorpe, McHugh, Bae, Benjamin and Brannon have each authored three to five articles. These

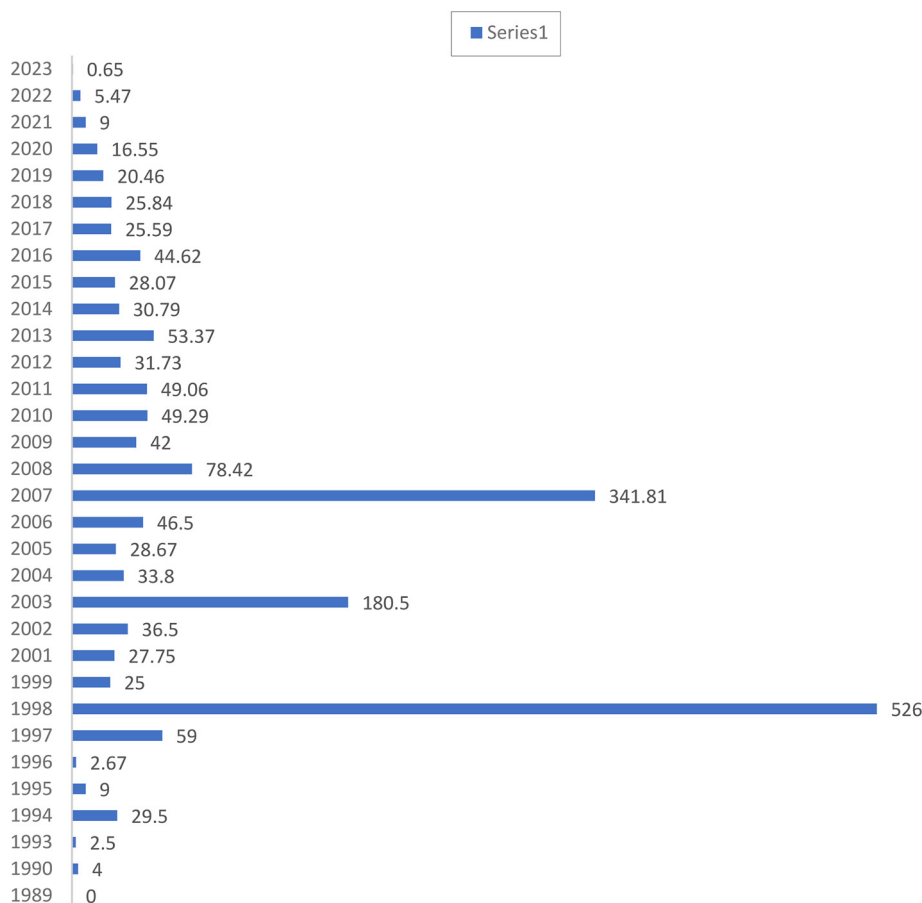


Figure 3.
Average citations per year

Source: Authors' work

authors emerge as key contributors to the scholarly discourse on nurses' job satisfaction and retention.

The production of articles by authors over time in the domain of nurses' job satisfaction and retention is presented in [Figure 7](#). Ellenbecker has consistently published on various aspects, including nurse retention, job stress and strategies for recruiting home health-care nurses. Zhang has explored topics such as job satisfaction, negative coping style and the relationship between transition shock and intent to stay among newly graduated nurses. Baumann's work spans areas like nurses' work psychology, evolution/devolution of care provision and relationships between work outcomes, attitudes and environments of health support workers.

The nursing talent retention study-country scientific production map ([Figure 8](#)) shows the number of scientific publications about nursing talent retention in different countries. As depicted in [Figure 8](#), the countries with the highest number of publications are the USA, Canada, China, the UK, Australia and The Netherlands. These countries also have some of the highest rates of nurse retention in the world.

