

There is a need for a paradigm shift of sexual health in nursing research: Mapping hotspots and theme trends evaluation

Hemşirelik araştırmalarında cinsel sağlık konusunda bir paradigma değişimine ihtiyaç vardır: Önemli noktaların haritalanması ve tema eğilimlerinin değerlendirilmesi

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ABSTRACT

OBJECTIVE: This study aimed to identify the performance, study focus, thematic trends, and historical development of sexual health publications in nursing science.

MATERIAL and METHODS: The study was conducted using a descriptive bibliometric study design. The data were obtained from the Web of Science Core Collection. The analysis includes performance analysis and science mapping techniques. The R software Bibliometrix package was used to perform data analysis and visualization.

RESULTS: A total of 3,484 publications were produced by 9,794 authors in 98 countries. The most productive country and author were the United States with 1,516 publications and M. Hayter with 22. Themes with higher density and centrality were HIV, adolescents, sexual behavior, reproductive health, sexuality, nursing, sexual health, and women's health. Some themes with lower density and centrality were nursing education, gender identity, and LGBTQ. Also central were such themes as quality of life, depression, breast cancer, and sexual dysfunction.

CONCLUSION: Nursing's focus on sexual health is partially adequate but requires further studies and innovative approaches. Unlike the biomedical model, research should address the social and emotional aspects of sexuality, emphasizing components that enhance sexual health and well-being. Efforts should aim to elevate nursing practices and education to meet contemporary needs by embracing the concept of sexual health for all.

Keywords: bibliometrics, science mapping, sexual care, sexual health, sexual well-being, nurses, nursing

ÖZ

AMAÇ: Bu çalışmanın amacı hemşirelik biliminde cinsel sağlık yayınlarının performansını, çalışma odağını, tematik eğilimlerini ve tarihsel gelişimini belirlemektir.

GEREÇ ve YÖNTEMLER: Bu çalışma tanımlayıcı bir bibliyometrik çalışma desenini kullanarak yürütülmüştür. Veriler Web of Science Core Collection'dan elde edilmiştir. Analiz, performans analizi ve bilim haritalama tekniklerini içermektedir. Veri analizi ve görselleştirmesi yapmak için R yazılım Bibliometrix paketi kullanılmıştır.

BULGULAR: Toplam 3.484 yayın 98 ülkede 9.794 yazar tarafından üretilmiştir. En üretken ülke ve yazar 1.516 yayınlı Amerika Birleşik Devletleri ve 22 yayınlı M. Hayter olmuştur. Daha yüksek yoğunluk ve merkeziliğe sahip temalar HIV, ergenler, cinsel davranış, üreme sağlığı, cinsellik, hemşirelik, cinsel sağlık ve kadın sağlığıdır. Daha düşük yoğunluk ve merkeziliğe sahip bazı temalar hemşirelik eğitimi, cinsiyet kimliği ve LGBTQ'dir. Ayrıca yaşam kalitesi, depresyon, meme kanseri ve cinsel işlev bozukluğu gibi temalar da merkezi konumdadır.

SONUÇ: Hemşireliğin cinsel sağlığa odaklanması kısmen yeterlidir ancak daha fazla çalışma ve yenilikçi yaklaşımlar gerektirmektedir. Biyomedikal modelin aksine, araştırma cinselliğin sosyal ve duygusal yönlerini ele almalı, cinsel sağlığı ve refahı artıran bileşenleri vurgulamalıdır. Çabalar, herkes için cinsel sağlık kavramını benimseyerek hemşirelik uygulamalarını ve eğitimini çağdaş ihtiyaçları karşılayacak şekilde yükseltmeyi hedeflemelidir.

