The scenario of scientific publication on palliative care in oncology over the last 5 years: a scoping review*

Cenário da publicação científica dos últimos 5 anos sobre cuidados paliativos em oncologia: revisão de escopo

Entorno de la publicación científica de los últimos cinco años acerca de los cuidados paliativos en oncología: revisión de blanco

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ABSTRACT
Objective: To identify the profile of studies published on palliative care in oncology and to analyze their levels of evidence. Method: A scoping review. Inclusion criteria: published in the last 5 years, in English, Portuguese or Spanish. Exclusion criteria: incomplete articles, paid for, or those without results. Results: The search resulted in 42,650 publications, where 341 remained after four selection steps. The largest number of publications was in 2015, with 32.55% of the total; 83% were classified as Recommendation Grade B, and 52% with Level of Evidence 2B. Uniprofessional production was more frequent with 67.74% of the publications; physicians were the authors in 93.26%, and nurses in 25.22% of the total articles. Conclusion: There are several articles on the subject, however they have low scientific evidence. Most of the production is uniprofessional, and nurses are the main authors of multiprofessional publications. A brief overview of the scientific publication on palliative care in oncology was performed, from which we can recommend integration among professionals for producing multiprofessional studies with better quality of scientific evidence to direct and improve healthcare.

DESCRIPTORS
Palliative Care; Neoplasms; Patient Care Team; Oncology Nursing; Review.
INTRODUCTION

In the last decades, there has been an increase in the life expectancy of the Brazilian population accompanied by the growing number of chronic diseases such as cancer, which is undoubtedly a public health problem, and especially in developing countries. About 600 thousand new cases of cancer are estimated for the next 2 years in Brazil\(^1\). Even with the technological advances associated with the therapeutic evolution, the mortality rate is still high. According to Globocan/IARC, the estimated number of deaths in 2012 alone was 8 million people worldwide\(^2\). This condition affects the ideal of healing and preservation of life for which health professionals are trained\(^3\).

In view of the above, there is a proposal to intervene in the current panorama of care offered, seeking the training of professionals who work in this area. To meet this demand, Palliative Care has emerged as an alternative to active patient care since the 1960s\(^4\). The World Health Organization published the first definition of Palliative Care only in 1990, which was revised in 2002.

"Palliative Care consist of the assistance promoted by a multidisciplinary team that seeks to improve the quality of life of patients and their families in face of a life-threatening disease, through the prevention and relief of suffering, early identification, impeccable assessment and management of the pain and of other physical, social, psychological and spiritual symptoms"\(^5\).

Thus, this theme came to be understood as care that should essentially rely on a multidisciplinary team.

On average, it is estimated that more than 20 million people worldwide need palliative care in the final phase of life\(^6\). This care approach has been gaining more and more space in communities; however, there is still a shortage of places and professionals prepared for this demand, perhaps due to cultural issues of ignorance and prejudice, since euthanasia is still confused with palliative care. The Brazilian National Academy of Palliative Care (ANCP – Academia Nacional de Cuidados Paliativos) recognizes the gap in the training of health professionals in Palliative Care, however it emphasizes that the coming years will bring a change in the current situation due to a public health need\(^7\). Based on these challenges, we can point out the need to analyze and compile scientific production on this context. This study aimed to identify the profile of studies published on palliative care in oncology and to analyze their level of evidence.

METHOD

Mixed research synthesis was used. The study design (a non-clinical survey) as described by Brun was integrated by applying the Problem, Concept and Context (PCC) methodology to guide data collection\(^8\). The PCC strategy is a mnemonic that helps identify key topics: Problem, Concept and Context. This strategy was adopted to address the research question of this scoping review\(^9\). A scoping study or scoping review is defined as a type of study that seeks to explore the main concepts of the subject in question, to ascertain the size, scope and nature of the study, condensing and publishing data in order to point out the gaps in existing research\(^10\).

In this study, the Problem consisted of characterizing the national and international scientific publication on palliative care in oncology; the Concept encompassed palliative care among all care settings; and the Context related to the number of publications, the recommendation grades and the levels of evidence of the studies, the professional area of the authors, whether the publications were uni or multiprofessional, the most researched subjects and the frequency of publications in the last 5 years. Combining the key topics of the PCC and the objectives of the study, the research question of this scoping review was: What are the characteristics of scientific publications on palliative care in oncology in the last 5 years?