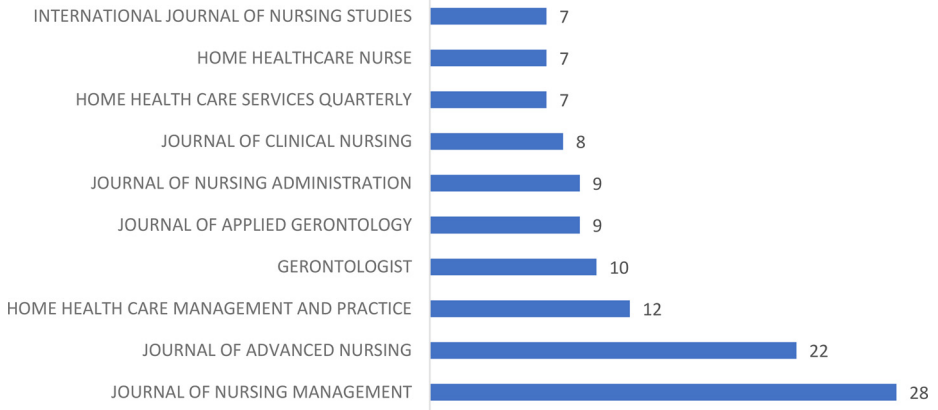


Figure 4.
Journal publication
volume

Source: Authors' work

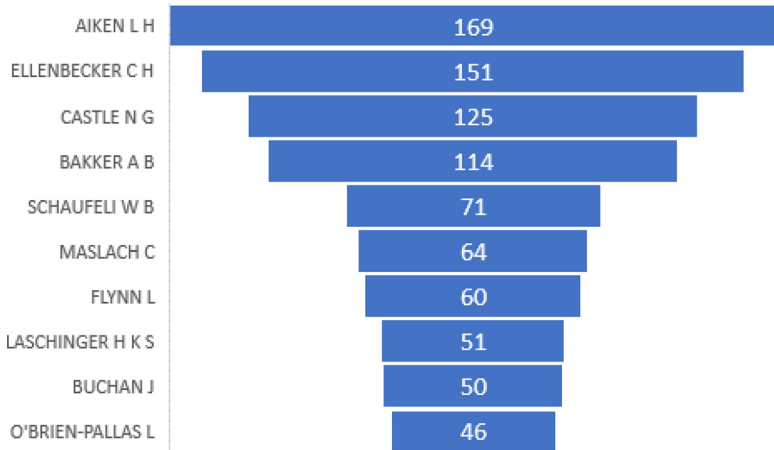


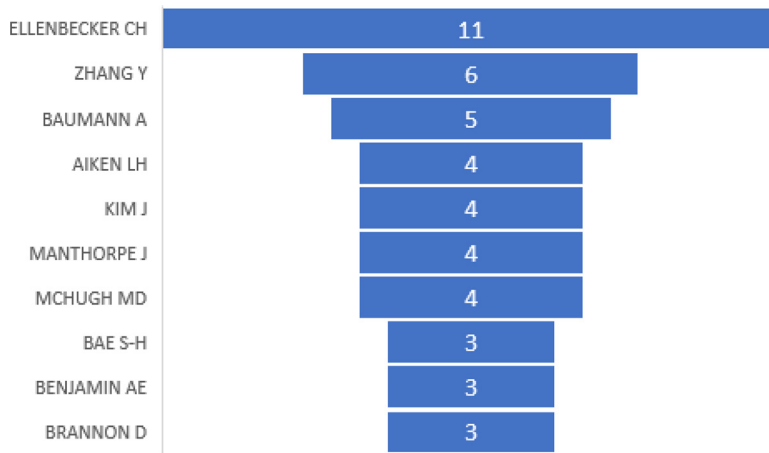
Figure 5.
Key local citations

Source: Authors' work

Element	h_index	g_index	m_index	TC	NP	PY_start
<i>Journal of nursing management</i>	17	28	0.59	1296	28	1995
<i>Journal of advanced nursing</i>	14	22	0.61	933	22	2001
<i>Gerontologist</i>	10	10	0.5	451	10	2004
<i>International journal of nursing studies</i>	7	7	0.5	440	7	2010
<i>Journal of applied gerontology</i>	7	9	0.41	226	9	2007
<i>Journal of nursing administration</i>	7	9	0.23	689	9	1993
<i>Health care management review</i>	6	6	0.26	149	6	2001
<i>BMC Health services research</i>	5	6	0.31	62	6	2008
<i>Health and social care in the community</i>	5	5	0.29	154	5	2007
<i>Home health care services quarterly</i>	5	7	0.15	86	7	1990

