

Identification of articles published by brazilian occupational therapists in journals indexed in databases

Mapeamento de artigos publicados por terapeutas ocupacionais brasileiros em periódicos indexados em bases de dados

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ABSTRACT: *Introduction:* The publication of Brazilian articles in journals indexed in databases has increased over the last decades, reflecting the growth of research and publications in the country. This growth has facilitated the development of studies on the trajectories of the different professions, through the analysis of bibliometric indicators. However, in occupational therapy, there is still a gap. *Objective:* to identify and classify articles published by occupational therapists who were affiliated with Brazilian institutions in national and international databases through indexation and citation metrics. *Materials and methods:* This is a descriptive study with a quantitative approach. Data collection was performed using the databases: Pyscinfo, Web of Science, CINAHL, Scopus, PubMed, SciELO, LILACS, BIREME, and Google Scholar. Results: five hundred articles were analyzed. From those, fewer than 13% (n = 71) have received at least one citation. *Conclusion:* The data of indexing and citing of publication by occupational therapists can aid in discussion on the production and dissemination of research produced by the profession nationally.

KEYWORDS: Serial publications; Databases as a topic; Periodicals as topic; Bibliometrics; Occupational therapy.

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RESUMO: *Introdução:* A publicação de artigos brasileiros em periódicos indexados em bases de dados aumentou nas últimas décadas, refletindo o crescimento da pesquisa científica no país. Este crescimento facilitou o desenvolvimento de estudos sobre as trajetórias dos diferentes campos do conhecimento, por meio da análise de indicadores bibliométricos. Na terapia ocupacional, entretanto, esses estudos são escassos. *Objetivo:* identificar e classificar os artigos publicados por terapeutas ocupacionais afiliados a instituições brasileiras em bases de dados nacionais e internacionais, com base em indicadores de indexação e citação. *Materiais e métodos:* Estudo descritivo com abordagem quantitativa. As fontes de indexação consultadas foram: Pyscinfo, *Web of Science*, CINAHL, *Scopus*, PubMed, SciELO, LILACS, BIREME e *Google Scholar*. *Resultados:* Quinhentos e cinquenta (n=550) artigos foram analisados. Destes artigos, menos de 13% (n = 71) recebeu pelo menos uma citação. *Conclusão:* Os dados levantados sobre a indexação e a citação de publicações por terapeutas ocupacionais brasileiros podem auxiliar na discussão sobre a produção e disseminação de conhecimento científico produzido pela profissão a nível nacional.

DESCRITORES: Publicações seriadas; Bases de dados como assunto; Publicações periódicas como assunto; Bibliometria; Terapia ocupacional.

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INTRODUCTION

Currently, journals are the main vehicles of scientific communication¹. Although in existence since the 17th Century, the use and expansion of journal production as the main strategy for diffusion of science discoveries occurred after the Second World War². Bibliographic databases were created to facilitate access to information produced owing to the high volume of publications and the rise of the internet and the development of innovative technologies has stimulated the flow of scientific communication disseminated in journals and indexed databases³.

Brazilian journal production has grown significantly in the last decades, in respect of scientific knowledge disseminated^{4,5}. This increase can be primarily related in Brazil to the increase in higher education degrees and to the increase of graduate programs and research groups^{2,6}. Indicators related to publication in journals indexed in databases^{2,7} and journal citation in other publications have been used to evaluate the growth of Brazilian science^{2,8}.

In order to understand the paths and trends of national scientific production, recent studies have classified and described the different aspects of national publications as follows: the quantitative increase of papers in several areas of knowledge^{9,10}; the institutional and regional author's affiliation and the different types of scientific collaborations involved^{8,11}; the journals of publication and their indexing in different databases² and the impact of particular publications due to the number of citations received¹².

These types of evidence allow the identification of some characteristics of Brazilian scientific production. It has been observed that scientific knowledge produced in Brazil largely originates in public graduate programs¹³, located in the southeast, and especially in the state of São Paulo⁵. This predominance has generated important regional disparities regarding the potential contribution of each Brazilian region^{11,14}. In recent decades, there has been a demand for greater visibility of nationally produced scientific work via publication of papers in international journals, and their being indexed in databases that are qualified. At the same time, national journals have also been indexed in these databases^{1,14}.

Research has sought to understand the dynamics within scientific knowledge production to plan and undertake action to broaden the boundaries of the knowledge production and support the development and diffusion of Brazilian knowledge. Within the occupational therapy (OT) profession, investigations using this approach have also been developed, with greater intensity in the

international context¹⁵. From the 1980s and 1990s, the first studies on scientific knowledge specific to this area of OT were disseminated in databases¹⁵.

