


Research Article

Evaluation of palliative care publications in terms of health policy with bibliometric analysis method

Sağlık politikası açısından palyatif bakım yayınlarının bibliyometrik analiz yöntemiyle değerlendirilmesi

 Aysun Yeşiltaş^a

^a Department of Health Management, Nezahat Keleşoğlu Health Science Faculty, Necmettin Erbakan University, Konya, Türkiye

Abstract

Introduction: Management of health services is important for the effective and efficient execution of health services. Palliative care services, one of the basic components of health services, are effective in improving the quality of life of patients with serious health problems. It is essential to develop health policies regarding the presentation, management and change of palliative care services, the need for which is increasing day by day due to changing demographics and increasing population at the global level. In this context, the aim of the study is to examine the articles themed on palliative care in the health policy category in the Web of Science (WoS) database from a bibliometric perspective.

Methods: The data of the study were determined by scanning the WoS database with the keyword "palliative care" between September 2-5, 2024. The data obtained were filtered in terms of document, language and WoS category. The articles were then analyzed using the VOSviewer scientific mapping tool. The analysis results were visualized according to four criteria: co-authorship, co- occurrence , citation and co-citation.

Results: The study reached 3812 articles. The first article on palliative care was published in 1993, and most articles were published in 2021. It was determined that the country where the most articles on the subject were published was the United States, and the institution was King's College London. It was determined that the source with the most articles on palliative care was Palliative Medicine. It was seen that the author with the most publications on this subject was IJ. Higginson: the author with the most citations was DE. Meier: and the author cited according to the co-citation criterion was HM. Chochinov . The most frequently used keywords in articles on palliative care were determined as palliative care, cancer, end-of-life care, end of life, and quality of life. The keywords used in recent years regarding palliative care are Covid-19, accessibility to healthcare services, continuous professional development, series illness, healthcare utilization, digital health, symptom, virtual reality, adaptation, and competence.

Conclusion: As a result, it has been observed that the number of articles on palliative care has increased in the last decade. The change in the keywords in the studies conducted on the subject indicates that there are new trends in palliative care literature. It is thought that the study will contribute to researchers, health workers and managers interested in palliative care.

Keywords : Palliative Care , Health , Health Services, Health Administration

Öz


Giriş: Sağlık hizmetlerinin etkili ve verimli yürütülebilmesi için sağlık hizmetlerinin yönetimi önemlidir. Sağlık hizmetlerinin temel bileşenlerinden biri olan palyatif bakım hizmetleri, ciddi sağlık sorunları olan hastaların yaşam kalitelerini artırmada etkilidir. Küresel düzeyde değişen demografi ve artan nüfus nedeniyle ihtiyacın her geçen gün arttığı palyatif bakım hizmetlerinin sunumu, yönetimi ve değişimi ile ilgili sağlık politikalarının geliştirilmesi elzemdir. Bu bağlamda çalışmada Web of Science (WoS) veri tabanındaki sağlık politikası kategorisinde palyatif bakım temalı makalelerin bibliyometrik açıdan incelenmesi amaçlanmıştır.

Yöntem: Araştırmanın verileri WoS veri tabanında "palyatif bakım" anahtar kelimesi ile 2-5 Eylül 2024 tarihleri arasında taranarak belirlenmiştir. Elde edilen veriler doküman, dil ve WoS kategorisi açısından filtrelenmiştir. Sonrasında makaleler VOSviewer bilimsel haritalama aracı kullanılarak analiz edilmiştir. Analiz sonuçları ortak yazarlık, eş-dizimlilik, atıf ve ortak atıf kriterlerine göre olmak üzere dört kritere göre görselleştirmiştir.