PUBLICACIÓN SEARCH METHODS

The search for the scientific production was conducted in journals indexed in the MEDLINE/PubMed database. The defined criteria for selecting this database were: availability to browse articles on the web, presence of search engines with keyword support and the operator “and”, an up-to-date database and a reliable publication vehicle. Studies published in English were selected, as this is considered the preferred language for scientific publication in the health area. However, relevant studies published in Portuguese and Spanish in the database were also considered.

The electronic search was carried out in September 2016 using the keywords: Patient Care Team AND Palliative Care, Patient Care Team AND Oncology, Palliative Care AND Oncology in English and translated into Portuguese and Spanish. The inclusion criteria for articles were: articles published in the last 5 years; in English, Portuguese or Spanish, with at least two of these descriptors: Patient Care Team, Palliative Care and Oncology. The exclusion criteria were: incomplete articles, paid for, studies in the design phase or those without results or whose focus did not correspond to the research question.

SELECTION CRITERIA AND PROCEDURES

The selection of scientific articles was carried out according to four stages as described below. The first stage was the building of a search string formed by combining the previously mentioned descriptors, which were submitted to the related database. The filters were applied in the 2\(^{nd}\) Stage (availability of free and in-full texts; in English, Portuguese and Spanish; date of publication in the last 5 years), and the retrieved articles were initially stored in sequential order in a text document in Word software version 2016 of the Microsoft Office suite. Duplicate studies were only documented once. At this stage, titles and descriptors were read in order to verify whether the articles corresponded to the research question. From the articles selected in the previous stages, the 3\(^{rd}\) Stage was carried out...
by two reviewers who read the abstract, introduction and conclusion of each article to identify their relevance to this research and whether they met the inclusion or exclusion criteria. Finally, the pre-selected articles were read in full in the 4th Stage to more accurately identify their relevance to the research, and whether the inclusion and exclusion criteria were considered. In this last stage, relevant data were extracted for further analysis.

**Procedure for Data Extraction and Summarization**

Data extraction was carried out after reading the articles in full and applying the inclusion and exclusion criteria; it was performed by a single reviewer, who also filled out a spreadsheet which consisted of a table in Excel software, 2016 version of the Microsoft Office suite. The data in the order in which they were compiled into the database are summarized below: identification number; year of publication; language in which it was published; recommendation grades; level of evidence; type of study; authors’ profession (nurses, physicians, physiotherapists, nutritionists, psychologists, social workers, pharmacists, speech therapists, dentists, occupational therapists and others); type of production (uni or multiprofessional); main themes of the articles (pain, symptoms, bereavement/death/end of life, pediatrics, family/caregiver, spirituality/religion/faith, diagnosis/prognosis, complementary therapy, professional practice, professional training, food/nutrition, ethics/bioethics/moral/legislation, communication, chemotherapy, radiotherapy, surgery, survival, quality of life, home care, outpatient care, cost/savings).

The identification number was sequentially recorded according to the reading order of the articles and the data collection. The Recommendation Grades and the Levels of Evidence were analyzed and classified according to Phillips et al. The data were analyzed by descriptive statistics as absolute and relative frequencies. PSPP software version 3 (2007) was used for the analyzes.

**RESULTS**

The articles retrieved with the search descriptors and excluding duplicate studies corresponded to 42,650 articles. Of these, 42,596 were in English, 27 in Portuguese and 27 in Spanish. The search with the descriptors *Patient Care Team AND Palliative Care* retrieved 3,414 articles; with *Patient Care Team AND Oncology*, 7,321 articles; and with *Palliative Care AND Oncology*, 31,861 articles. The search with the descriptors in Portuguese and Spanish retrieved 27 articles each, and only for the respective combinations of Cuidados Paliativos AND Oncologia and Cuidados Paliativos AND Oncología.

After the screening with the descriptors in the database, 42,650 articles were retrieved; their analysis was then performed according to the described stages. Figure 1 specifies the results of each analysis stage following the PRISMA 2009 Flow Diagram model.

**Figure 1 – Diagram of the inclusion and exclusion process of studies – Porto Alegre, RS, Brazil, 2016.**
Regarding the language of the articles, 94.72% (323) were published in English, 4.11% (14) in Portuguese and 1.17% (4) in Spanish. For the year of publication, it was observed that the highest frequency of publications was in 2015 (32.55%, 111), and the 2 years with the lowest number of publications were 2016 and 2012, respectively, with 17.20% (59) and 13.49% (46). The amount of annual and cumulative production of the last 5 years is described in Figure 2.