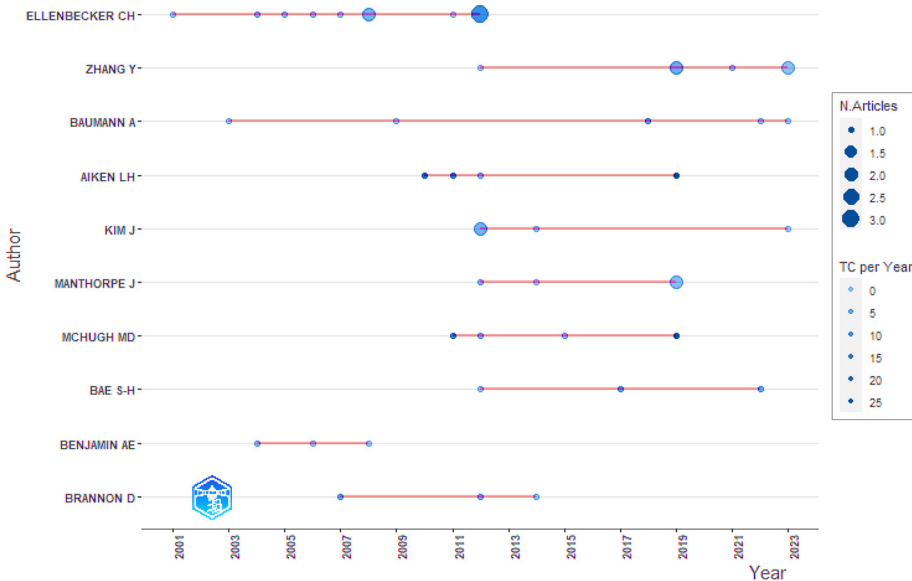
Table 3.
Sources local impact
by H-index

Source: Authors' work



Source: Authors' work

Figure 6. Key authors of significance



Source: Authors' work

Figure 7. Evolution of authors' scientific production over time

Figure 9 presents globally cited documents on nurses' job satisfaction and retention, highlighting the paper titles along with their total citation counts. Notably, Bakker's work in "J MANAGE PSYCHOL" is highly influential, garnering an impressive 6,061 citations, showcasing its widespread recognition in the academic realm. Other noteworthy contributions include papers by Cheng in "APPL PSYCHOL", Glisson in "CHILD ABUSE NEGL", Larrabee in "J NURS ADM", Zangaro in "RES NURS HEALTH", Aiken in

