

## Review Article

# Analysis of International Scientific Production Of Nursing Elderly With Cancer in Palliative Care: Bibliometric Study

### ABSTRACT

**AIMS:**to analyze and map the international production on Nursing Care for the elderly with cancer in palliative care, between 2000 and July 2021. **METHODS:** this is a descriptive, exploratory and mixed-approach study that can be classified both a bibliometric and scientometric research. Data collection took place from June to July 2021, in the Scopus (Elsevier) database. After defining the inclusion and exclusion criteria, the collection began, which resulted in the final sample consisting of 198 publications. After the entire selection process, the dataset was saved in a single file in CSV Excel format, where it was later exported to the VOSviewer® software. **RESULTS:**it was shown that most selected publications are concentrated between the years 2019 with 44 (22.22%) publications, 2018 with 37 (18.69%) publications. The United States of America appears as the country with the largest majority of co-authors, with 81 (40.91%) documents and 750 citations, and the first 15 authors who most published on the subject are from the United States of America, followed by authors from Canada and Sweden. **CONCLUSION:**This review article showed that publications covering the subject are still limited when related to nursing. However, despite the few existing publications, there has been a growing increase in the quantity of publications over the years, which indicates the relevance that the topic has gained in the academic world.

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*Keywords: Nursing. Nursing Assistance. Elderly. palliative care*

### 1. INTRODUCTION

Brazil is experiencing a process of demographic transition, where there is a drop in rates that together with a decrease in the mortality rate, drive the aging of the population. As a result, there is an increase in deaths in the elderly group, mainly related to diseases resulting from ageing, as well as the predominance of chronic and degenerative diseases. Therefore, there is a need to change health services, moving away from the curative model to more preventive care, in order to guarantee improvements in the quality of life of this population [1].

The increase in the elderly population entails changes in health services, because with advancing age, many elderly people are affected by some Chronic

Noncommunicable Disease (NCD). NCDs are disabling diseases that, combined with the vulnerabilities brought with old age, lead to the loss of autonomy and independence of this social group, making it susceptible to disabilities. Among the NCDs that most affect the elderly is cancer, which has a higher incidence in the male population [2].

Advanced age is one of the risk factors for cancer, and in Brazil, there is an increase of up to four times more in the incidence and prevalence rates of cancer in the elderly population, thus demonstrating the delay in the diagnosis of this disease. Malignant neoplasms were responsible for approximately 300,000 deaths in 2015, with approximately 69% affecting the elderly [3].

Faced with this scenario, Palliative Care (PC) emerges as an innovative form of care, which acts commonly used in the patient's end-of-life process and aims at comprehensive care through interventions that integrate the physical, psychological, spiritual aspects, social and natural. In this principle, in order to reduce the suffering of patients, who no longer have any means of treatment, the PC act in the comfort and relief of patients and their families [4-5].

Given this context, nursing is one of the main professions in carrying out PC, as it works in direct contact with patients for a long period. Thus, it can identify the patient's needs to carry out interventions using the palliative care precept. In this way, nursing works to relieve symptoms that are no longer treated and especially in the bond between patient, family and health team, as it interacts and seeks the best form of intervention through PC [6].

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Therefore, in view of this, the need arose to investigate the gaps in the international literature on the theme proposed by the researchers, since the theme is extremely relevant for the practice of nursing and for better health care for the elderly with cancer in the process of death. \_ Therefore, this study aims to analyze and map the international production of "Nursing care for the elderly with cancer in palliative care", from 2000 to July 2021.

## 2. MATERIAL AND METHODS

This is a descriptive study (since it intends to investigate the phenomena and their relations with the researched object), exploratory (since it seeks to expand the theoretical framework on the proposed theme), with a mixed approach (qualitative and quantitative) and can be classified as a bibliometric and scientometric survey as it includes tables and graphs to show descriptive statistics and uses advanced text analysis and network analysis to reveal hidden patterns in the content of abstracts regarding relationships between terms.

**Bibliometric studies help** in the understanding of new themes, enabling the identification of trends for future research, being anchored in three basic Laws: Bradford's Law (which deals with the journals that publish the most on a given topic); Lotka's Law (which addresses the authors who produce the most in a given

**Comment [BH2]:** Cancer is more likely to happen in people who are older, and in Brazil, the rates of cancer in older people are up to four times higher than in younger people. This shows how long it takes to diagnose this disease.

**Comment [BH3]:** Faced with this scenario, palliative care (PC) emerges as an innovative form of care that is commonly used in the patient's end-of-life process and aims at comprehensive care through interventions that integrate the physical, psychological, spiritual, social, and natural aspects. In accordance with this principle, in order to reduce the suffering of patients who no longer have any means of treatment, the PC acts for the comfort and relief of patients and their families.

**Comment [BH4]:** Given this context, nursing is one of the main professions involved in carrying out PC, as it involves working in direct contact with patients for a long period of time. Thus, it can identify the patient's needs for carrying out interventions using the palliative care precept. In this way, nursing works to relieve symptoms that are no longer treated, especially in the bond between patient, family, and health team, as it interacts and seeks the best form of intervention through PC.