The articles were analyzed in terms of quality and categorized by the Recommendation Grades and the Levels of Evidence, according to the classification developed by Oxford Centre for Evidence Based Medicine (11). According to the analysis of the articles, 82.99% (283) were classified as Recommendation Grade B, of which 51.91% (177) had Levels of Evidence 2B. Only 9.68% (33) of the articles reached the Recommendation Grade A, and only 3.81% (13) were classified as Levels of Evidence 1A. Table 1 presents the full result of the quality analysis and the study types of the articles included in this review. We can point out that the Cohort studies were the most frequent type of study among those included in this scoping review, corresponding to 207 (60.70%) of the total number of retrieved articles. Cohort Studies are also the most frequent among those with Levels of Evidence 2B, representing 94.91% of the articles classified in this Level of Evidence, as well as Recommendation Grade B, with 59.15% of the total articles.

![Figure 2 - Scientific production on palliative care in oncology from 2012 to September 2016 – Porto Alegre, RS, Brazil, 2016.](image)

Table 1 – Relationship between the recommendation grade, the level of evidence and the study type of the articles – Porto Alegre, RS, Brazil, 2016.

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RG = Recommendation Grades; LE = Levels of Evidence; MA = Meta-analysis; SR = Systematic Review; RCT = Randomized Clinical Trial; UCT = Uncontrolled Clinical Trial; CS = Cohort Study; CCS = Case-Control Study; CSS = Cross-Sectional Study; CSeS = Case Series Study; CD = Case Description; SO = Specialist Opinion.
The professional category of the authors of the articles was analyzed and the articles were produced by authors of a single profession (uniprofessional production), or by two or more professions (multiprofessional production). Uniprofessional production was more frequent among the total articles, corresponding to 67.74% (231), while multiprofessional corresponded to 32.26% (110). The professional category that published the most articles were physicians with 93.26% (318) of the total articles included in the study, followed by nurses who participated as authors in 25.22% (86) of all the included articles. Psychologists, although they participated as authors in a significantly lower number than the other previously mentioned professional categories, appear as the third professional category in frequency of authorship of the articles with 5.57% (19) of the total. Relating the professional category to the form of production resulted in physicians producing 95.45% of the total number of articles published in a multiprofessional manner. Although physicians make up the category with the greatest number of multiprofessional publications, when only analyzing medical publications it was evidenced that 66.98% of its production was uniprofessional, and 33.02% was multiprofessional. The category of nurses had a frequency of 81.40% of multiprofessional productions, representing 63.64% of the authorship of the total productions in a multiprofessional way. The production by professional category by uni and multiprofessional forms are described in Figure 3.

Figure 3 – Frequency of scientific publication on palliative care in oncology of each professional category related to the form of production – Porto Alegre, RS, Brazil, 2016.

An investigation of the most frequent themes of the articles included in this review was carried out based on dividing the main themes into 21 theme categories. As a result of the thematic analysis, we present the three most frequent themes among the articles: Professional Practices/Team, with a frequency of 277 reports (81.23%); Diagnosis/Prognosis, with frequency of 243 articles (71.26%); and Quality of Life, with a frequency of 191 articles (56.01%). The complete list of frequencies and the appearance percentages of each theme are presented in Table 2.

Table 2 – Frequency and appearance percentage of the main thematic categories among the articles – Porto Alegre, RS, Brazil, 2016.

<table>
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<th>THEME</th>
<th>FREQUENCY</th>
<th>PERCENTAGE</th>
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<tr>
<td>Professional Practices/Team</td>
<td>277</td>
<td>81.23%</td>
</tr>
<tr>
<td>Diagnosis/Prognosis</td>
<td>243</td>
<td>71.26%</td>
</tr>
<tr>
<td>Quality of life</td>
<td>191</td>
<td>56.01%</td>
</tr>
<tr>
<td>Symptoms</td>
<td>160</td>
<td>46.92%</td>
</tr>
<tr>
<td>Survival</td>
<td>122</td>
<td>35.78%</td>
</tr>
<tr>
<td>Bereavement/Death/End of Life</td>
<td>89</td>
<td>26.10%</td>
</tr>
<tr>
<td>Professional Training/Team</td>
<td>88</td>
<td>25.81%</td>
</tr>
<tr>
<td>Communication</td>
<td>68</td>
<td>19.94%</td>
</tr>
</tbody>
</table>