Bulgular: Çalışma kapsamında 3812 makaleye ulaşılmıştır. Palyatif bakım ile ilgili ilk makale 1993 yılında, en fazla makale ise 2021 yılında yayınlanmıştır. Konu ile ilgili en fazla makalenin yayınlandığı ülkenin Amerika, kurumun ise King's College London olduğu tespit edilmiştir. Palyatif bakım konulu makalelerin en fazla yer aldığı kaynağın Palliative Medicine olduğu belirlenmiştir. Bu konuda en fazla yayına sahip yazarın IJ. Higginson; en fazla atıfa sahip yazarın DE. Meier; ortak atıf kriterine göre alıntılanan yazarın ise HM. Chochinov olduğu görülmüştür. Palyatif bakım konulu makalelerde en fazla kullanılan anahtar kelimeler palyatif bakım, kanser, yaşam sonu bakımı, yaşamın sonu ve yaşam kalitesi olarak tespit edilmiştir. Palyatif bakım ile ilgili son yıllarda kullanılan anahtar kelimeler Covid-19, sağlık hizmetlerine erişilebilirlik, sürekli mesleki gelişim, ciddi hastalık, sağlık hizmeti bakımı kullanımı, dijital sağlık, semptom, sanal gerçeklik, adaptasyon ve yeterlilik şeklindedir.

Sonuç: Sonuç olarak palyatif bakım konusundaki makalelerin son on yılda sayısının arttığı görülmüştür. Konu ile ilgili yapılan çalışmalarda anahtar kelimelerde görülen değişimin palyatif bakım literatüründe yeni eğilimler olduğuna işaret etmektedir. Çalışmanın palyatif bakım konusuna ilgi duyan araştırmacılara, sağlık çalışanlarına ve yöneticilere katkı sağlayacağı düşünülmektedir.

Anahtar kelimeler: Palyatif Bakım, Sağlık, Sağlık Hizmetleri, Sağlık Yönetimi,

Received	Accepted	Published Online	Corresponding Author	E-mail
November 10, 2024	January 30, 2025	March 20, 2025	Aysun Yeşiltaş	ayesiltas@erbakan.edu.tr
Correspondence	Aysun Yeşiltaş, Nezahat Keleşoğlu Sağlık Bilimleri Fakültesi Köyceğiz Yerleşkesi (Köyceğiz Mah. Demeç Sok. No:39/1 Meram / Konya, Türkiye)			
	https://doi.org/10.22391/fppc.1582594			

Key Points

1. Palliative care themed articles number in the last ten years increase has shown.
2. Health policy 3812 articles in the category has been published.
3. Palliative care in your articles used key words last five per year change has shown.
4. Palliative care from 110 countries in the literature researcher's contribution has provided.

Introduction

While the world population was estimated to be 2.5 billion in the 1950s, it is expected to exceed 8 billion by mid-2022 [1]. This global demographic change also affects the use of health services [2]. Especially life-threatening and life-limiting serious diseases create a great burden on society and health systems. It is important to manage health services by developing policies that will prevent this burden from weakening the health system [3]. In this context, palliative care, which is one of the basic components of health services, is defined as " *active holistic care of individuals of all ages who have serious health problems due to serious illness and especially those approaching the end of their lives* " [4]. Providing adequate palliative care provides great benefits for patients, relatives, institutions within health systems, health workers and health expenditures [5]. It is recommended that countries with rapidly aging populations around the world review their health policies for the elderly, and integrate services that will contribute to palliative care, especially end-of-life care, family care and care planning [6]. In fact, it is emphasized that palliative care services should be provided in the earlier stages of the disease in order to have a significant impact on the quality of life and end-of-life care of patients [7]. The purpose of palliative care services is to alleviate the suffering of patients and their families by addressing the physical, psychosocial, and spiritual symptoms experienced by patients through comprehensive assessment and treatment [8]. On the other hand, from a health policy perspective, the absence of palliative care services in low-income countries results in significant costs being borne by the relatives of the patients and hinders economic growth [9]. It is also stated that hospital-based palliative care services can improve patient outcomes, health service utilization and costs [10]. The policies that form the basis of an effective health system also play an important role in the best implementation of palliative care on the basis of the patient, family and society [11].

This study aims to examine the articles published on the subject of " *Palliative Care* " scanned in the WoS database with the bibliometric analysis method in order to evaluate their development between 1993-2024. In recent years, publications on palliative care have been widely covered in the literature. Therefore, studying is important in terms of being a roadmap for researchers working in the field regarding trends and developments in palliative care. The VOSviewer analysis program was used because it allows the analysis results to be presented in an understandable and clear manner with visual mapping .