**Comment [BH5]:** because it intends to investigate the phenomena and their relationships to the investigated object

**Comment [BH6]:** since it seeks to expand the theoretical framework on the proposed theme.

area of knowledge) and Zipf's Law (which presents the correlation between the number of words in a given text and the frequency of these same words) [7].

Scientometric studies, on the other hand, focus on the evaluation of scientific production and are not based on non-scientific or empirical texts and works, focusing fundamentally on the measurement of science [7].

The guiding question of this study was elaborated according to the PICO strategy (P: Patient, I: Intervention, Co: Context) "how is the nursing care provided to patients with cancer in palliative care between the years 2000 to July 2021? Data collection took place from June to July 2021 through institutional online access to the CAPES Periódicos Portal, in the Scopus database (Elsevier). Scopus is considered the largest database of citations and abstracts of academic literature, covering scientific journals, books and conference articles (SANTOS et al., 2017). To conduct the search for productions relevant to the proposed theme, a combination of the following MeSH (Medical Subject Headings) was used: "Nursing", "Elderly", "Cancer" and "Palliative Care", all mediated by the Boolean operators "And" and /or or".

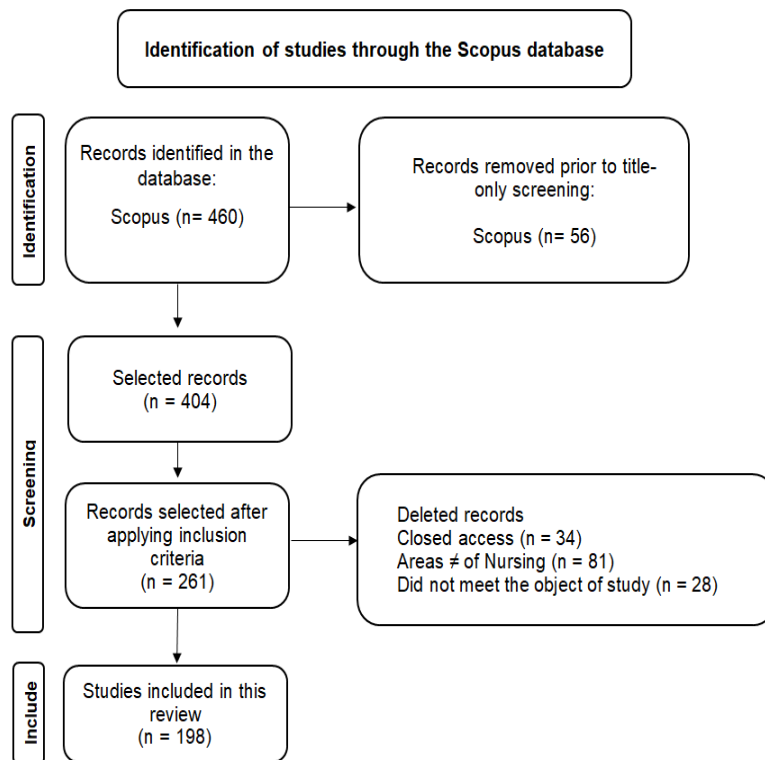
The following variables were used for data analysis: 1) Citation information (Author; Author(s) ID; Document title; Year; EID; Source Title; Volume, Pages; Citation count; Source and type of document; Publication stage; DOI and Open access); 2) Bibliographic Information (Affiliations; Serial Identifiers (eg, ISSN); PubMed ID; Publisher; Original Document Language); 3) Abstracts; author keywords and indexed keywords; 4) references of selected studies.

After the selection stage and combination of descriptors with keywords, the following inclusion criteria were established: full text available in the database, original and review articles (integrative, bibliometric and systematic) available in full in Portuguese, English and Spanish, articles published between 2000 and July 2021 that addressed the topic in question in a manner relevant to the proposed object of study. The following exclusion criteria were used: texts that are unavailable or have restricted access, theses, dissertations, letters to the editor or works that do not satisfactorily deal with the subject.

Once the pre-established criteria were defined, the search began in the said database, which resulted in 460 publications. After this moment, the title and abstract were previously read. However, after applying the filters, the final sampling resulted in 198 publications, as shown in figure 1, below:

**Figure 1:** Selection process of the selected articles, adapted from the PRISMA 2020 Flow Diagram, Belém-Pará, Brazil.

**Comment [BH7]:** The following variables were used for data analysis: 1) Citation information (author; author(s) ID; document title; year; EID; source title; volume; pages; citation count; source and type of document; publication stage; DOI and open access); 2) Bibliographic Information (Affiliations; Serial Identifiers (e.g., ISSN); PubMed ID; Publisher; Original Document Language); 3) Abstracts; author keywords and indexed keywords; and 4) references from selected studies.



Source: research authors, 2021.  
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After the entire selection process of the included studies had elapsed, the data set was saved in the cloud (online drive), in a single file in CSV Excel format, where it was later exported to the VOSviewer® software (version 1.6.6). It is worth mentioning that VOSviewer® is a tool that creates co-citation networks from the analysis of documents and articles from a database such as Web of Science, PubMed and Scopus [8].

