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Análise bibliométrica do manejo dos cuidados paliativos: tendências, desafios e perspectivas na literatura científica

Bibliometric Analysis of Palliative Care Management: trends, Challenges, and Perspectives in the Scientific Literature

Análisis bibliométrico del manejo de cuidados paliativos: tendencias, desafíos y perspectivas en la literatura científica

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RESUMO

Objetivo: analisar as tendências atuais em pesquisas bibliométricas relacionadas aos cuidados paliativos. **Método:** utilizou-se métodos bibliométricos, examinou-se uma ampla gama de publicações de artigos originais e de revisão, considerando indicadores como citações, coautoria e frequência de termos-chave. **Resultados:** os resultados revelam um aumento significativo na produção científica nesse domínio nos últimos cinco anos, indicando um interesse crescente. Observamos também a diversificação de tópicos e abordagens, refletindo a complexidade e a amplitude do manejo dos cuidados paliativos. **Conclusão:** destaca a importância de acompanhar de perto essas tendências para orientar futuras pesquisas e promover uma compreensão mais abrangente do papel dos cuidados paliativos na sociedade contemporânea. Este estudo oferece uma visão abrangente e atualizada do cenário bibliométrico nesse campo, proporcionando insights valiosos para pesquisadores, acadêmicos e profissionais interessados nessa área em constante evolução.

Descritores: Enfermagem; Bibliometria; Cuidados paliativos.

ABSTRACT

Objective: to analyze current trends in bibliometric research related to palliative care. **Method:** bibliometric methods were used, examining a wide range of original and review articles, considering indicators such as citations, co-authorship, and frequency of keywords. **Results:** the results reveal a significant increase in scientific production in this domain in the last five years, indicating a growing interest. We also observed a diversification of topics and approaches, reflecting the complexity and breadth of palliative care management. **Conclusion:** it highlights the importance of closely monitoring these trends to guide future research and promote a more comprehensive understanding of the role of palliative care in contemporary society. This study offers a comprehensive and up-to-date overview of the bibliometric landscape in this field, providing valuable insights for researchers, academics, and professionals interested in this constantly evolving area.

Descriptors: Nursing; Bibliometrics; Palliative care.

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RESUMEN

Objetivo: analizar las tendencias actuales en la investigación bibliométrica relacionada con los cuidados paliativos. **Método:** se utilizaron métodos bibliométricos, examinando una amplia gama de publicaciones de artículos originales y de revisión, considerando indicadores como citas, coautoría y frecuencia de términos clave. **Resultados:** los resultados revelan un aumento significativo en la producción científica en este dominio en los últimos cinco años, lo que indica un interés creciente. También observamos una diversificación de temas y enfoques, que refleja la complejidad y amplitud del manejo de los cuidados paliativos. **Conclusión:** destaca la importancia de seguir de cerca estas tendencias para orientar futuras investigaciones y promover una comprensión más completa del papel de los cuidados paliativos en la sociedad actual. Este estudio ofrece una visión general completa y actualizada del panorama bibliométrico en este campo, proporcionando información valiosa para investigadores, académicos y profesionales interesados en esta área en constante evolución.

Descriptores: Enfermería; Bibliometría; Cuidados paliativos.

INTRODUCTION

Palliative care (PC) represents a fundamental approach to improving the quality of life of patients facing chronic and progressive diseases, focusing on the prevention and relief of suffering. In the context of primary care, the effective implementation of palliative care requires a multidisciplinary team of health professionals with specific skills (Clark and Seymour, 2020; Ferri and Wanat, 2022).

Given the increase in new cases of chronic and progressive diseases and the evolution of cancer itself, palliative care has emerged as an important philosophy of health care, especially when the chances of a cure are unlikely, even in the face of major therapeutic advances in recent years, reiterating life and death as natural processes (Santos, Soeiro, Maués, 2020).

The World Health Organization (WHO, 2021) has estimated that more than 56 million people in the world need PC every year. This demand is set to double by 2060, driven by an ageing population and an increase in chronic non-communicable diseases, with 10 million people in Africa, 14 million in the Americas, 13 million in Southeast Asia, 8 million in Europe, 4 million in the Eastern Mediterranean and 7 million in the Western Pacific (Ferri, Wanat, 2022).

The majority of people in need of PC reside in low- and middle-income countries (78%). This disparity reflects the lack of resources and infrastructure to provide adequate support to these populations (WHO, 2021).