Methods

This study aimed to examine the publications on palliative care in the health policy category of the Web of Science (WoS) database from a bibliometric perspective. In addition, the current status of the publications of researchers in Türkiye on this subject was evaluated in the study. For this purpose, the WoS database was searched between September 2-5, 2024, under the heading " palliative The search was conducted with the keyword " care ". After the search, the publications were sorted by language (English), document (Article), WoS category (Health Politics services) and 3812 articles published between 1993 and 2024 were reached. The files downloaded as text were loaded into the VOSviewer analysis program without any processing.

Ethical approval, informed consent, permissions

The author declares that ethical rules were followed in all preparation processes of this study. Ethics committee approval was not obtained because secondary data from the Web of Science database was used.

Results

It is observed that the number of publications on Palliative Care has increased especially in the last five years. It was determined that the highest number of publications on the subject was published in 2021 (378 articles); the lowest number of articles were published in 1993 (1 article) and 1994 (1 article), when the first article on the subject was published. In the evaluation of the publications on palliative care published in the health policy category, the first 10 months of 2024 were included in the study (Figure 1).

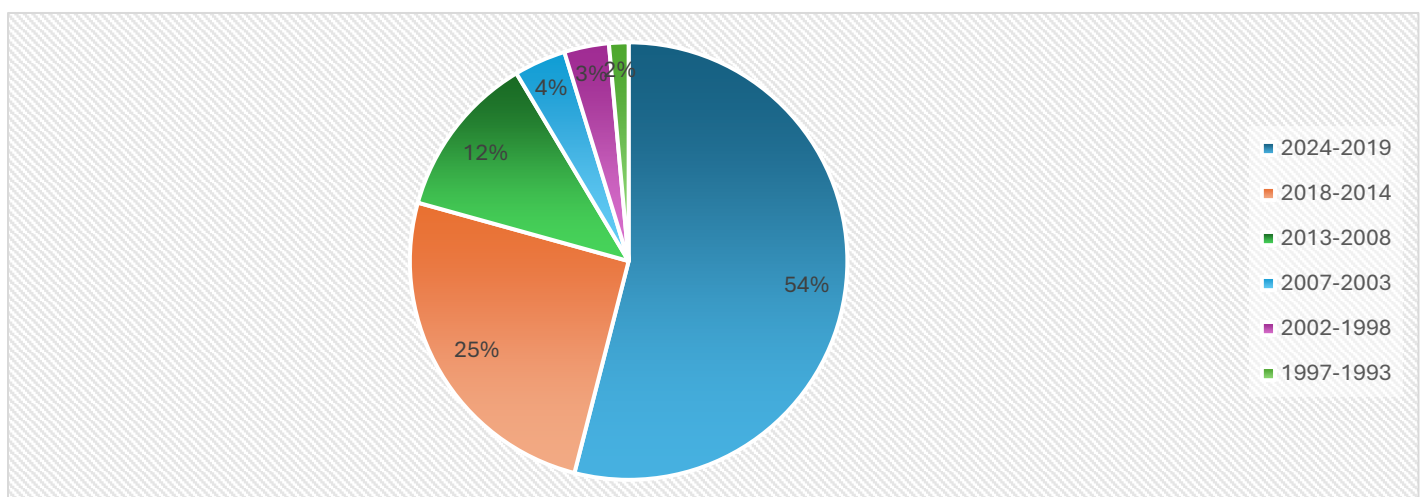


Figure 1. Distribution of articles by year

The VOSviewer program visualized the data of 3812 articles according to four criteria: Co-authorship, Co-occurrence, Citation and Co-citation. Accordingly, the findings are presented under these four headings.

1.Co-authorship Criterion Analysis Results

The co-authorship criterion includes examining the articles in terms of author, institution and country. Accordingly, it was determined that there were 355 co-authors with at least 5 publications and citations out of 15329 authors. The first four researchers with the most publications on palliative care were determined as Irene J. Higginson (37 articles, 1104 citations), Eduardo Bruera (34 articles, 390 citations), Richard Harding (30 articles, 692 citations) and Luc Deliens (30 articles, 647 citations), respectively (Figure 2).