This bibliometric mapping with a quantitative approach allowed the visualization of several bibliometric aspects of scientific publications, carried out in the form of different networks, with emphasis on the analysis and visualization of large sets of bibliographic data from a distance approach. Therefore, the nodes of the bibliographic network are placed in such a way that the distance between them approximately indicates their relationship according to certain aggregation criteria, forming a map [9].

In addition, Microsoft Excel was also used to carry out the descriptive statistics of the results. Because it is a study that uses secondary data and is freely available in a data repository, there was no need for submission to the Research Ethics Committee.

### 3. RESULTS AND DISCUSSION

198 publications were identified, distributed in 48 journals and with publications in 46 countries. First, in relation to the year, it was evidenced that most of the selected publications are concentrated between the years 2019 with 44 (22.22%) publications, 2018 with 37 (18.69%) publications, 2016 and 2015 with 20 (10.10%) publications respectively, 2017 with 19 (9.60%) publications and 2014 with 17 (8.59%) publications on the subject (Fig. 2-a).

With regard to publications by co-authorship and country, taking into account at least 1 document with 5 citations per co-author, the division into 7 clusters was observed, as follows: 1st) Red Cluster: composed of 6 countries (Belgium; Germany; Ireland; Italy ; Netherlands and Switzerland); 2nd) Cluster Verde: composed of 6 countries (Bhutan; Botswana; Colombia; France; Turkey and the United States); 3rd) Dark Blue Cluster: composed of 3 countries (China; Hong Kong and South Korea); 4th) Yellow Cluster: composed of 3 countries (United Kingdom; Canada and Iceland); 5th) Cluster Lilac: composed of 3 countries (Mexico, Portugal and Spain); 6th) Light Blue Cluster: composed of 3 countries (Australia; Norway and Switzerland) and 7th) Orange Cluster: composed of 2 countries (Denmark and Lithuania). The results show overlapping countries, which shows us a growing trend of countries researching the topic in the field of Nursing.

The United States of America was evidenced as the country with the highest number among all the others, indicating that most of the co-authors are from that country with 81 (40.91%) documents and 750 citations, followed by the United Kingdom with 18 (9.09%) publications and 195 citations, Canada with 13 (6.57) documents and 195 citations, followed by Australia with 13 (6.57%) documents and 118 citations, Sweden with 12 (6.06%) publications and 205 citations and Japan with 10 (5.05%) documents and 113 citations, thus forming the countries with up to 10 publications (Fig. 2-b).

As for the distribution of the most cited publications and the relationship with the institution of the authors and co-authors, we evidenced the formation of 3 clusters, distributed as follows: 1st) Red Cluster: composed of 10 Health Learning institutions; University of Pennsylvania Department of Medicine; Division of Malignancy and Cell Therapy; Division of Medical Oncology; MorraOssea Hematology and Transplantation Unit; Institute of Health and Biomed; Queensland School of Nursing; University of Pennsylvania) 2nd) Green Cluster: composed of 7 institutions ( Calvary Health Care Kogarah; Department of Hematology/Oncology; Division of Hematology/Oncology; Duke Fuqua School of Business; Impact Faculty of Health; Palliative Medicine Service; School of Medicine) and 3rd) Blue Cluster: composed of 5 Institutions (Abramson Cancer Center; Cleveland Clinic; College of Nursing and Health; Department of Epidemiology and Biostatistics of Philadelphia; Section of Hematology-Oncology), the overlapping of institutions in the image shows a number of trends institutions that research the subject (Fig. 2-c).

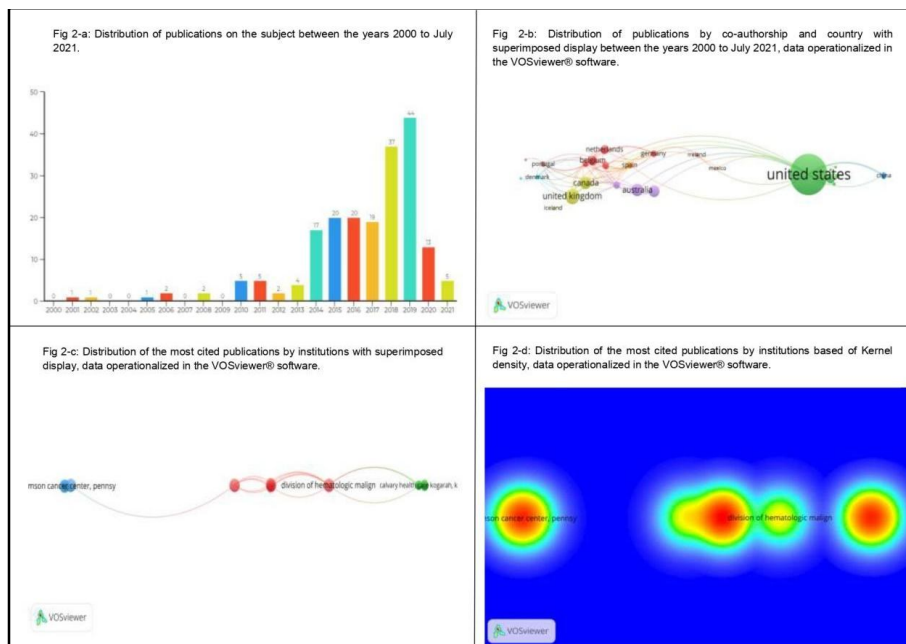
Affiliation institutions play a key role for researchers by supporting them in many ways, as researchers' performance is an important component of the institution's performance and, as evidenced in this study, the authors with the highest number of publications come from institutions different, a fact that highlights the heterogeneity of publications on the subject with regard to institutions.