According to the WHO (2021), there is an urgent need for investment in infrastructure, training of professionals and public policies to guarantee universal access to PC. This care is a global humanitarian need for people with cancer or chronic diseases, in view of the aspects that involve physical, psychological, social and spiritual suffering, dignity based on respect for the patient's autonomy and wishes, preservation of quality of life and a dignified death, with as little suffering as possible.

Nevertheless, research and scientific development on this subject should be considered relevant, involving investment in research into palliative care, its management and the development of new methods and strategies aimed at appropriate intervention/actions to care for symptoms (Smith, Jones, 2022).

In Brazil, PC was instituted as a public policy and recognized as part of integrated long-term care within the Unified Health System (SUS) in 2018, and can be carried out in various settings, including hospital wards, long-term care institutions, basic health units, specialized outpatient clinics and at home (Brasil, 2018). In this sense, training the multidisciplinary team in primary health care to provide palliative care should be considered a sine qua non and crucial condition for the success of public policies aimed at this type of care within the health system.

The ageing of the population increases the need for PC due to the rise in chronic diseases and cancer. An integrated and specialized approach to healthcare is crucial, requiring a multidisciplinary team trained to guarantee quality and humanized care.

PC aims to alleviate the suffering of patients with progressive and incurable diseases, focusing on quality of life. The growing demand for this approach requires a mapping of scientific production on the subject. The management of PC has been gaining prominence on the global scene, seeking to provide quality of life for patients with progressive and incurable diseases. Despite the growth of the topic, there are still gaps in knowledge that require in-depth investigation (Santos et al., 2017).

Bibliometric studies play a crucial role in this context, offering a comprehensive and quantitative view of scientific production in a specific field. Through rigorous analysis, these studies make it possible to map scientific production, quantify the number of publications on palliative care management over time, identify the main journals, authors and countries contributing to the topic, and outline the main themes and methodological approaches used.

From the perspective of identifying trends and gaps in knowledge, a bibliometric study on palliative care management can help to uncover areas of research that are on the rise and topics that have been little explored, detect research needs to direct future studies and highlight areas with potential for innovation and advances in palliative care management (Clark, Seymour, 2020).

Bibliometrics is therefore a valuable tool for advancing knowledge and improving practice in the management of palliative care. By mapping scientific production, identifying gaps and translating knowledge into practical applications, these studies contribute to building a more dignified future with a better quality of life for patients and their families (Zhu and Zhang, 2022).

For this study, the question to be answered is: what are the main trends, patterns and gaps in academic production on palliative care management over the last five years, considering international collaboration, predominant thematic areas and the influence of factors such as the average age of the documents and the annual growth rate?

To answer this question, the general objective was to analyze current trends in bibliometric research related to palliative care. The specific objectives are:

1. To assess the influence of the average age of documents on scientific production on palliative care.
2. To analyze the annual growth rate of academic research on palliative care management over the last five years.
3. To identify the main trends in academic production on palliative care management over the last five years.
4. To analyze the patterns of international collaboration between authors in palliative care research.
5. To identify possible gaps in the scientific literature related to palliative care management.

Relevance of the study

Bibliometric research stands out as a valuable approach to mapping the current landscape of these studies, offering a comprehensive view of the growth, patterns and areas of focus in the scientific literature. The application of bibliometrics to the topic of "Palliative Care Management" is highly relevant and provides a comprehensive understanding of the current scientific landscape. Bibliometrics, as a quantitative method for analyzing bibliographic production, makes it possible to assess the quantity, quality and impact of publications in the field.

Identifying trends and emerging themes: bibliometric analysis can identify publication patterns over time, highlighting specific areas of focus, such as innovative therapeutic approaches, ethical issues or emerging clinical challenges in palliative care.

Mapping collaborations and research networks: identifying collaborations between researchers and institutions, as well as mapping research networks, helps to understand the dynamics of teamwork and identify centers of excellence.

Evaluation of scientific productivity: bibliometrics makes it possible to evaluate the productivity of authors, institutions and countries in the field of palliative care, providing insights into who the main contributors to the field are.

Identification of leading journals: bibliometric analysis can reveal which scientific journals are most prominent in publishing research on palliative care management, indicating important sources for researchers.

Tracking citations and impact: evaluating citation and impact indexes of articles related to palliative care provides a measure of the impact and influence of this research in the scientific community.

Guidance for researchers and decision-makers: a bibliometric understanding of the field provides valuable information to guide future research, helping researchers, clinicians and decision-makers to identify gaps in knowledge and areas requiring greater attention.

METHODOLOGY

This bibliometric study looked at the production/dissemination and use of information recorded electronically in the international Scopus database. To achieve the proposed objectives, bibliometric methods were used, a quantitative technique that analyzes scientific production in terms of publication patterns, co-authorship, citation networks and keywords (Egghe, 2005).