continue…
DISCUSSION

The first data that subsidizes the discussion is the considerable difference in the amount of publications in relation to the languages used; judging from the total number of articles included in this review, 94.72% (323) were published in English. This fact can be explained by numerous reasons, and one of them is that countries that have a more developed level of palliative care available and conduct more research in this area are mostly English-speaking countries.(13) This may also be related to the global trend(14) of using English as an international language in science, since studies point out that articles published in English receive more citations, and therefore they are more widely read, leading to more knowledge being disseminated on a larger scale, which leads researchers to search for periodicals and publications in the English language.

The first definition of palliative care was published by the World Health Organization (WHO) in 1990(15) and updated by the same institution in 2002(10). Based on these milestones, palliative care has been discussed and studied more expressively year after year, as can be seen from the growing curve in Figure 2 which highlights the number of publications per year in the last 5 years. In 2014, WHO published the Global Atlas of Palliative Care at the End of Life(13), globally releasing the importance and the deficit of palliative care provision around the world. The dissemination of a reference document published by one of the most internationally recognized health organizations may have boosted the peak of scientific publications in the year 2015, as shown in Figure 2. Similarly, the declining curve in 2016 can be explained by the fact that the search for the articles was carried out in September of that same year, excluding the last 3 months.

Analyzing together the Recommendation Grades, the Levels of Evidence and the Study Type, we obtained a higher frequency of publications on palliative care in oncology with Recommendation Grades B, Levels of Evidence 2B, and being Cohort study types, representing 49.26% (168) of the total number of articles included in this scoping review. One review article(16) tried to evaluate national publication on palliative care between 2000 and 2011, and presented a low strength of evidence of such publications as one of its conclusions, considering the development of new studies with better Recommendation Grades and Levels of Evidence as important. Similarly, international reviews point out gaps in the evidence base of research on palliative care, since they lack broader discourse of international development. The relative lack of interventionist research that demonstrates the efficacy and cost-effectiveness of palliative care limits the tools with which advocates can collaborate with international policymakers on this issue. Also, we suggest further studies with an interventionist approach in order to not only strengthen the scientific evidence, but also to provide professionals in the area with tools for formulating international policies(17).

Our results show that the professional categories of nurses and physicians are the areas that produce the most scientific articles on palliative care in oncology, which is in line with findings from other similar articles and similar objectives(18-19). As concluded from the investigation(18), the professional category that publishes the most in the scenario of palliative care is nursing, due to the very essence of the training of this category based on care. In turn, Medicine is the professional category that is included in all palliative care teams and plays a prominent role among publications in the area, highlighting physicians as the professionals who occupy the leading position in palliative care teams. This approach is refuted by authors who argue that, in addition to multiprofessional service being one of the principles of the palliative philosophy, the care of patients in palliative care requires much more than just clinical skills; it also requires inclusion of other professional categories on the team, making it interdisciplinary(5,18-19).
Also in relation to the professional categories, the production form of each category was also analyzed in considering both uni or multiprofessional articles. From this cross-sectional analysis, medicine is the category that most frequently had authorships of scientific production on palliative care in oncology, corresponding to 93.26% (318) of the total number of articles included in this study, and only one third of its production was carried out in a multiprofessional manner (33.02%). However, in the nursing category (which appears as the second with the highest number of publications), 25.22% (86) of the total articles included in this study were published in a multiprofessional way, corresponding to 81.40% of its total production. This means that nurses were involved as authors in the production of more than half the total number of multiprofessional articles published, accounting for 63.64% of the total of this form of scientific production. Nursing professionals not only present the majority of their publications as being multiprofessional, but they also make up the category that publishes the most in this format, which corroborates the training of the professional nurse for teamwork.

It is well known that the multiprofessional approach is one of the world’s principles of palliative care, thus, the importance and impact of this approach are well discussed. Studies show that poor communication between staff is a reality that can represent an obstacle to the good practice of palliative care, as well as including technologies to improve communication would not change this scenario if the teams are not aware of the importance of effective and formal communication for qualifying care. This conclusion makes us reflect that if multiprofessional production is scarce, it is also a representation of the care practice reality, in which each professional carries out their functions in isolation, without developing multi-professional communication. Another study goes further, discussing the successful experience of a multidisciplinary team of pediatric oncology in its investigation, who sought to share knowledge through effective communication and clearly outline their role in building singular care. Once again we delineate the parallel between practice and theory, care practice based on knowledge exchange adds quality to the care, in the same way as it prepares professionals for developing investigations and studies, implementing the scientific production.