**Comment [BH8]:** One hundred and ninety-eight (198) publications were identified, distributed in 48 journals, and published in 46 countries. First, in relation to the year, it was evidenced that most of the selected publications are concentrated between the years 2019 with 44 (22.22%) publications, 2018 with 37 (18.69%) publications, 2016 and 2015 with 20 (10.10%) publications, 2017 with 19 (9.60%) publications, and 2014 with 17 (8.59%) publications on the subject.

**Comment [BH9]:** As for the distribution of the most cited publications and the relationship with the institution of the authors and co-authors, we evidenced the formation of 3 clusters, distributed as follows: 1st) Red Cluster: composed of 10 health learning institutionse relationship with the institution of the authors and co-authors, we evidenced the formation of 3 clusters, distributed as follows: 1st) Red Cluster: composed of 10 health learning institutions (University of Pennsylvania Department of Medicine; Division of Malignancy and Cell Therapy; Division of Medical Oncology; Morra Ossea Hematology and Transplantation Unit; Institute of Health and Biomed; Queensland School of Nursing; University of Pennsylvania) The second Green Cluster is made up of 7 institutions (Calvary Health Care Kogarah; Department of Hematology/Oncology; Division of Hematology/Oncology; Duke Fuqua School of Business; Impact Faculty of Health; Palliative Medicine Service; School of Medicine); and the third Blue Cluster is made up of 5 institutions (Abramson Cancer Center, Cleveland Clinic, College of Nursing and Health, Department of Epidemiology and Biostatistics of Philadelphia, Section of Hematology-Onc

Furthermore, we can also observe the geothermal density in the color prism of publications by Institutions (Fig. 2-d). For better visualization, the data are expressed in figure 1 below.

**Figure 2: Analysis of the distribution by year of publication, co-authorship by countries, authors and density of selected publications, Belém-Pará, Brazil.**



Source: research authors, 2021.

With regard to Lotka's Law, it was possible to observe that the first 15 authors who published the most on the subject are from the United States, followed by authors from Canada and Sweden. Regarding the metrics, we observed that the authors are distributed by the H index in terms of citation and distributed according to their institutional affiliation.

It is observed that author Bruera, ED has 5 (2.53%) publications on the subject and holds the H-101 index, a fact that makes it stand out from the others, as it is considered high. Then, the author Kamal, AH also has 5 (2.53%) publications, with an H-29 index, followed by the authors Currow, DC and Furst, CJ with 4 (2.02%) publications and factor H-60 and H-30, respectively. It is noteworthy that the author Adolfsson, J has only 2 (1.01%) publications on the subject, but has the H-66 index, as can be better observed in Table 1, below.

**Comment [BH10]:** With regard to Lotka's Law, it was possible to observe that the first 15 authors who published the most on the subject were from the United States of America, followed by authors from Canada and Sweden. Regarding the metrics, we noticed that the distribution of the authors according to their institutional affiliation and the H index in terms of citations.

**Table 1: Distribution of authors with the highest number of publications on the subject, frequency, H index, and country of affiliation (Lotka Law), Belém-Pará, Brazil.**

Nº.	Authors	f*	H index	Country	Institution
1	Bruera, ED	5	H-101	USA	University of Texas
two	Kamal, AH	5	H-29	USA	Duke Cancer Institute
3	Currow, DC	4	H-60	Australia	Flinders University
4	Furst, CJ	4	H-30	Sweden	Institutionen för Kliniska Vetenskaper
5	Axelson, B.	3	H-16	Sweden	Unit of Clinical research center
6	Deliens, L.	3	H-56	Belgium	University of Gent
7	Dione-Odom, JN	3	H-19	USA	The University of Alabama at Birmingham
8	Fassbender, K	3	H-20	Canada	Cross Cancer Institute
9	Filbet, M	3	H-18	France	Center Hospitalier Lyon-Sud
10	Seow, H	3	H-25	Canada	mcmaster university
11	Sjogren, P	3	H-51	Denmark	Rigshospitalet
12	Abernethy, AP	two	H-66	USA	Food and Drug Administration
13	Adolfsson J	two	H-53	Sweden	Karolinska Institutet
14	Audibin, M.	two	H-31	Canada	Université Laval
15	Bakitas, MA	two	H-27	Singapore	Duke-NUS Medical School Singapore

f\*=frequency

Source: research authors, 2021.