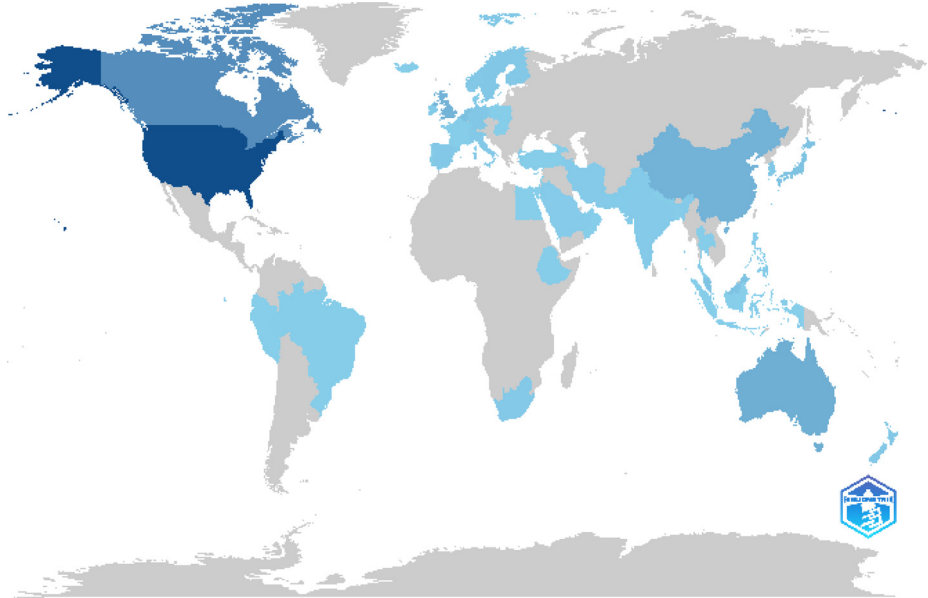


Figure 8.
Scientific production
of articles by country

Source: Authors' work

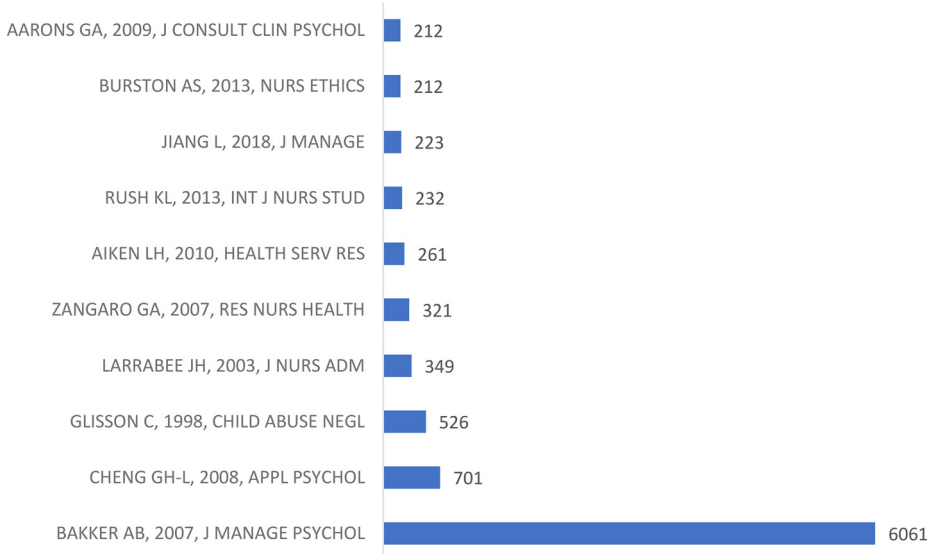


Figure 9.
Documents with
highest global
citations

Source: Authors' work

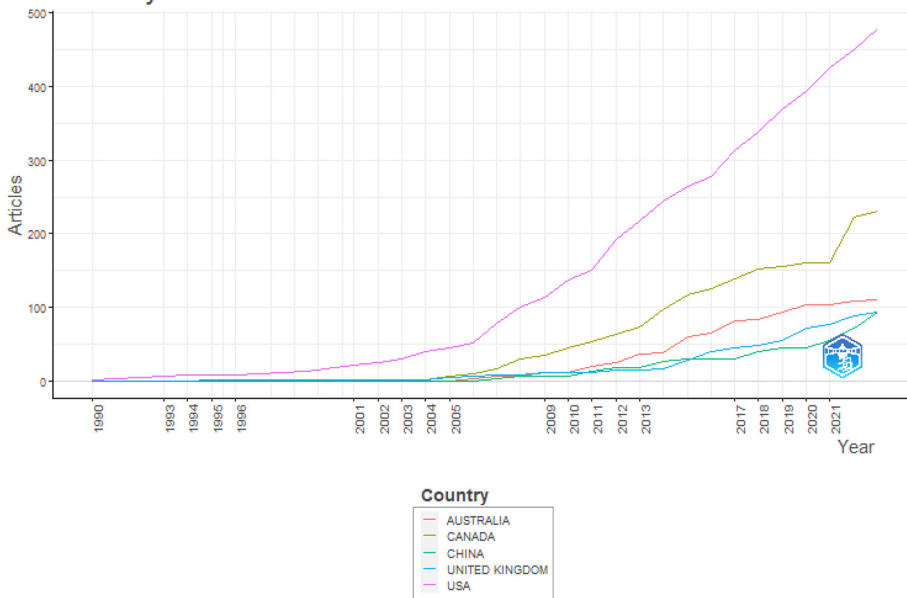


Figure 10. Country production over time

Source: Authors' work

“HEALTH SERV RES”, Rush in “INT J NURS STUD”, Jiang in “J MANAGE”, Burston in “NURS ETHICS” and Aarons in “J CONSULT CLIN PSYCHOL”.