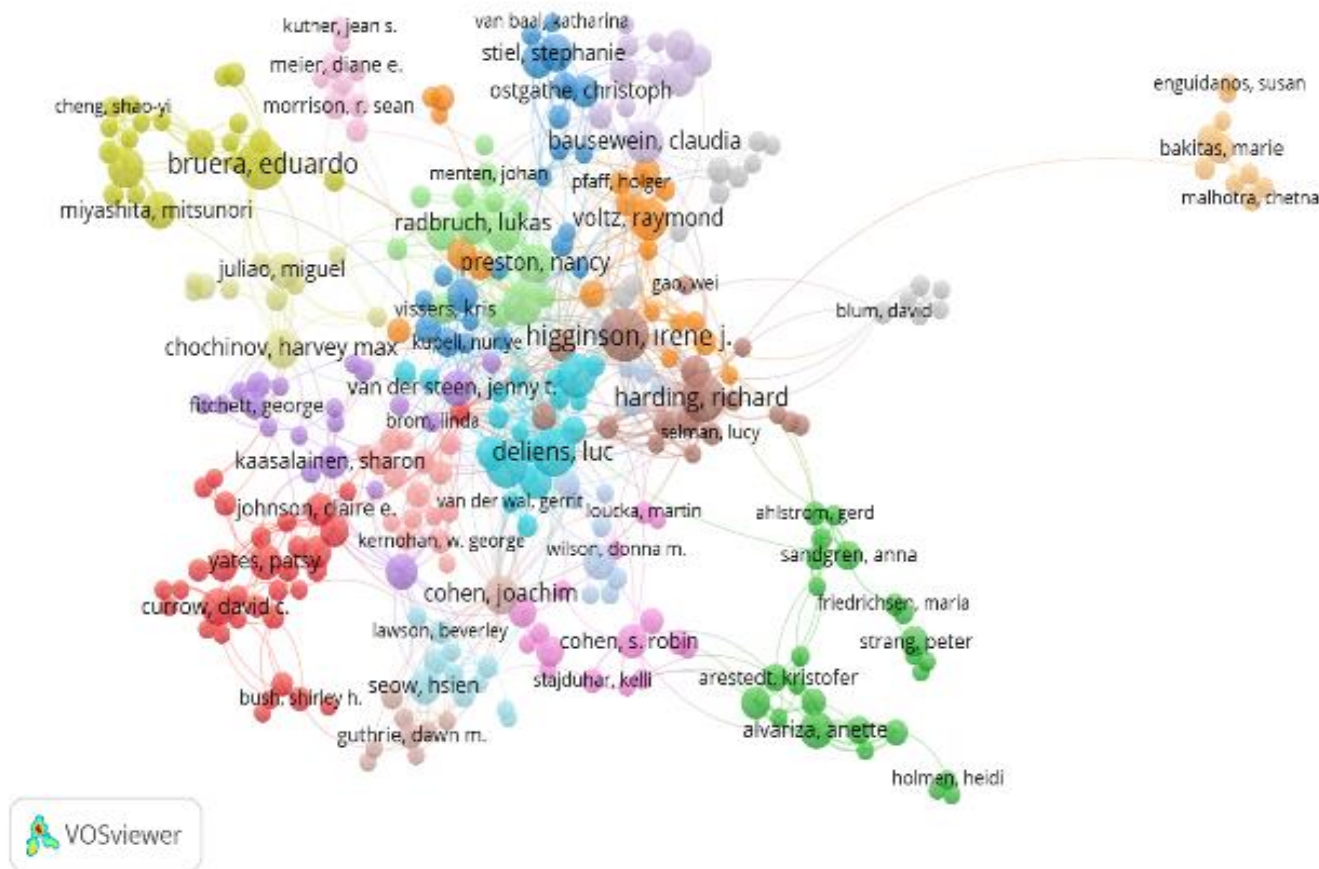


Figure 2. Author Network Map of Articles

When the co-authorship criterion was examined in terms of institution, it was seen that there were 482 institutions with at least 5 articles and citations out of 5208 institutions. The first five institutions with publications on palliative care were King's, College London (114 articles, 1850 citations), University of Toronto (100 articles, 1430 citations), McMaster University (82 articles, 983 citations), Radboud University (65 articles, 810 citations) and Karolinska Institute (62 articles, 922 citations) (Figure 3). As a result of this criterion, bibliometric analysis showed that the top five countries out of 66 countries with at least 5 publications and citations from 110 countries were America (858 articles, 14073 citations), Canada (531 articles, 9902 citations), England (503 articles, 8065 citations), Australia (403 articles, 5791 citations) and Germany (261 articles, 2947 citations), respectively (Figure 4).