With regard to the most cited publications, we observed that the article with the highest number of citations is from 2006 with 131 citations, published in the journal "Nursing Ethics", which is the most cited among the 198 publications. Then comes a publication from 2013 with 88 citations, published in the journal "Oncology Nursing Forum" and thirdly, a publication from 2015 with 58 citations, published in the "Journal of Pain and Symptom Management". For a better visualization and understanding of the most cited articles, the data are shown in Table 2 below.

**Table 2: Distribution of the 15 most cited articles in terms of year, title, authors, journal, impact factor and number of citations, Belém-Pará, Brazil.**

Nº	Year	Title	Authors	Magazine	Impact factor	Nº. citations
1	2006	Views on Dignity of Elderly Nursing Home Residents	Franklin LL, Britt-Ternstedt, Nordenfelt L.	Nursing Ethics	2,874	131
2	2013	Family caregiver burden, skills preparedness, and	Grant M, Sun V, Fujinami R, Sidhu R, Otis-Green S, Juarez	Oncology Nursing Forum	2.172	88

			quality of life in non-small cell lung cancer	G, Klein L, Ferrell B.			
3	2015		What Is Different About Patients With Hematologic Malignancies? A Retrospective Cohort Study of Cancer Patients Referred to a Hospice Research Network	LeBlanc TW, AP, Abernethy, Casarett DJ.	Journal of Pain and Symptom Management	3.612	58
4	2014		Advance Care Planning and Physician Orders in Nursing Home Residents With Dementia: A Nationwide Retrospective Study Among Professional Caregivers and Relatives	Vandervoort A, Houttekier D, Van den Block L, Van der Steen JT, Stichele RV.	Journal of Pain and Symptom Management	3.612	50
5	2015		Different experiences and goals in different advanced diseases: Comparing serial interviews with patients with cancer, organ failure, or frailty and their family and professional carers	Kendall M, Kendall M, Lloyd A, Kimbell B, Cavers D, Buckingham S, Boyd K, Grant L, Worth A, Pinnock H, Sheikh A, Murray SA.	Journal of Pain and Symptom Management	3.612	49
6	2014		Risk factors for loneliness in patients with cancer: A systematic literature review and meta-analysis	Deckx L, Van den Akker M, Buntinx F.	European Journal of Oncology Nursing	2,398	48
7	2015		Association between early palliative care referrals, inpatient hospice utilization, and aggressiveness of care at the end of life	Amano K, Morita T, Tatara R, Katayama H, Uno T, Takagi I.	Journal of Palliative Medicine	2,947	47

8		2001	Nurses' knowledge of pain in the elderly	Sloman R, Ahern M, Wright A, Brown L	Journal of Pain and Symptom Management	3,612	45
9		2014	Comparing unmet needs between community-based palliative care patients with heart failure and patients with cancer	Kavalieratos D, Kamal AH, Abernethy AP, Biddle AK, Carey TS, Dev S, Reeve BB, Weinberger M	Journal of Palliative Medicine	2,947	37
10		2015	Care management by oncology nurses to address palliative care needs: A pilot trial to assess feasibility, acceptability, and perceived effectiveness of the CONNECT intervention	Schenker Y, White D, Rosenzweig M, Chu E, Moore C, Ellis P, Nikolajski P, Ford C, Tiver G, Mccarthy L, Arnold R	Journal of Palliative Medicine	2,947	35
11		2015	Managing interview end of life medications at home-accounts of bereaved family carers: A qualitative study	Payne S, Turner M, Seamark D, Thomas C, Brearley S, Wang X, Blake S, Milligan C	BMJ Supportive and Palliative Care	3,568	31
12		2010	Pain and Its Treatment in Older Nursing Home Hospice/Palliative Care Residents	Hanlon JT, Perera S, Sevick MA, Rodriguez KL, Jaffe EJ	Journal of the American Medical Directors Association	4,669	29
13		2019	A Novel Palliative Care Approach Using Virtual Reality for Improving Various Symptoms of Terminal Cancer Patients: A Preliminary Prospective, Multicenter Study	Niki K, Okamoto Y, Maeda I, Mori I, Ishii R, Matsuda Y, Takagi T, Uejima E	Journal of Palliative Medicine	2,947	28
14		2012	Coordinate My Care:	Smith C, Hough L,	BMJ	3,568	28

			A clinical service that coordinates care, giving patients choice and improving quality of life	Cheung CC, Millington-Sanders C, Sutton E, Ross JR, Thick M, Riley Dr J	Supportive and Palliative Care		
15	2011	Evaluation of a Continuous Quality Improvement Initiative for End-of-Life Care for Older Noncancer Patients	Woo J, Cheng JOY, Lee J, Lo R, Hui E, Lum CM, Or KH, Yeung F, Wong F, Mak B	Journal of the American Medical Directors Association	4,669	28	

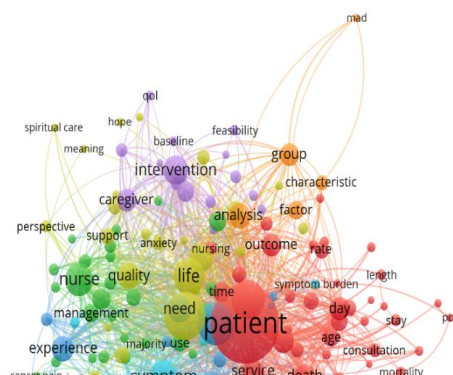
Source: research authors, 2021.