Figure 10 illustrates the country's production over time. The USA demonstrated a consistent increase in production over the years, reaching the highest count of 478 articles in

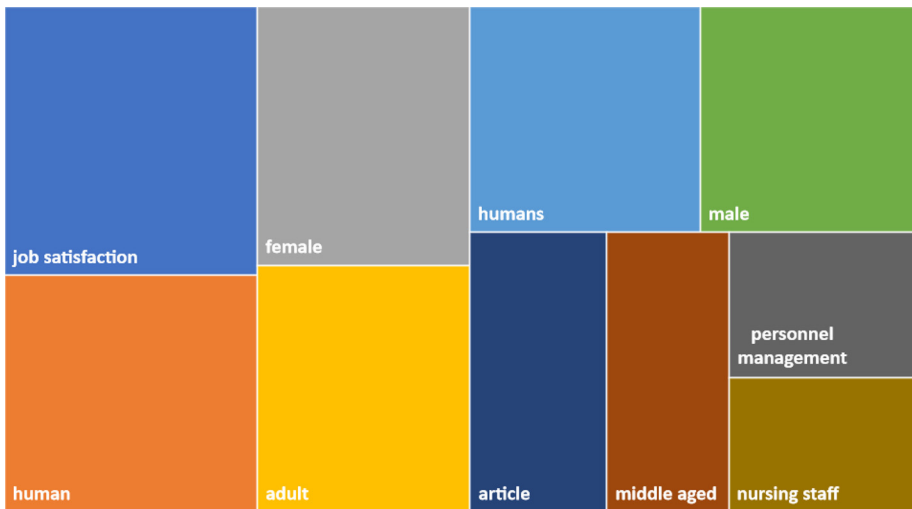


Figure 11. Most frequent keywords

Source: Authors' work

the year 2023. The UK and Canada also exhibit a rising trend in their contributions, with Australia and China making noteworthy contributions in recent years.

The methodology for selecting keywords in Figure 11 involved counting the occurrences of words in a data set related to job satisfaction. The word occurrences in the data set suggest a predominant focus on the theme of “job satisfaction”, with a notable frequency of 333 mentions. This emphasizes a substantial emphasis on exploring and understanding the factors contributing to and influencing job satisfaction in various contexts. The recurrent use of terms such as “human”, “female” and “male” implies a consideration of diverse perspectives, potentially delving into gender-related aspects within the broader discourse on job satisfaction.

The word frequency data over the years is presented in Figure 12, which reflects the evolving focus and emphasis within the research on nursing job satisfaction and related topics. Notably, the term “job satisfaction” shows a consistent increase over time, suggesting a growing interest and recognition of its importance in the nursing profession. The steady rise may indicate an increased awareness of the impact of job satisfaction on the well-being of nurses and the overall health-care system.

Similarly, terms like “human”, “female”, “male” and “adult” demonstrate a sustained presence, reflecting a continual exploration of gender and age-related aspects in the context of nursing job satisfaction. The persistent attention to these factors suggests an ongoing effort to understand how different demographic variables may influence job satisfaction among nurses.

The frequency analysis of nursing research terms over time illustrated in Figure 13 reveals several notable trends. Job satisfaction emerges as a consistent focus, peaking in 2019, reflecting an enduring interest in understanding and enhancing nurses’ workplace contentment. The appearance of “turnover rate” and “worker” in later years suggests a growing concern with workforce retention. The impact of the COVID-19 pandemic becomes evident with terms like “covid-19” and “pandemic” surfacing in 2022–2023. Organizational and management themes persist, highlighting an ongoing exploration of how these factors influence nursing.