2. Collocation Criterion Analysis Results

The collocation analysis results include the examination of the articles in terms of keywords. Accordingly, it was determined that a total of 5618 different keywords were used in the articles on palliative care. The most frequently used keywords were palliative care (1865), cancer (312), end-of-life care (272), end of life (194) and quality of life (179), respectively. It was observed that the keywords Covid-19, accessibility to health services, continuous professional development, health care use, digital health, virtual reality, symptoms, adaptation and competence were used in the articles on palliative care, especially in the last five years. This situation provides information about the content of the publications on palliative care in recent years (Figure 5).

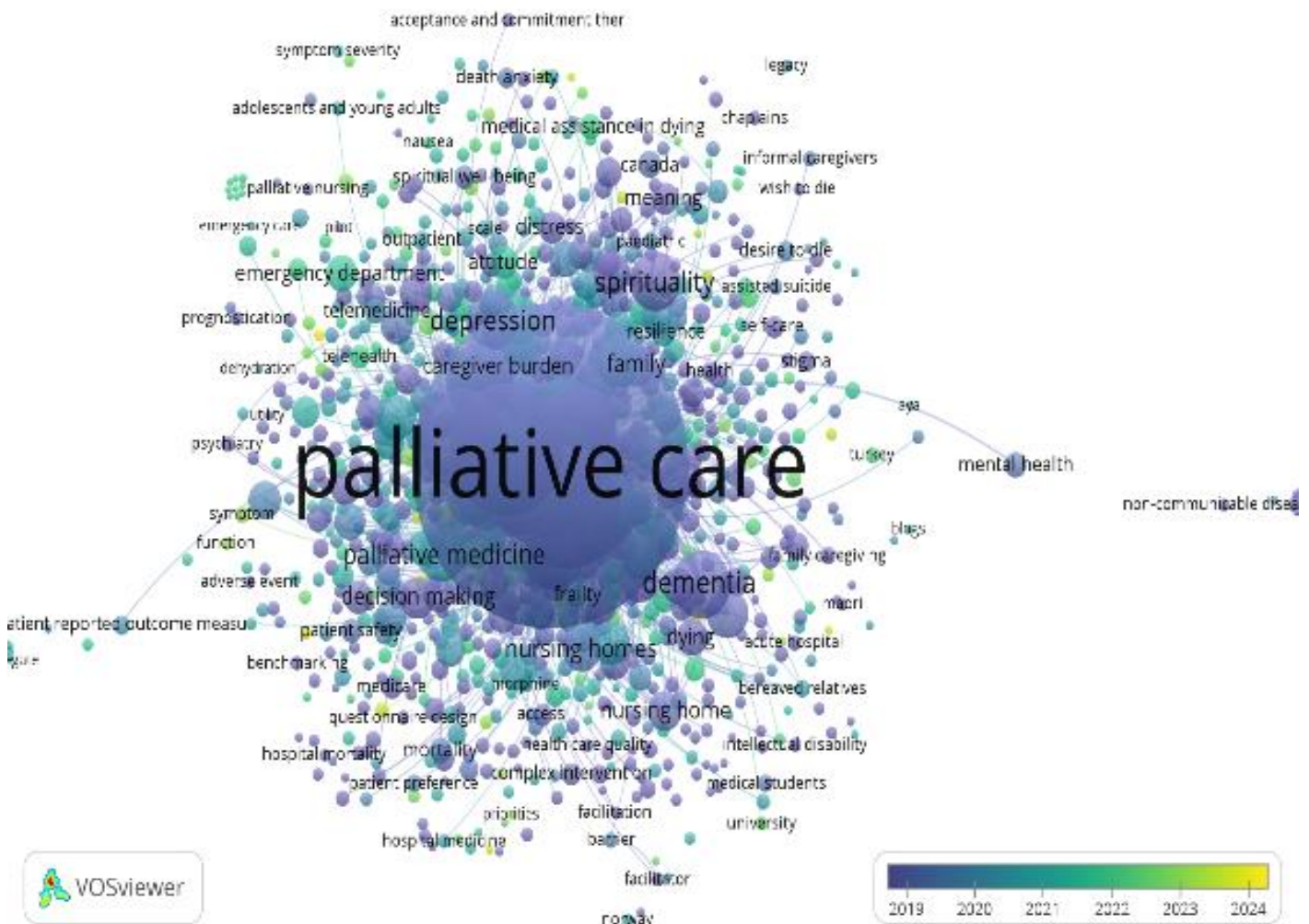


Figure 5. Keyword Network Map of Articles

3. Citation Criteria Analysis Results

Citation Criteria analyses are performed according to document, source, author, institution and country. Accordingly, in the analysis of articles published on palliative care according to the citation criteria, America from 110 countries, King's from 5208 institutions College London (1850 citation), BMC Palliative among 142 sources Care (16505 citations), Meier (1560 citations) out of 15329 authors, and Anderson et al.'s (740) article published in 1996 ranks first among 3812 articles (Table 1).

Table 1. Analysis Findings According to Citation Criteria

Organisation	Citation	Country	Citation	Source	Citation	Writer	Citation
King's Coll . London	1850	America	14073	BMC Palliative Resort	16505	Meier , D.E.	1560
Icahn Sch Med Mt Sinai	1452	Canada	9902	Journal of Palliative resort	10916	Morrison, R.S.	1364
Uni.of Toronto	1430	England	8065	Palliative & Supportive Resort	7680	Higginson , I. J.	1104
University of Alberta	1332	Australia	5791	Health Affairs	2068	Kelley , A.S.	905
University of Melbourne	1203	Holland	3997	Medical Resort	1457	Garrido , MM	785
Document							Citation
Anderson (1996) Palliative performance scale (PPS): a new tool							740
Garrido (2014) Methods for Constructing and Assessing Propensity Scores							611
Morrison (2011) Palliative resort consultation teams cut hospital costs for Medicaid beneficiaries							355
Barnato (2007) Are regional variations in end -of-life care intensity explained by patient preferences: A Study of the US Medicare Population							355
Kissane (2001) Demoralization syndrome - a relevant psychiatric diagnosis for palliative resort							305

According to the co-citation criterion, 798 cited authors with at least 20 citations were found out of 54369 cited authors. The first five cited authors were Chochinov (445 citations), Higginson (379 citations), Hui (376 citations), Gomes (365 citations) and World Health Organization (364 citations). Again, according to the co-citation criterion, the 245 cited references with at least 20 citations out of a total of 90228 cited references were listed as Temel (261 citations), Braun (224 citations), Bruera (106), Zigmond (92 citations) and Steinhauser (87 citations).