With regard to the keywords present in the included studies, these were analyzed regarding the title and abstract of the publications. From the analysis using the VOSviewer® software, it was observed that the authors used a total of 5,001 keywords, and of this total, 185 words were repeated at least 10 times, creating a co-occurrence map with 8 grouping clusters.

In VOSviewer® each circle represents a network node and the size of the node and the item indicate the frequency of occurrence of a keyword and their relationship is stronger the closer they are. In this way, the most frequent words determine the main theme of the body of documents, thus complying with Zipf's Law. In cluster 1 (red color), the largest nodes are observed, which indicate the words with the highest frequency of occurrence of the keywords in the documents of this sample.

Among the keywords that were cited most often in the selected publications, the 20 most used with  $n \geq 10$  were the following: "patient (n= 737)"; "cancer (n = 291)"; "care (n=227)"; "palliative care (n=199)"; "life (n=179)"; "symptom (n=145)"; "nurse (n=142)"; "intervention (n=117)"; "cancer patient (n=106)"; "need (n= 98)"; "quality (n=94)"; "treatment (n=91)"; "experience (n=90)"; "service (n=90)"; "death (n=85)"; "pain (n=84)"; "hospital (n=83)"; "disease (n=77)"; "caregiver (n=74)" and "assessment (n=63)".

**Figure 3: Map of the co-occurrence network of keywords in the selected studies, operationalized in the VOSviewer® software (Zipf's Law), Belém-Pará, Brazil.**



**Table 1. Physical, chemical and biological properties of experimental soil (0-20 cm)**

Particulars	Value	Methods
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Each figure should have a caption. The caption should be concise and typed separately, not on the figure area. Figures should be self-explanatory. Information presented in the figure should not be repeated in the table. All symbols and abbreviations used in the illustrations should be defined clearly. Figure legends should be given below the figures.] A sample figure is given in figure 1.

Source: research authors, 2021.

In reference to the Bradford Law, it was observed that the journal with the highest number of published articles was the "Journal of Palliative Medicine" with 49 (24.75%) of the publications, being a journal of medicine and nursing, considered as a reference in the theme, with a good Impact Factor. Following, the "Journal of Pain and Symptom Management" appears with 19 (9.60%) publications, the journal "International Journal of Palliative Nursing" appears with 15 (7.58%) publications, respectively.

**Table 3: Distribution of journals with a score  $\geq 2$  that published on the subject between 2000 and July 2021 (Bradford Law), Belém-Pará, Brazil.**

Nº	Periodical	f	%	Study area	Impact factor	Citation score	SJR 2020	SNIP	QUALIS-CAPES
1	Journal of Palliative Medicine	49	24.75 %	General Nursing	2,947	3.3	0.986	1.12	TO 1
2	Journal of Pain and Symptom Management	19	9.60%	General Nursing	0	5.7	1,438	1,609	TO 1
3	International Journal of Palliative Nursing	15	7.58%	Advanced Nursing	0.72	1.4	0.425	0.628	B3
4	European Journal of Oncology Nursing	15	7.58%	Oncology Nursing	2,398	3.1	0.755	1,092	TO 1
5	BMJ supportive & palliative care	13	6.57%	Oncology Nursing	3,568	4.8	0.779	1.117	W/I*

6	Oncology Nursing Forum	12	6.06%	General Medicine	1,728	2.8	0.658	0.828	TO 1
7	Clinical Journal of Oncology Nursing	7	3.54%	Oncology Nursing	1,224	1.7	0.375	0.444	TO 1
8	Cancer Nursing	6	3.03%	Oncology Nursing	2,592	3.7	0.790	1.008	TO 1
9	Journal of Advanced Nursing	6	3.03%	General Nursing	3,187	4.2	0.948	1.443	TO 1
10	Palliative and Supportive Care	5	2.53%	General Nursing	2,257	3.1	0.786	1.081	
11	Geriatrics and Gerontology International	3	1.52%	Gerontological Nursing	2.73	4.4	0.823	1.168	A2
12	Journal of the American Medical Directors Association	3	1.52%	General Nursing	4,669	8.0	1.84	2.03	TO 1
13	Seminars in Oncology Nursing	3	1.52%	Oncology Nursing	2,315	2.7	0.596	0.753	W/I*
14	Zeitschrift fur Gerontologie und Geriatrie	3	1.52%	Geriatrics and Gerontology	1,281	1.6	0.361	0.640	W/I*
15	Home Health Care Services Quarterly	two	1.01%	Community Nursing and Home Care	1.110	1.3	0.408	0.582	W/I*
16	Journal of Clinical Nursing	two	1.01%	General Nursing	3.036	4.1	0.940	1.479	TO 1
17	Journal of Hospice and Palliative Nursing	two	1.01%	General Medicine	1,477	1.4	0.457	0.610	A2
18	Journal of Oncology Practice	two	1.01%	Oncology Nursing	3.84	4.6	1.555	W/I*	W/I*
19	Medicine Palliative	two	1.01%	Oncology Nursing	W/I*	0.2	0.190	0.249	W/I*
20	Nursing Ethics	two	1.01%	Nursing, Issues, Ethics and Legal Aspects	2,874	3.6	0.85	1.434	TO 1
21	Pain Management Nursing	two	1.01%	Advanced Nursing	1929	2.6	0.557	0.921	TO 1
22	Magazine with 1 Publication	25	12.63%	-	-	-	-	-	-