Regarding Brazilian OT, these types of studies are still limited. Barros and Oliver¹⁶ classified the bibliographic production of Brazilian occupational therapists and members of research groups. Another inquiry has identified an increase of papers in recent years and a greater involvement of OT professionals in research groups¹⁷. More recently, publications in the two main Brazilian OT journals have been classified using article research theme, author's affiliation institution and the number of texts by author¹⁸.

There are unknown studies that have mapped articles published by Brazilian occupational therapists in different databases. Therefore, this study aimed to identify articles published by OT professionals in national and international databases, in particular, to classify journals according to whether they dealt with OT specifically, the year of publication of articles, the number of authors involved and their geographic and institutional affiliation, and the types of scientific collaboration. In addition, this study sought to identify the number of indexed articles and citations referenced by other papers in each database and the average time between publication and the first citation received.

MATERIALS AND METHODS

Study Type

This is a descriptive study, with a quantitative approach widely used both in analysis of Brazilian knowledge production^{2,5} and in the field of OT in the national^{17,18} and international context¹⁵.

Inclusion and exclusion criteria

Articles published by occupational therapists affiliated with Brazilian institutions were included, such as higher education institutions and OT services. These articles were located through searching eight journal indexing sources frequently used in national research¹³ and in the OT field¹⁵.

Articles were excluded that did not include occupational therapists as authors affiliated to a Brazilian institution, as well as editorials, letters to the editor, conferences, books, and book chapters. Articles in duplicate in the sources, and articles lacking relevant information for this study, were also excluded. Previous studies have adopted similar inclusion and exclusion criteria to focus on

the most relevant publications in respect of the diffusion of scientific knowledge^{9,10}.

Indexing Sources

The databases considered for this research were: 1) Psycinfo (American Psychological Association), 2) Web of Science (Thomson Reuters Scientific), 3) Cumulative Index to Nursing and Allied Health Literature (CINAHL, EBSCO Information Services), 4) Scopus (Elsevier), 5) MEDLINE/PubMed (National Library of Medicine), 6) Scientific Electronic Library Online (SciELO) and 7) Latin-American and Caribbean Health Sciences Literature (LILACS) and Virtual Health Library (BIREME). These sources provide information including abstracts and/or full texts¹⁹, and index journals from various related areas of knowledge including OT. For comparative purposes, this study sought to identify articles in Google Scholar (Google, <https://scholar.google.br>) to obtain complementary information, as developed in previous research⁶.

Data collection

Articles were retrieved by a combination of filters using title, abstract and keyword, with country affiliation. Due to the diversity of nomenclatures of these filters in the bases investigated, Chart 1 presents the filters used in each indexing source.

The descriptors used were “terapia ocupacional” and Brazil, and their correlates in the English language. Articles with derivations of these descriptors, such as “terapeuta ocupacional,” “terapêutico ocupacional,” and “brasileiro” and their corresponding terms in the English language were also included. When this combination could not be used electronically in the information sources for this study, the search was then carried out manually with the descriptors of the study, followed by a scan of the articles selected for identification of the country of affiliation. This descriptor combination approach is a recurring strategy adopted in research on national publications^{10,12}, as well as for manual scanning². It is reiterated that only articles of occupational therapists affiliated with the institutions in Brazil were included, and they presented the descriptor “occupational therapy” and its correlates in the title, abstract and keywords. When information on the authorship of the articles was incomplete, the Lattes Platform (www.lattes.cnpq.br), was consulted^{5,20}.

The indexing sources were accessed through the CAPES Periodicals Portal¹⁹. This collection strategy has been used in recent studies¹. The data were collected from November 2016 to March 2017 by a single researcher and was carried out individually in the databases listed. First, the filters were applied according to the inclusion and exclusion criteria. Then, in the selected articles, the data focused on for this study were obtained.

Chart 1 – Search filters used in indexing sources.

Indexing Sources *	Search filters	
	Title, abstract and keywords **	Affiliation Country **
Bireme (http://pesquisa.bvsalud.org/portal/advanced/)	Title, Abstract, Subject descriptor, Main subject	Affiliation Country
Lilacs (http://bases.bireme.br/)	Words, Title Words, Abstract words, Subject descriptor	Affiliation Country, Affiliation
Scielo (http://www.scielo.br)	All index, Title Words, Abstract, Subject.	Affiliation - Country
Psyinfo (http://psycnet-apa-org.ez3.periodicos.capes.gov.br)	Any field, title, Abstract, Keywords.	Affiliation
Web of Science (http://apps-webofknowledge.ez3.periodicos.capes.gov.br)	Topic, Title.	Country, Address
CINAHL (http://web.a-ebSCOhost-com.ez3.periodicos.capes.gov.br)	Title, Abstract, Subject.	Author Affiliation
Scopus (https://www-scopus.ez3.periodicos.capes.gov.br)	All fields, Title, Abstract, Keywords	Affiliation Country, Affiliation
MEDLINE/PubMed (https://www-ncbi-nlm-nih-gov.ez3.periodicos.capes.gov.br)	All fields, Title, Abstract	Affiliation

* Indexing sources and their access links.