Discussion

Health services are among the priority issues for policy makers and decision makers because they are one of the elements affecting the economic and social life of a country [12]. Especially with demographic changes, increases in health expenditures parallel to the increase in the elderly population cause changes and developments in health policies [13]. On the other hand, the need for palliative care services, which is one of the health services, is increasing due to the aging of the world population and the increase in cancer rates in both developed and developing countries [14]. Therefore, the need to evaluate the increasing palliative care services in terms of health policy has emerged. In line with this need, articles on palliative care were examined from a health policy perspective in the study. As a result of the bibliometric analysis of 3812 articles in the WoS database in the context of palliative care in the health policy category; it was seen that palliative care publications started with a publication in 1993 and increased especially from the period 2008-2013. It was determined that 79% of the palliative care literature was published in the last ten years. In this case, it can be stated that researchers have shown an interest in the subject of palliative care in recent years. More than 15,000 researchers have contributed to the palliative care literature since 1993. Among these researchers, Irene J. Higginson ranks first as the most productive researcher with 37 articles. The performance and productivity of a researcher is largely judged by the number of publications and where they are published. Journals are deeply embedded in the academic infrastructure and specialized in their scope. In addition to providing a permanent record of the articles they publish; journals also act as representatives of the articles they publish [15]. In this context, articles on palliative care have been published in 142 different journals. Among these journals, the source that covers the topic of palliative care the most is BMC Palliative. It has been identified as Care . This journal is Journal of Palliative Care and Palliative & Supportive Care is following. When an evaluation is made from an institutional perspective, the institution that works the most on palliative care is King's College. It has been determined that London is the institution whose publications are cited the most. Again, King's College London . When the institutions were examined in terms of both citations and publications, it was determined that institutions from different countries were at the top. The fact that institutions from different countries were in the top five in palliative care shows the diversity of institutions that attach importance to the subject.