Anahtar Kelimeler: bibliyometri, bilim haritalaması, cinsel bakım, cinsel sağlık, cinsel iyilik hali, hemşireler, hemşirelik

INTRODUCTION

The widely adopted World Health Organization (WHO^[1]) definition of sexual health is "a state of physical, emotional, mental, and social well-being; it is not merely the absence of disease, dysfunction, or infirmity". This is a right that must be respected, safeguarded, and attended.^[2] Sexual health affects many people throughout their lives and can

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be associated with other health conditions.^[3,4] Due to its emotional, mental, and physical components, sexual health is a vital aspect of overall health and a significant indicator of both physical and mental well-being.^[5]

Sexual health is a part of people's holistic needs. The nurse has a vital role in and responsibility for promoting it.^[3,4] Sexual health care, which is described as fundamental care for nurses, must address the multi-dimensional aspects of human sexuality to the achievement of the United Nations Millennium Development Goals.^[6] Sexual health nursing involves evaluating patients' sexuality, delivering suitable sexual education and guidance, and when required, directing patients to specialized units for further consultation and care. Nurses' responsibilities in addressing sexual concerns can encompass gathering information, disseminating knowledge, offering counselling, and providing referral services.^[7] Psychosexual nursing care extends beyond addressing medical concerns, focusing on crucial aspects such as an individual's self-image, confidence, and the integration of their partner in sexual experiences.^[8] However, many studies have presented a fragmented and sub-optimal approach.^[9]

The WHO^[1] emphasized that sexual health needs a positive attitude toward sexuality and sexual relationships. Although the WHO's emphasis, it is stated that there is a criticism about a global tendency that focuses on risk and negative sexual health outcomes. A biomedical approach to sexual health which only focus biological dimensions of sexuality and ignore emotional and social dimensions of it may lead to insufficient perspectives on what constitutes normal sexuality and eclipse other aspects of sexuality in practice, as well as confusion and inconsistency across different studies, making it difficult to advance the science in this area. Therefore, we must re-align our approaches to sexual health and provide to holistic approach of sexuality.^[9,10] There is increasing criticism for a global tendency that focuses on risks and adverse health outcomes in sexual research and practices. Therefore, there is a need for evidence about hotspots and global trends of sexual health research in nursing over time. No known study has identified the current state and evolution of nursing studies on sexual health. Therefore, to bring renewed attention to the topic of sexual health, this article aimed to identify the research focus and thematic trends in research on sexual health in nursing by using bibliometric analysis. Knowledge handling from this study will provide up-to-date insight into the trending topics and encourage new directions for future studies.

MATERIAL and METHODS

Study design

This was a descriptive bibliometric research study. Bibliometric analysis is a quantitative statistical approach that provides a broad picture of the relevant literature and allows researchers to identify global trends and hotspots in publishing on a specific topic.^[11] Therefore, it was selected to provide a deeper understanding of sexual health research in nursing. The study was reported using the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Checklist.

Research questions

- What is the annual publication rate and number of sexual health research citations in nursing?
- Which are the most productive researchers, countries, and journals on sexual health research in nursing?
- What is the co-occurrence map of author keywords on sexual health research in nursing?
- What is the thematic map of keywords in research on sexual health research in nursing?
- What are trending topic keywords in research on sexual health research in nursing?
- What is the thematic evolution of keywords demonstrated in sexual health research in nursing?

By handling these research questions, the present study provides evidence about performance of sexual health studies in nursing and science mapping of hotspots and global trends of sexual health research in nursing over time.

Sample

The study was carried out with data extracted from a database.

Data collection

The data were extracted from the Web of Science (WoS) Core Collection database. This is a broadly used database for bibliometric analysis because it has archives of journals and citations dating back to earlier years and many journals with high-impact values, providing efficient access to bibliographic data.^[12]

Search strategy and study selection

The data search was conducted on 1 June 2023, the Medical Subject Headings (MeSH) terms "sexuality" and "sexual health" in the WoS database. The inclusion criteria were being a study on sexual health, having at least one

author who was a nursing researcher, being an article or review, publication after 2000, and being in English.