** Nomenclatures related to the search filters prioritized in the study.

Data Analysis

To conduct data analysis, a script was formulated for storing the data in Microsoft Excel Program®, to obtain the following data: journal title, publication year of the article, first author's institutional and geographical affiliation, and authorship and types of scientific collaboration between authors. Information was also obtained on the number of citations received and the year of first citation in each database.

Based on this information, some variables related to indexing and citations were developed. The following variables were obtained for indexing: numbers of indexed articles in each database; the total number of indexed articles in all databases, obtained by the sum of articles indexed in each database; the percentage of coverage of journals, obtained by the ratio between the number of journals indexed in the database, in which at least one article was published and the sum of the journals from all the databases that published at least one article, multiplied by 100; and the percentage of articles indexed in each base, obtained by the ratio between the number of articles indexed in the database and the total number of articles indexed in all databases, multiplied by 100. Concerning citation, the number of articles cited in each database and the total number of articles cited in all databases was obtained. The citation rate in each database was obtained using the ratio between the numbers of articles cited and the articles indexed in each database. Finally, a time interval between the publication and the first citation of the article in each database was calculated.

The selection and tabulation strategies of the data, as well as the variables listed in this research, have been used in recent investigations^{1,5,12}, contributing to analyses of national bibliographic publications. For our analysis, we opted for a simple quantitative and descriptive approach to data, using tables, analogous to methodological approaches developed in other studies^{2,5,18}.

RESULTS

A total of 2,107 articles were found. It is worth noting that there were 473 repeated indexations in different databases. For example, the same article had been counted more than once because it had been indexed in more than one database. Finally, after applying the inclusion and exclusion criteria and withdrawing repetitions, 550 texts were selected. These were found in at least one indexing source.

Characterization of articles and journals found

The 550 selected articles were published in 100 different journals. Of these journals, 11 were specific to OT and 89 were not. However, the number of published articles was approximately equal, with 55.64% (n=306) published in specific journals and 44.36% (n=244) in non-area-specific journals. Table 1 shows the periodicals and the number of articles published.

Table 1 – Journals with the maximum number of articles published by Brazilian occupational therapists

Journal	OT journal?	Number of articles	%
<i>Revista de Terapia Ocupacional da Universidade de São Paulo</i>	Y	171	31,09
Brazilian Journal of Occupational Therapy	Y	96	17,45
<i>O Mundo da Saúde</i>	N	33	6,00
<i>Interface – Comunicação, Saúde, Educação</i>	N	22	4,00
<i>Temas sobre desenvolvimento</i>	N	13	2,36
<i>Acta Fisiátrica</i>	N	12	2,18
Occupational Therapy International	Y	12	2,18
<i>Revista Chilena de Terapia Ocupacional</i>	Y	8	1,45
<i>Revista Brasileira de Reumatologia</i>	N	7	1,27
American Journal of Occupational Therapy	Y	6	1,09
<i>Revista Brasileira de Geriatria e Gerontologia</i>	N	5	0,91
<i>Saúde e Sociedade</i>	N	5	0,91
Scandinavian Journal of Occupational Therapy	Y	5	0,91
Other journals	*	155	28,18
Total		550	100

* Set of specific and non-specific journals that published 1 to 4 articles by Brazilian occupational therapists. Note: Y =Yes; N = No.

Articles written by Brazilian occupational therapists have been published in specific journals, such as the national journals *Revista de Terapia Ocupacional da Universidade de São Paulo* (31.09%, n=171), and *Cadernos de Terapia Ocupacional da UFSCar* (17.45%, n=96). Likewise, they have also been published in journals that are not specific to the profession, such as *O Mundo da Saúde* (6%, n=33) and *Interface – Comunicação, Saúde, Educação* (4%, n=22).

There has been a trend for an increasing number of texts published over the years. Up to 2000, 19 texts (3.45%) were published in indexed journals. In the period between 2001 and 2010, 233 (42.36%) texts were published, and between 2011 and 2016, 298 (54.18%) articles were published, demonstrating that 96.55% (n=531) of indexed articles published by Brazilian occupational therapists occurred in the last 16 years.