The choice of Scopus can be justified for several reasons. Firstly, Scopus is a comprehensive and multidisciplinary database that covers a wide range of areas of knowledge, including medicine, nursing, psychology and social work, which are relevant to the topic of palliative care. In addition, it is known for its high quality and rigor in indexing scientific journals, conferences and other types of academic publications. This guarantees the reliability and validity of the data collected for bibliometric analysis.

Another point to consider is its ability to provide citation metrics, such as the h-index, which can be useful for assessing the impact and influence of publications in the field of palliative care. Thus, its choice offers a solid basis for conducting a robust and comprehensive bibliometric study on palliative care management, providing reliable and representative data on scientific production in this field (Cronin , Cronin, 1990).

The distribution of journals and authorship were subjected to descriptive analysis using the R® software, with a significance level set at 5% (p-value = 0.05).

Bibliometrix and VOSviewer - Visualizing scientific landscapes software were used to calculate the strength of the links established between authors and co-authors, as well as geographical areas, represented in map form.

The data was collected in February 2024. The ideal search string for a bibliometric study took into account the specific objectives of the research and the areas of interest. In this study, we used the string: ("palliative care" OR "end-of-life care" OR "hospice care" OR "symptom management") AND ("management" OR "intervention" OR "strategy" OR "approach") AND ("healthcare" OR "clinical practice") AND ("article" OR "review" OR "research").

The time frame was 2020 to 2024, and only documents in the form of scientific articles were kept.

RESULTS AND DISCUSSION

Here is a summary of the significant information about the collection of scientific data retrieved, covering the time interval from 2020 to 2024. During this period, 674 different sources were used, including journals and books, to compile a total of 1,893 documents. Notably, a negative annual growth rate of -35.25% is observed, indicating a substantial reduction in the production of new documents over the specified years. The average age of the documents is 2.7 years, which suggests that most of the documents are relatively recent. On average, each document was cited 5,408 times, and the total set of documents has 72,103 references, which reflects a high degree of interconnection in the cited literature.

The results of this study indicate a growing trend in scientific production on palliative care over the last five years. This finding is in line with the study by Kamal et al. (2018), who also observed a significant increase in the literature on palliative care, reflecting a growing recognition of the importance of this area in contemporary medicine. However, unlike Kamal et al. (2018), who highlighted the increase in publications on the integration of palliative care in oncological contexts, our study reveals a thematic diversification, covering aspects such as symptom management, interdisciplinary care and ethical implications, which suggests an evolution in the field of palliative care beyond the initial focus on cancer.

As for the content of the documents, 6,335 additional keywords (ID) and 3,984 author keywords (ED) were identified, which help to categorize and access the documents according to specific themes.

With regard to authors, the dataset includes a total of 10,990 different authors, with 59 of them having published single-authored documents. Collaboration between authors is evident, with only 59 documents being single-authored, while on average each document has 7.14 co-authors. In addition, 21.71% of the co-authorships are international, indicating significant global collaboration. This result may indicate that PC research is a field that requires an interdisciplinary and collaborative approach (Pargament, 2022; Koenig, King, Carson, 2021). Co-authorship per document may be an indication that this topic is a field of knowledge that is becoming increasingly collaborative (Van Raan, 2005). The percentage of international co-authorships suggests an increasingly globalized field (Chandler, Cash and Lee, 2022; Khalaf, Alubied, Khalaf, Rifaey, 2023).

All the documents accounted for are categorized as articles, for a total of 1,893 articles. This highlights the academic nature of the database and may indicate a strong emphasis on original research and literature reviews within the field in question.

The quantity of documents is substantial, which indicates a solid basis for bibliometric analysis. The negative annual growth rate indicates a reduction in the number of documents over the years. This can be the result of various factors, such as the nature of the field or changes in research trends. A drop in the annual growth rate can be a warning sign for the scientific community, which should seek to identify the causes and take measures to reverse this trend.