The literature search was conducted using the agreed filters (categories, document types, publication years, and languages) by two independent researchers (ADD and FSK). The topic searches retrieved from WoS were “sexual health” or “sexuality” with the period 2000–01–01 to 2023–06–01. The search strategies were [TS=(sexuality or sexual health)] AND [Language=(English)]. TS means topic, as indicated by WoS. Original articles and reviews with full manuscripts that referred to sexuality as the main topic were included. The search results comprised 10,940 publications. Subsequently, Social Sciences Citation Index was selected as the subject area to access the publications published in the highest-indexed journal. Finally, the publication type was limited to articles and reviews, retrieving 3,484 studies. All information with publication settings (including the citation information, bibliographic information, abstract and keywords, other information, full record, and cited references) was then exported in TXT format as the full records and references. The exported publication records included the title, author, name of the research institution (research institute, school, or hospital), abstract, journal, publication time, and other information. The data were checked for typographical errors and duplication and converted to a convenient form for data analysis. The bibliometric results were also visualized using R. Using such a complementary approach strengthens the results.

Ethical considerations

Ethical approval was not required due to the study having no direct influence on humans or animals.

Data analysis

This bibliometric data analysis included performance analysis and science mapping techniques. Performance analysis examining the contributions of research to sexual health was performed to present publication-related metrics such as total publications, publication year, productive authors, countries in which studies were conducted, and journals in which studies were published.

Science mapping, including co-word analysis, was performed to determine research hotspots. This is an effective method for specific structures in a research field [13], instrumental in presenting its bibliometric and intellectual structure. [14] A co-word (keyword co-occurrence) map was generated by accepting the node number as 25 and the keyword co-occurrence rate as 2. A word cloud was also

generated by rating the most frequently used keywords among 25 authors.

The study also used bibliometric analysis enhancement techniques such as thematic maps, thematic evolution analysis, and visualization. Thematic maps present the degree of the centrality and density of the theme, with the upper map (motor themes, niche themes) showing high-density clusters and the lower map (basic themes, emerging and declining themes) showing low-density clusters. [15] The number of words in the thematic map analysis was accepted at 250, with a minimum cluster frequency of 5 and a level number for each cluster of 1. Thematic evolution analysis, which explores evolutionary trends of thematic context and structures, was performed to define development in the sexual health nursing field over 20 years. Highly relevant keywords form theme clusters by the most frequently used keywords. During the analysis, the number of studies was considered while determining the year intervals and presented in three stages. The minimum word frequency was accepted as 2, and the number of words per year was taken as 1. The R software version 4.3.0 Bibliometrix package was used to perform data analysis and visualization. [16]

Rigor

The data search strategy is presented transparently and reproducibly to ensure the validity and reliability of the bibliometric study. The data search, selection, and abstraction process was conducted by two authors (ADD and FSK) independently. Thus, rigor was achieved.

RESULTS

Results of the performance analysis

The results of the WoS database search indicated 3,484 publications on sexuality in nursing areas between 2000 and 2023, including 3,157 articles (90.6%) and 327 reviews (9.4%). These were produced by 9,794 authors. The most productive authors were M. Hayter (22 publications), L. Rew (20 publications), D. Morrison-Beedy (19 publications), and C. Quinn (18 publications). Most of the studies were produced in the United States (1,516 publications), Brazil (377 publications), Australia (277 publications), and England (225 publications). The majority were published in the *Journal of Clinical Nursing* (224 publications), *Journal of Advanced Nursing* (166 publications), and *Janac Journal of the Association of Nurses in AIDS Care* (154 publications) (Table 1).