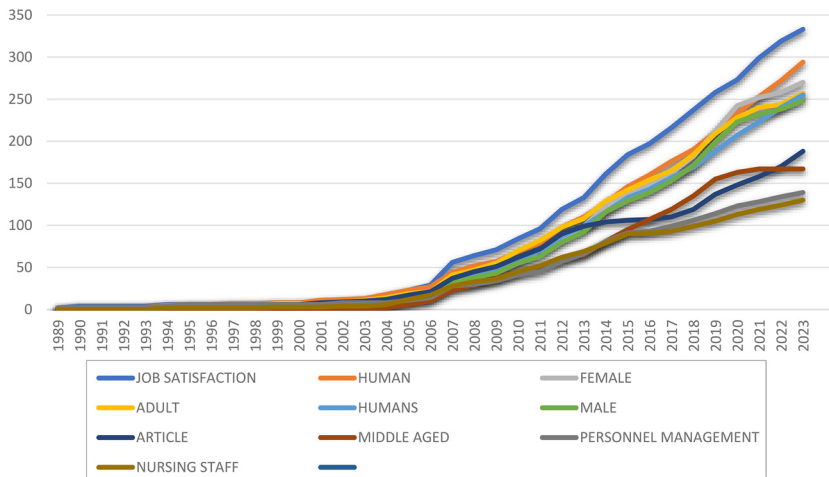


Figure 12.
Word’s frequency
overtime

Source: Authors’ work

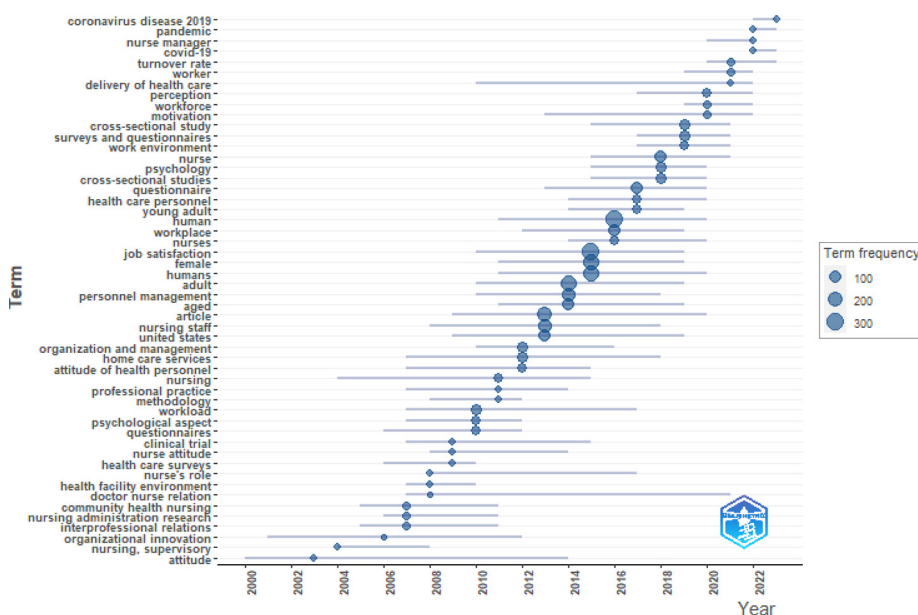


Figure 13.
Trending topics

Source: Authors' work

5. Findings

5.1 Logical connections in the network visualization of keywords

Using VosViewer, a bibliometric mapping tool developed by van Eck and Waltman (2010) logical connections were established in Figure 14. The connections were further shown cluster-wise and tabulated in Table 4. In Cluster 1, logical connections were observed between job security, job performance, employee retention and professional competency. Cluster 2 demonstrated a logical connection between burnout and organizational culture, as well as between professional autonomy and organizational policy. Cluster 3 indicated a relation between organizational commitment and turnover rate. In Cluster 4, the relationship between patient satisfaction and staff development is highlighted, while Cluster 5 focused on compensation and intention to stay. Rewards and safety are linked with the socioeconomic factors of nurses in Cluster 6. There has been a relationship between mental stress and job satisfaction in Cluster 7.

5.2 Trend analysis of scientific production

The bibliometric analysis visualized the upward trend in the publication of articles, which focused mainly on the retention and job satisfaction of nurses. This also indicated that there is a growing interest in addressing the shortage of nurses and improving their working conditions. There is an increase in publications between 2012 and 2023.

5.3 Citation and sources impact

The earlier articles witnessed high average citations, and recent years show a low citation impact, possibly due to the recency. This shows the relevancy of earlier work and the contributions of authors are commendable in the nurse retention studies. Journals such as

“Journal of Nursing Management” and “Journal of Advanced Nursing” emerged as the most relevant sources, contributing substantially to the literature on nurses' job satisfaction and retention.