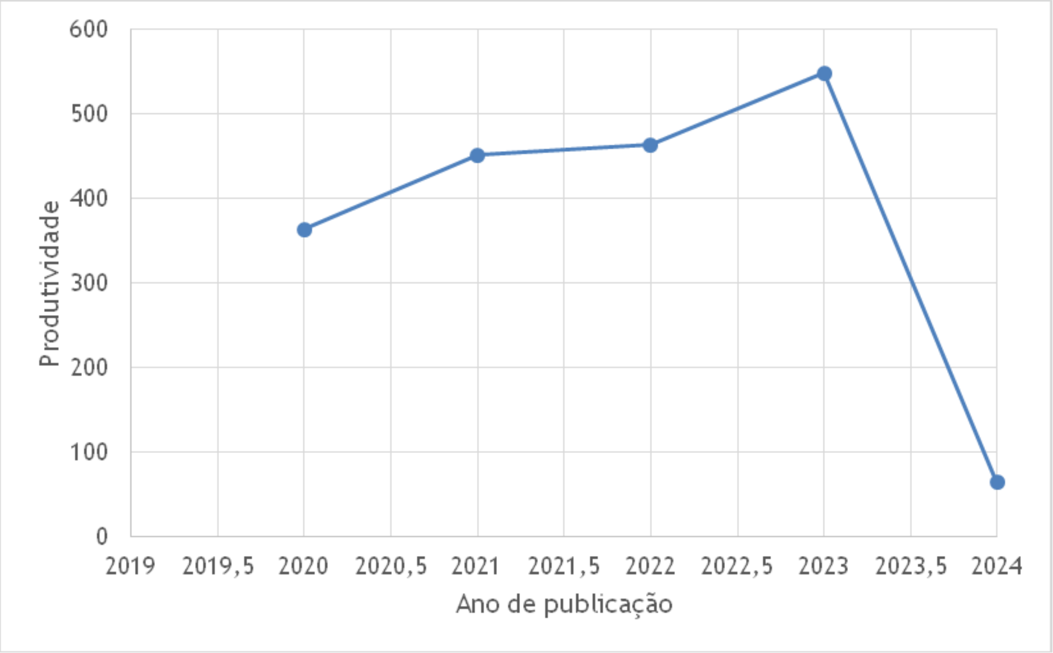
The negative annual growth rate observed in 2024 raises concerns similar to those discussed by Aoun and Nekolaichuk (2019), who warned of the risk of stagnation in the development of palliative care research due to the possible saturation of certain topics and the need for innovative research approaches. This point underscores the importance of identifying and exploring gaps in the literature, such as the need for more studies on palliative care in non-oncology contexts and the integration of digital technologies in the provision of care.

The low average age of the documents suggests that the field is constantly evolving, with a lot of recent research. A relatively high average number of citations per document indicates that work in the field is cited frequently, suggesting significant interest from the academic community (Moed and Van Raan, 2005).

The substantial number of references highlights the extensive literature review carried out in the research, indicating a solid knowledge base. The presence of 6,335 additional keywords (ID) and 3,984 author keywords (DE) suggests a diversity of topics and approaches in the field. The large number of authors indicates significant and diverse collaboration in the area of palliative care management.

Graph 1 shows the evolution of scientific production on the topic studied in the period between 2020 and 2024.

Graph 1 - Evolution of scientific production on spirituality and health in Scopus



Source: Research data, João Pessoa, 2024.

The practical implications of our findings are significant. The identification of a growing international collaboration between researchers, for example, echoes Ferrell and Temel's (2020) arguments about the need for a global and collaborative approach to tackling the challenges in palliative care. This is particularly relevant given the disparities in access to and quality of palliative care between different regions and countries, as highlighted by Pastrana et al. (2020). Therefore, the results of this study not only corroborate the need to continue expanding palliative care research, but also suggest that future investigations should prioritize international collaboration, innovation in research and attention to emerging and unmet needs.

Productivity increases from 2020 to 2023, reaches a peak in 2023, suffers a significant drop in 2024, given that the search took place in February 2024, thus justifying the significant drop. This positive trend indicates a significant increase in the scientific community's interest in the subject.

The high volume of articles published (5549 in 2023) shows the relevance and importance of the topic for scientific research. Possible growth factors are: greater investment in research on the subject by funding agencies, governments and companies, technological advances that facilitate research and data collection or greater interest from society in information on the subject.

Based on Ferri and Wanat (2022), an acceptable explanation for this growth is possible, perhaps because it is based on general trends in oncology research and the ageing of the world population. These trends may lead to a growing focus on the impact of the need for palliative care, directly reflecting on quality of life. The implications of this growth include increased competitiveness, which increases the number of researchers working on the topic, which can increase competition for resources and publications, and the need for constant updating, allowing for a greater volume of scientific production, requiring professionals in the field to keep up to date with the latest research (Koenig, 2012; Chandler and Cash, 2022).

Table 1 shows bibliometric indicators relating to a set of documents, including information on the number of documents published (N), the average number of citations per article, the average number of citations per year and the citable years. This table offers an in-depth view of the reception of research in the area over the period studied. The main indicators will be addressed, highlighting trends, characteristics, possible causes and implications for research, practice and education in palliative care.