One of the most common types of analysis in bibliometric analysis is citation analysis [16]. The most cited study on palliative care is Anderson's (1996). It is seen that the most cited author among researchers is Meier, followed by Morrison . The fact that the majority of the most cited researchers on the subject are from America and that America has the most palliative care publications shows that America is the leading country in palliative care. On the other hand, the fact that there are 110 countries contributing to the palliative care literature shows that different countries also attach importance to the subject. From this perspective, it can be said that the importance of palliative care has been recognized by researchers from many countries and has spread to a wide geography.

Palliative care is not only about death, but also about living well with chronic diseases that limit life. The important point here is to support patients who are about to die or in the last stages of their lives according to the principles of the palliative care approach rather than considering them as "palliative." The basic values of palliative care are person-centeredness, quality of life and dignity, patient autonomy, and the provision of compassionate care based on needs (not diagnosis-based), coordination and continuity of care [17]. In this context, articles published on the subject of palliative were evaluated in terms of keywords. It was observed that the keywords used especially in recent years were similar to the basic values of palliative care. According to Corrin et al. [18], keywords express important words or concepts that represent the research focus and theoretical background of an academic study and allow readers to get a quick impression of what they will read in an academic article. In this study, it was observed that the keywords used in the articles on palliative care were palliative care, cancer, end-of-life care, quality of life, and in recent years, the keywords Covid-19, accessibility to health services, continuous professional development, health care use, digital health, virtual reality, adaptation, and competence were used. This situation shows that there has been a change in the content of the publications on palliative care in recent years. In particular, in addition to the keywords related to service quality such as development, competence, accessibility, it is seen that there are also keywords related to technology and information technology such as digital health, virtual reality. In this context, it can be stated that the topic of palliative care is also studied with different subheadings.

Limitations

The main limitation of this study is that only the Web of Science database was used. Another limitation is that the publication type included in the study was article and the preferred language was English. Another limitation is that the data set was analyzed with a single method.

Conclusion

Due to the changing demographic structure and increasing population in the world, the need for health services, especially palliative care services, is increasing day by day. Therefore, the subject of palliative care is increasingly gaining attention in literature. This research analyzes the articles on palliative care prepared in the field of health policy from a bibliometric perspective and provides summary and collective information to researchers and politicians interested in the subject. In line with the information obtained, researchers can be advised to conduct studies by including data obtained from databases such as Pubmed and Scopus. It is recommended that publications on palliative care examined in the health policy category be conducted in different categories and using different analysis methods such as meta-analysis and content analysis. In addition, researchers can be advised to conduct studies using different variables such as technology use and service quality together with palliative care in line with the current literature.

Conflict of interest : From the author's perspective interest conflict does not exist .

Author Contributions		Author Initials
SCD	Study Concept and Design	AY
NAME	Acquisition of Data	AY
AID	Analysis and Interpretation of Data	AY
DM	Drafting of Manuscript	AY
CR	Critical Revision	AY

Financial support: No financial support was received for this study.

Prior publication : This study has not been previously published or presented in a scientific program .