5.4 *Local impact of sources and authors' contributions over time*

Aiken, Ellenbecker and Castle are identified as the most locally cited authors, indicating their significant influence in shaping the valuable findings on nurses' job satisfaction and retention. Authors like Ellenbecker, Zhang and Baumann have consistently contributed to various themes related to nurse retention and job satisfaction. Their areas are linked with the nurse's recruitment process, job stress and the relationship between transition shock and intent to stay.

5.5 *Country scientific production and trending topics*

The USA, Canada, China, the UK, Australia and The Netherlands lead in scientific publications on nursing talent retention, reflecting their significant contributions and high rates of nurse retention globally. The major focus on the theme of “job satisfaction” is evident, in showing the importance of nurses' workplace satisfaction. The analysis revealed stable themes such as job satisfaction and turnover rate, along with the impact of the COVID-19 pandemic.

6. Discussions and practical implications

The research questions proposed in the study are addressed through the detailed discussion initiated in this section. In almost all developing countries, there is a problem of shortage of nurses as most of them migrate to developed countries (Lerotholi and Bezuidenhout, 2023). There are problems in nursing leadership, high turnover, succession planning and sourcing of talents in this complex scenario (E. A. El Dahshan *et al.*, 2018). While looking into the Magnet hospitals in the USA, i.e. accredited by the ANCC (American Nurses Credentialing Centre), they are found to be better performing in terms of staffing, work environment, quality patient care, professionalism, talent management practices and nursing leadership (Kelly *et al.*, 2011). A better staffing ratio is also making nurse retention possible, which has been reinforced by amending legislation in California (Aiken *et al.*, 2010).

In Canadian hospitals, it is observed that the nurse turnover rate is 19.9%, which is moderate (O'Brien-Pallas *et al.*, 2010). It reveals that it is due to the supportive work environments and transformational leadership that made the nurses' intentions to remain in their positions (Cowden *et al.*, 2011).

6.1 *Comparative analysis of the major countries*

The discussion highlights findings from various countries, including the USA, Canada and India, exhibiting the common challenges and contextual differences affecting nurse retention. While the USA and Canada have implemented strategies such as post-hire support and transformational leadership to address nurse retention, India still faces challenges with usual factors like low salaries, job insecurity and high workload.

Retention strategies used in the USA and Canada expose their positive impact on nurse retention rates and satisfaction on the job. Post-hire support and transformational leadership have been influential in creating supportive work environments among nurses, which yielded professional growth. Recognizing the potential of adapting best practices from countries like the USA and Canada, organizations such as the National Accreditation Board for Hospitals (NABH) in India can integrate elements from the American Nurses

Credentialing Centre (ANCC) to enhance talent management practices. Aligning regulatory frameworks and government policies with international standards can further facilitate the adoption of effective retention strategies in India.

The findings of this bibliometric analysis offer several practical implications for improving nurse retention in health-care settings. Health-care organizations should invest in developing strong nursing leadership and creating supportive work environments. This can be achieved through nursing leadership training programmes, adequate staffing ratios and recognition initiatives, to reduce burnout and increase job satisfaction. Implementing diversity management practices will provide an inclusive workplace culture, enhancing nurse retention. Policymakers should consider mandating appropriate staffing ratios and providing economic incentives to retain nurses, considering the significant costs associated with high turnover rates. Health-care administrators can improve nurse well-being, satisfaction and retention, ultimately leading to better patient care and organizational performance.

7. Conclusion

Evaluating the feasibility and adaptability of these strategies in the Indian health-care system is essential for addressing the challenges faced by nurses in India. To mitigate these challenges and improve nurse retention, interventions such as increasing salaries, providing job security and implementing supportive work environments are proposed to the health-care administrators and policymakers. Drawing insights from successful implementation in the USA and Canada, integrating these leadership approaches into Indian hospitals also will empower nurses, enhance job satisfaction and ultimately improve retention rates. These successful models shall be adopted by the countries that face nursing shortage issues to further strengthen their health-care infrastructures.

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Corresponding author

Murali Ramachandran can be contacted at: muralihamra@gmail.com

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