Table 1 - Average citation per year of the articles retrieved in the study

Year	Average total citations per article	number of articles	Total average number of citations per year	Quotable years
2020	11,16	364	2,23	5
2021	7,31	452	1,83	4
2022	5,22	464	1,74	3
2023	0,8	549	0,40	2
2024	0,14	64	0,14	1

Source: Research data, João Pessoa, 2024

With regard to trends in the average number of citations, there has been a marked decrease in the total average number of citations per article over the years, from 11.16 in 2020 to 0.14 in 2024. This drop can be explained by several factors, such as:

1. **Changes in research funding policies:** possible directing of resources to other research areas.

2. **Changes in institutions' research priorities:** changes in the research priorities of universities, research centers and other institutions.
3. **Changes in publication trends in scientific journals:** increased competition for publication in high-impact journals, leading to the submission of articles to journals with lower visibility and lower citation indexes.
4. **Possible impacts of the COVID-19 pandemic on research:** reduction in scientific productivity and redirection of research to other areas.

Possible specific factors are:

1. **Changes in the focus of palliative care research:** changes in the thematic priorities of palliative care research, with a focus on less cited areas.
2. **Methodological quality of studies:** a possible drop in the methodological quality of published studies, impacting on the number of citations.
3. **Differences in the visibility of journals:** publication in journals with lower visibility or lower citation rates**.**

These trends may directly or indirectly have implications for research, practice and education. In Research - the drop in citations may be an indicator that palliative care research needs to be more focused on priority areas with greater impact. In Practice: health professionals working in the field of palliative care need to be aware of the latest research and best practices in order to provide high quality care to patients. In Education: it is important that palliative care education programs include up-to-date content on the latest research and best practices in the field.

The average number of citations per article provides an indication of the average impact of documents (Glänzel and Moed, 2002). This average measures the average citation rate received by articles in a given year. It shows how the attention and impact of documents have evolved over time (Waltman and Van Eck, 2012).

The number of citable years indicates how many years after the publication of a document the citations are taken into account. This is relevant for calculating citation indicators, as more recent documents will have fewer citable years (Garfield, 1979).

Bradford's Law (Brookes, 1969) was applied to the dataset of authors' output. The CSV file containing the data retrieved from Scopus includes the publication source columns and the classification based on citation frequency, as well as citation frequency, cumulative citation frequency and the classification zone according to Bradford's Law.

For the analysis we focused on the distribution of publications between the zones (Zone 1, Zone 2, Zone 3), the frequency of citations, and how these zones demonstrate the concentration of publications relevant to a specific field (Glänzel , Moed, 2002). Bradford's Law suggests that a small number of journals (Zone 1) produce the majority of relevant publications in a specific field, followed by a larger number of journals with fewer relevant publications (Zone 2), and even more journals with very few relevant publications (Zone 3). Analysis of the data according to Bradford's Law reveals the following for each zone:

Zone 1: contains 13 publications with a total of 627 citations, resulting in an average of approximately 48.23 citations per publication. This indicates that a small number of journals in this zone are responsible for a large amount of citations, which is in line with the premise of Bradford's Law that a central core of journals concentrates most of the relevant publications in a specific field.

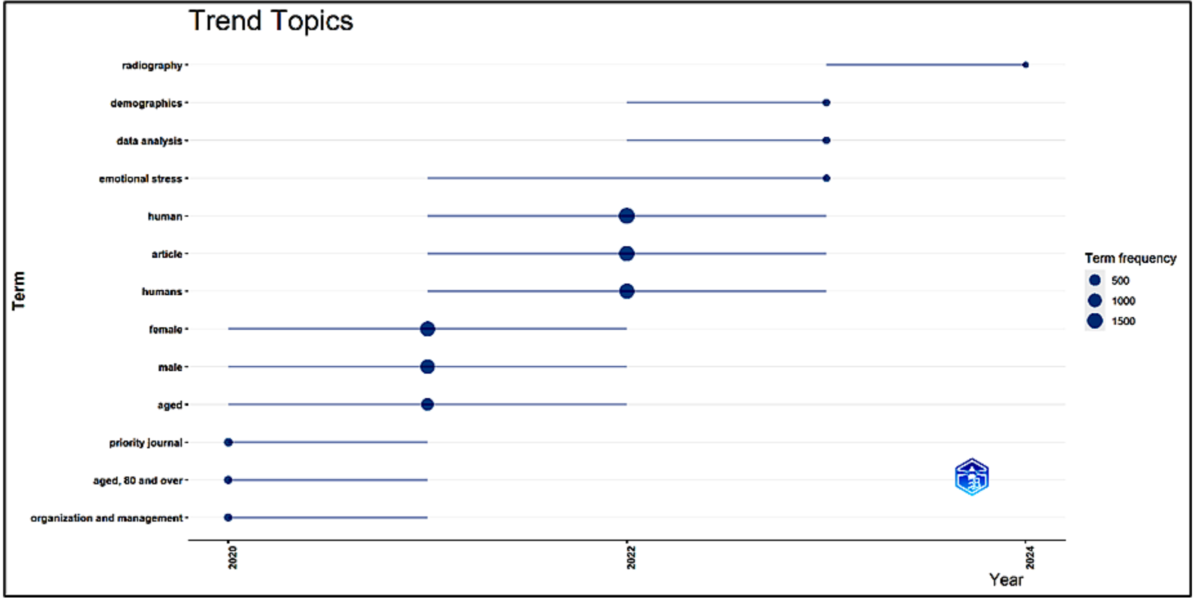
Zone 2: consists of 129 publications with a total of 642 citations, with an average of around 4.98 citations per publication. This shows that a greater number of journals contribute fewer citations per item, representing a second level of importance in the dissemination of knowledge in the field in question.