Table 1. Top-10 list of journals, authors, and countries of sexual health publication in nursing

Rank	Journal		Author		Country	
	Articles Published	Frequency	Articles Published	Frequency	Articles Published	Frequency
1	Journal of Clinical Nursing	225	Hayter M	22	USA	1526
2	Journal of Advanced Nursing	164	Rew L	20	Brazil	380
3	Janac Journal of The Association of Nurses in AIDS Care	155	Morrison-beedy D	19	Australia	247
4	Revista Brasileira De Enfermagem	82	Sutherland MA	18	England	227
5	Journal of Midwifery and Women's Health	77	Quinn C	17	Canada	194
6	Journal of Forensic Nursing	73	Champion CD	16	Sweden	146
7	Public Health Nursing	73	Holmes D	16	Turkiye	123
8	Revista De Pesquisa Cuidado Efundamental Online	72	O'Bryne D	16	Taiwan	99
9	Cancer Nursing	71	De Santis JP	15	China	93
10	Midwifery	70	Higgins A	15	South Korean	83

The number of publications per year is given in Figure 1. A total of 27 articles were published in 2000. The increase in publications started around 2006 and reached its peak in 2021. The decrease in 2022–2023 can be explained by the analysis date.

Results of sexual science mapping

The word cloud in Figure 2 presents the frequency of words. The most frequent author keywords were sexuality (408 times), nursing (318 times), sexual health (299 times), HIV (187 times), quality of life (145 times), women (140 times), women's health (137 times), and adolescents (136 times).

Please insert Figure 2 here

The co-occurrence analysis revealed that the most frequently used words were sexuality, nursing, sexual health, HIV, quality of life, and nurses. The co-occurrence network of research on sexuality in nursing areas can be categorized under three thematic clusters (Figure 3). The first cluster (red) includes 14 topics: sexuality (Betw=23.86), nursing (Betw=22.41), sexual health (Betw=13.19), women's health (Betw=3.49), quality of life (Betw=1.67), qualitative research (Betw=1.31), adolescent (Betw=1.28), nurses (Betw=0.67), depression (Betw=0.50), education (Betw=0.49), health promotion (Betw=0.42), cancer (Betw=0.11), breast cancer (Betw=0.10), and knowledge (Betw=0.03). The second cluster (blue) has two topics: intimate partner violence (Betw=1.90) and sexual assault (Betw=0.04). The third cluster (green) includes eight topics: women (Betw=8.16), mental health (Betw=6.31), adolescents (Betw=4.45), HIV (Betw=4.07), reproductive

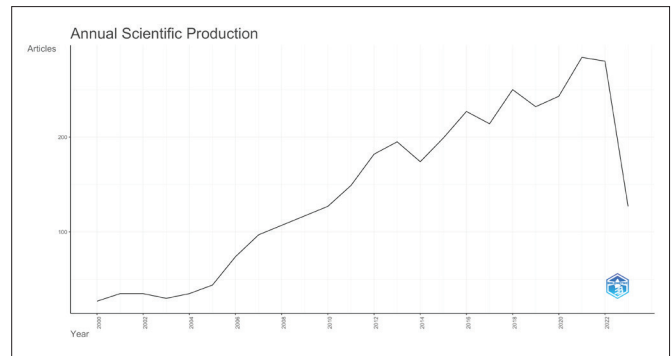


Figure 1. The number of sexual health publications in nursing per year



Figure 2. Word Cloud of sexual health in nursing research

Notes: As the frequency of words increases, they appear bigger in the word cloud.

health (Betw=2.55), pregnancy (Betw=1.0), sexual behavior (Betw=0.65), and violence (Betw=0.31).

The theme map of research on sexual health in nursing is given in Figure 4. Motor themes are positioned in the upper right quadrant, characterized by both higher density and