\*= Frequency

N/I\*= No Information

Source: research authors, 2021.

From the analysis of the selected studies, it was observed that the publications that made up this bibliometric review addressed 4 large distinct thematic groups: 1) Nursing Diagnoses Observed in Elderly People with Cancer in Chemotherapy Treatment; 2) Nursing Interventions for the Elderly with Cancer in Palliative and Family Care and 3) Nursing Assistance for the Elderly with Cancer in the End of Life Process at Home; 4) Main Depressive Symptoms Evidenced in the Literature for Elderly People with Cancer in Palliative Care.

In this study, it was observed that the scientific production about nursing care for the elderly with cancer in palliative care still presents a little expressive quantitatively, but that has been in constant growth since the 2000s, with the decade from 2010 to 2020 having the greatest production indexes on the theme (Fig. 2-a). Such findings corroborate the study carried out in Brazil, where the authors state that the largest number of Brazilian nursing publications on the subject occurred between the years 2016 and 2019 [10].

With regard to the co-authorship network by country, the United States (green cluster) is the largest producer of scientific articles on the subject, showing a very strong close relationship with co-authors from the United Kingdom, China, Australia and Canada ( Fig. 2-b). In the network view, each item is represented by circles or labels and the size of each circle is determined by the number of citations made, therefore, the number of citations, the larger the circle and the closer two clusters are with each other, the stronger their relationships [11].

Regarding the 15 authors who published the most on the subject in Scopus, it was observed that they have an H index with a minimum score of  $\geq 16$ , which shows that they are renowned researchers in the academic world and with a high rate of citations in their publications. The H index of a researcher is defined as the number of articles published by the researcher, which obtain citations greater than or equal to this number. Therefore, when we say that a researcher's H-index is ten, it means that he has at least ten articles published, each of them with at least ten citations [12].

Regarding the most cited articles, we observed that only 1 publication exceeded the number of more than 100 citations. This fact can be explained by being a study from the second half of the 2000s and serving as a theoretical basis for future publications that would appear on the subject.

The number of citations of an article, a metric widely used in academia, plays an important role in science when we are interested in seeing the consolidated influence of a particular scientist or institution on the progress of scientific knowledge over the years [13]. The number of citations of articles published in a given year increases more and more until a peak that usually occurs between the second and sixth years after its publication and from that period citations tend to decrease over time. over the years [14].

With regard to the network map created from the co-occurrence of the keywords, the term "Patient" stands out, the central theme of the established relationships. In this way, it was possible to characterize the literature, identifying the most used terms and expressions in the abstracts, keywords and titles of the network's publications. When considering the expressions that occur most in the literature and putting them together, it is possible not only to complement the

**Comment [BH11]:** Regarding the most cited articles, we observed that only 1 publication exceeded the threshold of more than 100 citations. This fact can be explained by the study being from the second half of the 2000s and serving as a theoretical basis for future publications that would appear on the subject.

already observed groupings, but also to obtain a relatively reliable approximation of the content of each grouping in terms of the object of analysis [9].

With regard to Bradford's Law, we observed that newspapers were approved for metrics such as Impact Factor, Cite Score, SJR and SNIP and QUALIS-Capes. The journal "Journal of Palliative Medicine" had the highest number of publications (n=49), corresponding to almost ¼ of the articles on the subject. It is also observed that publications are almost massively in Nursing journals, with an impact factor greater than 2 in most publications.

The SJR metric evaluates the scientific prestige of the journal, the SNIP checks the average number of citations of items recently published in the journal contextualized by area of knowledge, while the Cite Score evaluates the average number of citations of articles recent. With regard to QUALIS, this is a metric used with great importance in Brazil, this evaluation is carried out by Capes and undergoes an annual update process, the journals are framed in strata indicative of quality and are classified in A (A1 and A2, these being the highest), extract B (classified B1, B2, B3, B4, and B5) and extract C (the latter with zero weight [15-16].