Zone 3: Includes 532 publications with a total of 624 citations, which leads to an average of approximately 1.17 citations per publication. This group, the largest in terms of number of publications, contributes the lowest number of citations per item, highlighting the idea that many journals publish only a small number of articles relevant to the specific field.

This distribution reinforces the central observation of Bradford's Law, suggesting that the literature of a field can be divided into "clusters" of journals of different levels of importance and contribution. A small set of journals (Zone 1) are highly cited and therefore crucial to research in the field, while a progressively larger number of journals (Zones 2 and 3) contribute less to the advancement of knowledge in the field.

In order to identify the main trends in academic production on the management of palliative care over the last five years, a map of trending topics was drawn up based on the keywords (Graph 2).

Graph 2 - Main trends in academic production on palliative care management over the last five years



Source: Research data, João Pessoa, 2024.

Graph 2 shows the frequency of specific terms over time in palliative care research. Each line represents a different term, and the size of the circle along the line indicates the frequency of the term in a given year, which seems to range from 2020 to 2024. Here are some observations and interpretations of the data presented:

Radiography: The term "radiography" seems to have an increasing frequency over time, peaking in 2024. This may suggest a growing interest or advances in the application of radiography within the field of palliative care, perhaps related to the diagnosis or monitoring of chronic or terminal conditions.

Demographics and Gender Data: "Demographics", "female" and "male" also show an increase in frequency, indicating a focus on demographic analysis and gender differences within palliative care. This may reflect an emphasis on personalizing care based on population characteristics.

Data Analysis: The frequency of the term "data analysis" shows an increasing trend and then a plateau. This may indicate that data analysis has become an established part of palliative care research, perhaps due to the importance of quantitative and qualitative analysis in understanding patient needs and treatment outcomes.

Emotional Stress: The term "emotional stress" peaks in 2023, suggesting that there has been particular concern or studies focused on the impact of emotional stress on palliative care patients or their caregivers in this period.

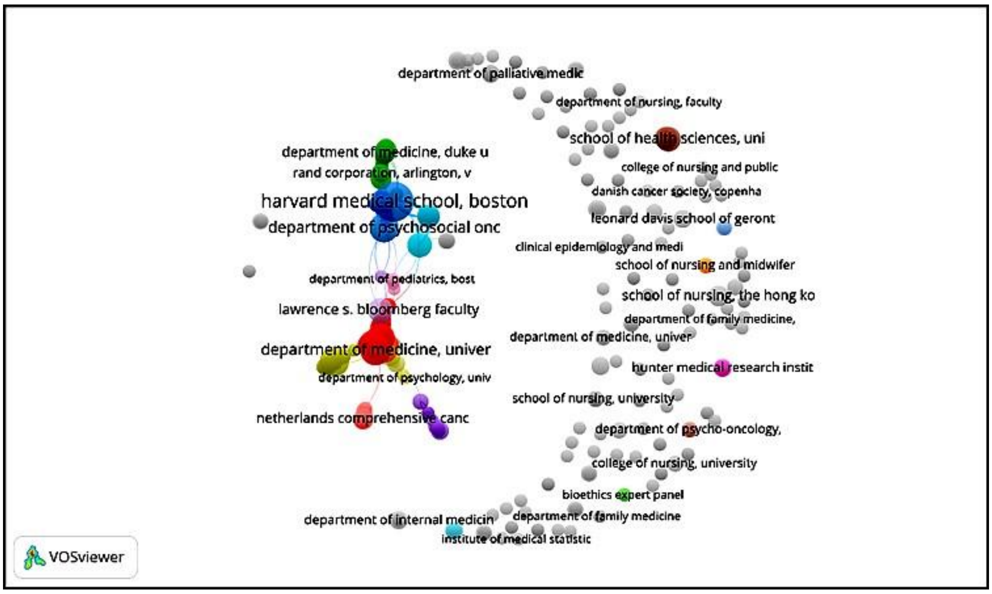
Priority and Organization: "Priority journal" and "organization and management" appear at the beginning of the period, indicating that these themes were of initial interest in research and may have been overtaken by other topics more recently.