References

1. United Nations. Global Issues. population Available at: <https://www.un.org/en/global-issues/population#:~:text=Our%20growing%20population.and%202%20billion%20since%201998> (Access Date: November 4, 2024)
2. Aina FO, Fadare JO, Deji -Dada OO, Agbesanwa TA. increasing the burden of aging population on health services utilization : a myth or reality in a country with predominantly young population . *Aging Medicine and Healthcare*. 2021;12(2):41-5 <https://doi.org/10.33879/AMH.122.2020.07023>
3. Sleeman KE, Brito, M, Etkind S, Nkhoma K, Guo P, Higginson IJ, et al. The escalating global burden of serious health-related suffering: projections to 2060 by world regions, age groups, and health conditions. *Lancet*. 2019;7(7):e 883–92 [https://doi.org/10.1016/S2214-109X\(19\)30172-X](https://doi.org/10.1016/S2214-109X(19)30172-X)
4. Pivodic L, Smets, T, Gott M., Sleeman , KE, Arrue , B, Turanzas , MC, et al. Inclusion of palliative care in health resort Politics for older people : A directed documentary analysis in 13 of the most rapidly ageing countries worldwide . *Palliative Medicine* . 2020;35(2):1-20 <https://doi.org/10.1177/0269216320972036>
5. Peeler A, Afolabi O, Harding R. Palliative care is an overlooked global health priority . *B.M.J.* 2024 (1); 387:q 2387 <https://doi.org/10.1136/bmj.q2387>
6. Radbruch L, De Lima L, Knaut F, Wenk R, Ali Z, Bhatnagar S, et al. redefining palliative care -a new consensus-based definition . *J Pain Symptom Manage* . 2020 Oct;60(4):754-764 <https://doi.org/10.1016/j.jpainsymman.2020.04.027>
7. Temel JS, Greer JA, Muzikansky A, Gallagher ER, Admane , S, Jackson VA, et al. Early palliative care for patients with metastatic non–small-cell lung cancer. *N Engl J Med*. 2010;363(8):733-42 <https://doi.org/10.1056/NEJMoa1000678>
8. Rome RB, Luminais HH, Bourgeois IN, Blais CM. The role of palliative care at the end of life Ochsner J. 2011 Winter ;11(4) :348-52 <https://pubmed.ncbi.nlm.nih.gov/articles/PMC3241069/>
9. Anderson RE, Grant L. What is the value of palliative resort provision in low-resource settings ? *BMJ Globe Health* . 2017;14(2):1-3e000139 doi : [10.1136/bmjgh-2016-000139](https://doi.org/10.1136/bmjgh-2016-000139)
10. Luta X, Ottino B, Hall P, Bowden J, Wee B, Dronay J, Riley J, Marti J. Evidence on the Economical value of end -of-life and palliative resort interventions : a narrative review of reviews . *BMC Palliat Care* . 2021;20(89):1-21 doi: [10.1186/s12904-021-00782-7](https://doi.org/10.1186/s12904-021-00782-7)
11. Stjernsward J, Foley KM, Ferris FD. integrating palliative resort into national policies . *JPSM*. 2007;33(5):514-20 [https://www.jpsmjournal.com/article/S0885-3924\(07\)00154-6/fulltext](https://www.jpsmjournal.com/article/S0885-3924(07)00154-6/fulltext)
12. Cavmak S, Cavmak D. [Historical development of health services in Turkey and health transformation program] (in Turkish). *Journal of Health Management*. 2017;1(1):48-57 <https://dergipark.org.tr/tr/pub/saglik/issue/30164/337586>
13. Gokbunar AR, Ugur A, Duramaz S. [The public interest policies of the decreasing in health spending for elderly population] (in Turkish). *The International Journal of Economics and Social Research* . 2016;12(1):109-22 <https://dergipark.org.tr/en/download/article-file/528549>
14. Reville B , Foxwell AM. The global state of palliative care-progress and challenges in cancer care *APM*. 2014;3(3):129-38 <http://dx.doi.org/10.3978/j.issn.2224-5820.2014.07.03>
15. Rally SP. What are Journals for ?*Ann R Coll Surg Engl* . 2015;97(2):89-91. doi : [10.1308/003588414X14055925061397](https://doi.org/10.1308/003588414X14055925061397)
16. Aria M, Cuccurullo C. Bibliometrix : an r- tool for comprehensive science mapping analysis . *Journal of Informetrics* . 2017;11(4):959-75 <https://doi.org/10.1016/j.joi.2017.08.007>
17. Lieve Van den Block The need for integrating palliative care in aging and dementia policies . *European Journal of Public Health* . 2014;24(5):705–6 <https://doi.org/10.1093/eurpub/cku084>
18. Corrin L, Kate Thompson K, Hwang GJ, Lodge JM. the importance of choosing the right keywords for educational technology publications. *AJET*. 2022;38(2):1-8 <https://ajet.org.au/index.php/AJET/article/view/8087/1884>