Studies show that professionals identify the importance of the multiprofessional team, as well as report that multiprofessional teams specialized in palliative care tend to demonstrate greater humanization in the care process, recognizing the importance of comprehensive care. As mentioned, multiprofessional teams that work in an interdisciplinary manner achieve positive results for both professionals and users. This form of action generates internal movements that lead professionals to reflect on their own practice, giving them the opportunity of a new look at the care work and enabling the performance of synergistic action among the various care agents. This in turn transposes the importance of total knowledge to the context of the scientific community, and as emphasized in the literature, we can conclude that encouraging the scientific community for publications carried out in a multiprofessional way can leverage and qualify scientific production in palliative care based on the articulation between the various professional knowledge areas.

The analysis of the most frequent themes of the publications resulted in 277 appearances (81.23%) of the theme Professional Practices/Team. This category compiled articles dealing with aspects of the practice of practitioners and health teams in the area of palliative care in oncology, such as protocols used in the care practice, intervention methods, differentiated approaches, and care procedures focused on professional and team practice, among others. The team of professionals who attend oncological patients under palliative care suffers from work overload due to the care complexity; in fact this is one of the reasons that motivates researchers to develop studies with the team and their professional practice as the main theme, with the purpose of justifying professional resizing with scientific data. This seems to be the most frequent theme of the articles included in this study, precisely because qualified professional practice is developed based on scientific evidence, constituting a widely discussed concept of evidence-based health. The large number of investigations and studies carried out on Professional Practices/Team arises from the need to reflect and understand health work, culminating in the provision of quality care. Even in spite of the knowledge specificities of each professional area, health work should be carried out essentially as a team. A self-critical professional with scientific and empowered knowledge can intervene in order to deconstruct barriers within the services, ensuring that other health professionals, patients and families of patients understand the philosophy of palliative care, thus achieving quality care.

The theme Diagnosis/Prognosis had the second highest frequency, with 243 (71.26%) appearances among the total articles included. This thematic category covered articles which especially addressed the diagnosis of advanced, incurable or terminal cancer and/or the prognosis, development or course of evolution of malignant diseases. Studies on diagnosis and prognosis determine many important factors such as therapeutic plans, therapy choice, identification of associated factors, risk factors, and epidemiological and demographic data. Therefore, it is justified that this theme is among the most frequent, since studies that focus on Diagnosis/Prognosis as the main theme tend to be comprehensive, allowing the definition of several variables that add greater analysis and discussion power to an article. In the case of palliative care, there are many controversies about the continuity of interventions and therapeutic decisions; therefore, the complete study of the clinical history, the criteria for diagnosis and prognosis are extremely important factors for health professionals.
With 191 appearances (56.01%), the third most frequent topic among the articles included in this Scoping Review is Quality of life. This thematic category supports articles that discuss the quality of life, its related factors and its impact in the context of palliative care in oncology. Palliative care has the promotion of quality of life\(^{(31)}\) focused on the patient and not on the disease as its main objective. Thus, it is understood that the quest to achieve this goal involves controlling pain and other symptoms, effective communication with the patient and their family, support during the grieving and end of life process, and spiritual assistance, among other topics categorized in this study as main themes\(^{(29-30)}\). Thus, we can explain the frequent occurrence of Quality of life as the main theme in scientific publications in oncology, since palliative care is defined as the quest for quality of life, where the concern is adding life to the years rather than years to life\(^{(31)}\).

**CONCLUSION**

The findings show a significant number of articles related to palliative care in oncology, which mainly address topics such as professional and team practices, diagnoses and prognoses, and also quality of life. The profile drawn by the results discussed in this study, as well as the recommendation grades and the lowly expressive Levels of Evidence found in the studies reflect the practice of palliative care, which is still largely empirically performed and without theoretical–scientific foundation.

Finally, we recommended an integration and exchange of knowledge among the professions so that future studies are carried out in a multiprofessional manner and with greater methodological rigor, in order to configure a scenario of qualified scientific production and possessing greater strength of evidence in the area of palliative care in oncology. Consequently we believe that it is possible to not only improve the scientific production, but also palliative oncological care.

**REFERENCES**


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