Focus on Age: "Aged" and "aged, 80 and over" have data points concentrated in the early years, indicating a specific focus on the older population at the beginning of the period analyzed. This is relevant for palliative care, as the older population can be a significant user of these services.

It is important to note that the presence of specific terms over time may reflect changes in research priorities, advances in the field, reactions to public health issues (such as a pandemic), or changes in health policy and research funding. Trend analysis can help researchers and decision-makers understand where to focus future resources and efforts.

In order to analyze the patterns of international collaboration between authors in palliative care research, a map of collaboration between institutions with at least two publications was created Figure 1.

Figure 1 - Map of international collaboration between authors in palliative care research



Source: Research data, João Pessoa, 2024.

Figure 1 shows a network collaboration map generated by the VOSviewer software, commonly used to visualize bibliometric networks, including collaboration networks between institutions. In this map, the nodes represent the institutions and the links between them indicate research collaborations, in this case in the field of palliative care. Here are some interpretations and analyses based on the graph:

Points of Collaboration: the institutions represented by the larger nodes, such as "Harvard Medical School" and the "Department of Palliative Medic", are probably leaders in palliative care research and collaborate extensively with other institutions. The size of the nodes generally represents the number of publications or the weight of the collaborations.

Network connections: the lines between the nodes indicate collaborations between institutions. Thicker or more numerous lines between two nodes suggest stronger or more frequent collaborations.

Geographical Distribution: the map includes institutions from various geographical locations, indicating an international nature of collaboration in palliative care. This is essential for the exchange of knowledge and practices in different cultural contexts and health systems.

Interdisciplinarity: the presence of varied departments, such as "psychosocial onc", "pediatrics", "psychology", and "family medicine", reflects the interdisciplinary nature of palliative care, which encompasses various medical specialties to meet the complex needs of patients.

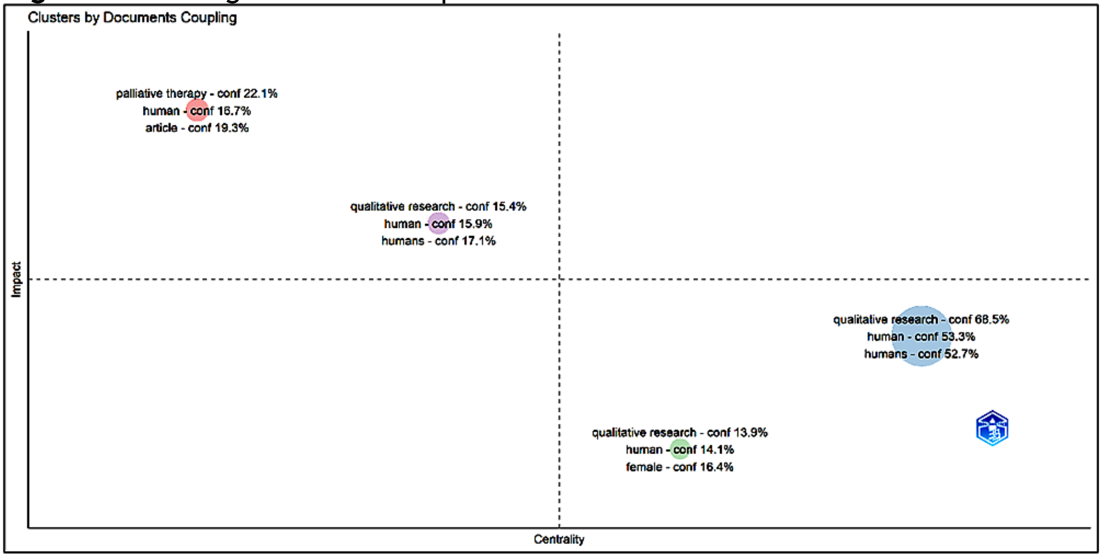
Research Centers: institutions with greater centrality in the network (closer to the center of the graph) can be considered research centers or collaboration hubs, indicating that they play a crucial role in disseminating knowledge and facilitating research partnerships.