Co-occurrence of keyword analysis is an effective method for specific structures in a research field.^[13] The most frequent co-occurrences of keywords were sexuality, nursing, sexual health, HIV, quality of life, and nurses. Nurses are an important element that can provide health services safely and competently within the scope of improving sexual health, increasing the quality of life, and improving self-efficacy.^[22] Nursing was used many times as a keyword and topic in sexuality studies. This is a pleasing indicator that nurses realize their place and importance in the presentation of sexual health and try to contribute and develop in this field. In addition, the fact that quality of life is addressed in nursing research is important in terms of focusing on the emotional dimensions and effects of sexual health. Sexual well-being-enhancing concepts and elements such as education, health promotion, knowledge, and quality of life were also used together. However, the thematic map analysis showed that sexuality was mostly handled at the functional level, despite the focus on quality of life as a centrality in nursing studies. The concept of sexuality is reinforced by the focus on diseases and dysfunctions of sexuality.^[23] Considering sexual positivity as a central guideline in pathological processes and ensuring sexual well-being will significantly improve public health.^[9] However, the fact that positive health elements were ignored in the overall themes emphasizes the importance of further addressing the norms and expectations that affect sexual health perception in future studies. In addition, there is a need improving life satisfaction and examining sexuality holistically in all stages of life.

The thematic map analysis revealed the importance of female sexuality and sexual health through high density and centrality. Women's sexuality is built based on oppressive norms and conditions such as gender, class, and race. The fact that women are more negatively affected than men in statuses such as sex work and immigration makes them vulnerable to risks related to sexuality.^[24] Therefore, concepts of women and the female body as fragile, vulnerable, and in need of help have been put forward.^[25] Again, adolescents, who are among the sexually vulnerable groups, formed one of the themes where sexuality was intensively covered. In addition to structural factors such as poverty, access to education, and gender inequalities, the fact that many factors negatively affect the health of young people, such as domestic relations and violence, increases the importance of the issue. International Conference on Population and Development (ICPD) gives priority and importance to sexual and reproductive health issues in young people.^[26] HIV also had high density and centrality in the publications. This may be because despite significant advances in

prevention and treatment efforts, HIV is a complex sexual health problem, with 1.5 million people infected each year and 38.4 million living with the virus today.^[27]

Some themes have strong links with others, such as human trafficking, sexual and gender minorities, and sexual orientation. This may be due to their recent popularity, as indicated by the analysis results of trending topics. LGBTI individuals, who are highly disadvantaged in terms of sexual health, may avoid receiving health services because of perceptions that health professionals do not respect their sexual identity and orientation.^[28] Sexual violence is one of the most horrific forms of violence against women that violates their fundamental freedoms and human rights. It is also a trauma with severe consequences such as depression, suicide, and social isolation.^[29] Nurses, as one of the first health professionals who come into contact with these victims, have a key role in ensuring access to health services, providing emotional support, and playing an active role in the treatment process.^[30] Therefore, studies in the field of sexual violence should increase to allow nurses to use their counseling and advocacy roles.

STRENGTHS and LIMITATIONS

The strength of this study is that it is the first bibliometric study to identify the performance, research focus, thematic trends, and evolution of sexual health studies in nursing. The data analysis was performed with many complementary techniques such as visualization, thematic maps, and thematic evaluations to present and strengthen the results. However, the study has some limitations. The data were limited to the period and source of the literature review.

CONCLUSION

This study provides important data on sexuality studies in nursing and reveals the existing gaps in the field. The number of studies has increased over the years. Nursing is a trending topic in this research, which is a pleasing indicator that nurses realize their place and importance in the presentation of sexual health and try to contribute and develop in this field. However, although the focus of nursing in sexual health is partially satisfactory, a need remains for more intensive studies and new approaches.

IMPLICATION for CLINICAL PRACTICE and RESEARCH

A holistic approach is necessary which integrate the emotional, social and biological dimensions of sexuality in

sexual health studies. Positive sexuality approaches that focus on the processes and components to move healthy and unhealthy individuals to sexual health are well-being are needed. Providing effective and sufficient sexual health care in today's changing structures requires increasing the number of studies in the fields of sexual violence, sexual and gender minorities, and sexual orientation. In addition, more studies are needed in the field of sexuality in developing and underdeveloped countries since studies are often conducted in Western countries.

Ethics Committee Approval

Ethical approval was not required due to the study having no direct influence on humans or animals.

Peer-review

Externally peer-reviewed.

Conflict of Interest

No conflict of interest was declared by the authors.

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