Regarding the impact factor, this is an important metric used by journals around the world, serving as the main indicator to measure the quality and representativeness of international journals and being widely used. The Impact Factor (IF) is an important metric created by the Institute for Scientific Information/Thompson Scientific Reuters for journals indexed in its database and is published by the Journal Citations Reports (JCR), is efficient in assessing the quality of a journal, not being, however, useful in analyzing the scientific quality of an isolated article, a researcher or an institution [12].

Regarding the thematic groups, we observed that the 4 axes formed from the selected studies intersperse with each other, generally addressing the role of the Nurse to the elderly patient in palliative care. One of the principles of palliative care is to provide relief for pain and other symptoms and, in this context, nurses must have skills aimed at the systematic assessment of symptoms, systematizing their care assistance by correctly identifying the problems, listing the precise nursing diagnoses, and setting goals with the team, patients and family members, to act with effective interventions, always guaranteeing the dignity of the patient [17].

In her care practice, the Nurse uses the Systematization of Nursing Care (SAE) which consists of: use of adequate theory, patient history, planning (diagnosis, results and interventions), implementation and (re)evaluation of actions with the team. In this sense, nursing diagnoses (ND), which is a care tool based on international taxonomies, consist of collecting the patient's history and physical examination, identifying problems related to the diagnosis, solving them with nursing prescriptions [18].

Among these ND classifications, the NANDA International and the International Classification for Nursing Practice (CIPE) stand out, which provide standardized terminology for patient care, which facilitates communication between nurses and other health professionals. responsible for the team's decisions, and the resulting data and information can be used for planning and managing nursing care and preparing the care plan [19].

Thus, palliative care strategies must be individual, centered on the patient, establishing interaction with the family, aiming at comprehensive and holistic care. After identifying the ND, the nurse must outline her Nursing Interventions (IE),

starting at the time of diagnosis of the disease together with curative care and perpetuating throughout the treatment, managing pain control and all the global symptoms presented by the patient . The elderly diagnosed with cancer will probably only achieve a good quality of life with early recognition and implementation of palliative care [20].

In addition to the negative impacts of the pathology, with all its stigmas, changes in appearance, social life, basic activities of daily living and uncertainties with the treatment and impossibility of cure contribute negatively to the psychological status of the elderly. . Behavioral changes tend to isolation or social reclusion, and may even trigger severe anxiety and/or depressive disorders, transient or persistent, and often unnoticed by the professional or family look [21].

In addition, the diagnosis of cancer brings many doubts and insecurities for the elderly and their families, and psychiatric disorders may arise, characterized in two basic groups: anxiety and depression. Depression is one of the most difficult psychiatric problems to diagnose in cancer patients, as many symptoms of the pathology and side effects of the treatment overlap with the symptoms of this disorder, thus leading to underdiagnosis [11].

In this way, the nurse, in her professional practice, can offer favorable conditions for the well-being of the elderly beyond the possibility of cure, as well as provide comfort, basic and pathophysiological care, paying attention to the patient's anxieties, desires and wishes, experiencing and sharing moments of love, compassion, teaching him that it is possible to have a dignified death, offering holistic and humanized care, enabling a peaceful and dignified death is his right [22].

#### 4. CONCLUSION

After carrying out this review, we evidenced that the publications that cover the theme in the proposed time frame are still limited when related to nursing. However, despite the few publications that still exist, there is a growing increase in the number of publications over the years, which indicates the relevance that the topic has gained in academia. Despite the few publications in the database, it is noted that the publications are at a high level of quality when we observe the evaluation metrics of the selected studies.

We can also infer that the main research centers on the subject are found in countries such as the United States of America, the United Kingdom and Australia. Furthermore, the study reinforced that there are several gaps to be answered and deepened on the subject and that require scientific investigation. It is also worth noting the low number of publications on the subject and the performance of palliative nurses in Primary Health Care.

This study presents as contributions the indicative of the need for more studies on the subject, the findings allowed us to analyze and evaluate the world panorama of palliative nursing. Therefore, with the analyzed studies, it is concluded that there is a need for more investment in research to meet existing needs, discover new care strategies for the elderly in palliative treatment, in order to understand and remedy the existing obstacles in the provision of care.

**Comment [BH12]:** After carrying out this review, we found that the publications that cover the theme in the proposed time frame are still limited when related to nursing. However, despite the few publications that still exist, there has been a growing increase in the number of publications over the years, which indicates the relevance that the topic has gained in academia. Despite the few publications in the database, it is noted that the publications are of high quality when we observe the evaluation metrics of the selected studies.

**Comment [BH13]:** We can also infer that the main research centres on the subject are found in countries such as the United States of America, the United Kingdom, and Australia. Furthermore, the study reinforced that there are several gaps to be filled and deepened on the subject that require scientific investigation. It is also worth noting the low number of publications on the subject and the performance of palliative nurses in primary health care.

**Comment [BH14]:** This study contributes by indicating the need for additional research on the subject; the findings allowed us to analyse and evaluate the global landscape of palliative nursing. Therefore, with the analysed studies, it is concluded that there is a need for more investment in research to meet existing needs and discover new care strategies for the elderly in palliative treatment in order to understand and remedy the existing obstacles in the provision of care.

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