Research focus: some nodes are labeled with specific focuses within the field of palliative care, such as "psycho-oncology" and "aged". This highlights specific areas of interest and suggests subfields within palliative care that may be receiving more collaborative attention.

It is important to recognize the value of international collaboration in promoting innovation and improving the quality of palliative care. Collaboration can help share best practices, develop standards of care and conduct large-scale studies that are key to advancing the field. The diversity of institutions also suggests a holistic and multidisciplinary approach, which is vital to address all dimensions of care for the terminally ill patient.

In order to identify possible gaps in the scientific literature related to palliative care management, a document linkage map was created Figure 2. The gaps identified in the literature, particularly with regard to the application of new technologies and the care of specific populations, such as pediatric and elderly patients, indicate promising areas for future research. Smith and Temin (2021) highlighted the importance of adapting palliative care to the unique needs of these groups, suggesting that personalized, evidence-based approaches can significantly improve patients' quality of life.

Figure 2 - Linking documents on palliative care



Source: Research data, João Pessoa, 2024.

Figure 2 represents a cluster mapping based on document linkage in the context of palliative care management. Document linkage is a technique that measures the similarity between documents based on the number of bibliographic references they share. The clusters formed suggest thematic areas within the palliative care literature based on how the documents are referencing each other. Centrality and impact are metrics that help us understand the importance and influence of these themes.

Centrality reflects the degree to which a theme is central in the research network, while impact can indicate the influence of a theme, often associated with citation frequency or perceived relevance.

Here are some points that may suggest gaps in the scientific literature based on the analysis of the graph:

Clusters with Low Centrality and Impact: Themes that appear at the bottom left of the graph may represent areas that are less developed or perhaps emerging in the palliative care literature. These themes may not have been widely explored and could represent opportunities for future research.

Thematic Variety: if some themes seem isolated or have few connections to other clusters, this may indicate a lack of interdisciplinary research or an opportunity to explore how these themes can be integrated into a more holistic understanding of palliative care.

Diversity of Populations: the term "female" appears to have a moderate level of centrality and impact, but there is no explicit mention of other demographic populations or specific patient groups. This may suggest a gap in the literature related to palliative care adapted for diverse populations, such as ethnic minorities, different age groups, or genders.

Research methods: there is a strong presence of "qualitative research" in the cluster with high centrality and impact. However, the lack of terms related to quantitative or mixed methods may indicate a gap in the use of diverse methodological approaches in palliative care research.

Emerging Themes: the absence of terms related to emerging technologies, innovations in treatment or new models of palliative care delivery may point to research opportunities in these areas.

To investigate these gaps more effectively, it would be useful to carry out a systematic literature review to identify which areas have fewer publications, a lower frequency of citations or a less significant presence in reviews and meta-analyses. In addition, interviews with experts in the field and surveys of palliative care professionals can help confirm these potential gaps and guide the development of future lines of research.

CONCLUSION

The study addresses the current scenario and trends in palliative care, emphasizing the need for an integrated and interdisciplinary approach, providing an enlightening view of the dynamics of scientific production on palliative care. The substantial increase in the number of articles published, especially in the last five years, points to a continuous development in the field of PC. This rise can be attributed to several factors, including the growing interest in the subject and the perception of its relevance in the field of health.

With a notable expansion in the literature on the subject, reflected by the growth in the number of publications until 2023, the bibliometric study revealed a subsequent decline. The research highlights the importance of investments in infrastructure, professional training and public policies to expand access to quality palliative care, especially in low- and middle-income countries. International collaboration and methodological diversity are identified as crucial to the development of the field, suggesting that there are still significant gaps to be explored, such as the application of new technologies and attention to specific demographic groups. The study points to the need for research focused on high-impact areas and constant updating of professionals to improve clinical practice and education in palliative care (National Institute on Aging (NIA), 2022).

In summary, the bibliometric analysis carried out in this study offers an in-depth understanding of the evolution of PC research. As the field continues to develop, it is essential to monitor these dynamics and recognize the crucial role played by some researchers in building knowledge in this expanding field.

It highlights the importance of closely following these trends in order to guide future research and promote a more comprehensive understanding of the role of PC in healthcare. This study offers a comprehensive and up-to-date view of the bibliometric landscape in this field, providing valuable insights for researchers, academics and professionals interested in this ever-evolving area.

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