Up to the year 2000, some 26% (n=5) of the texts were published in specific journals and 74% (n=14) in non-specific journals. In the period between 2001 and 2010, a greater balance was observed in the distribution of articles, where approximately 47% (n=110) were published in non-specific periodicals and 53% (n=123) in specific journals. In the period between 2011 and 2016, there was a greater predominance in the diffusion of texts in specific journals (64%, n=191) compared to non-specific ones (36%, n=107).

Origin of published articles

Regarding the origin of the articles published, the papers were classified according to Brazilian federal administrative units, the respective geographical region, and the institution of origin of the first author (Table 2). Concerning the federal unit, 78% (n=429) of the published works were from the Southeast region of the country, with an emphasis on the state of São Paulo, which accounted for 60.18% (n=331) of national publications. As for the institution of origin, 85.45% (n=470) of the published papers were affiliated to higher education institutions.

Authorship, Institutional, and geographical collaboration

We identified papers by the number of authors, ranging from 1 to 13 (Table 3). Articles with single authors represented 11.27% (n=62) of the publications. Most of the articles (95.82%, n=527) were published by between one and six authors. Given these figures, it became apparent that geographical and institutional collaboration of paper publications was linked with multiple authors (Table 3). There was a higher prevalence of collaborations among authors from the same state (75.82%, n=417). In terms of the authors' institutions, a higher prevalence of collaboration among authors in higher education institutions was identified.

Table 2 – Distribution of the articles according to the geographical region and the institution of the first author

Region	number of articles	%	Type of Institution of the 1st Author	number of articles	%
Northeast	43	7,82	Services	60	10,91
North	13	2,36	Public State higher education institutions	180	32,73
Midwest	7	1,27	Public Federal higher education institutions	240	43,64
Southeast	429	78,00	Private higher education institutions	50	9,09
South	38	6,91	Not Specified*	20	3,64
Not specified*	20	3,64			
Total	550	100	Total	550	100

* Contains articles where it was not possible to identify the federal unit or the institution of origin of the first author.

Table 3 – Distribution of articles analyzed regarding the type of scientific collaboration between authors

Geographical*	Number of articles	%	Collaboration		
			Institutional**	Number of articles	%
State	417	75,82	Higher Education Institutions	413	75,09
National	38	6,91	Higher Education Institutions and Services	87	15,82
International	16	2,91	Services	28	5,09
Single Authorship	62	11,27	Not specified ***	22	4,00
Not specified***	17	3,09			
Total	550	100	Total	550	100

*Geographical collaboration: State (same federal unit); National (different federative units); **Institutional collaboration: Higher Education Institutions and Services (Locations of assistance and management of OT services); ***Contains works where it was not possible to identify the geographical region or institution.

Indexing sources and bibliometric indicators

Of the 550 articles selected in the indexing sources, only 71 were cited at least once, receiving a total of 496 citations. Thus, the overall citation rate of the articles analyzed in this study was 0.13, which indicates that approximately only 13% (n = 71) of the studies published by occupational therapists in Brazil were cited in other publications. However, when the information obtained in Google Scholar was added to the numbers there was a relevant change in the data. Thus, 398 articles had been cited at least once, totaling 3,848 citations with a general citation index of 0.72. This indicates that >70% of these studies that had either been developed by or in collaboration with occupational therapists were cited by other documents registered with this tool.

Table 4 shows information regarding the number of articles indexed and cited in each database and after using the Google Scholar search tool. Taking the percentage (n=100) of journals for each source, the indexing sources with the greatest range of journals were BIREME (62%) LILACS (48%) and Scopus (47%). These databases also had higher percentages of coverage of the indexed articles (n=550), with 67.82% (n=373) in BIREME, 61.27% (n=337) in LILACS and 20.55% (n=47) in Scopus.

No information was found on the number of citations of each indexed article in the LILACS and BIREME databases. The Scopus and Web of Science databases obtained a greater number of articles cited at least once, with 58 and 23 texts, respectively. These databases also received the highest total number of citations, with 276 and 90 citations respectively. As for the citation rate, Scopus (0.51) and Web of Science (0.48) had the highest rates, followed by CINAHL (0.37), Psycinfo (0.36), and PubMed (0.33). The SciELO database presented with a more reduced citation rate (0.13).

Concerning the time interval between the publication of the papers and the first citation, the databases with approximately shorter average time intervals were Web of Science (1 year and 6 months) and CINAHL (2 years). PubMed and Psycinfo had the longest time intervals, of more than four years. In Google Scholar, it was possible to find information on approximately 98% of the journals and 98.73% (n=543) of the articles searched. Using this tool, we found that, of these indexed articles (n=543), 391 were cited at least once, indicating a citation rate of 0.72. The total number of citations received in this search tool was 3352 and the average time for receiving the first citation was 2 years and 7 months.

Table 4 – Distribution of articles analyzed as indexations and citations received in the databases searched.

Indexing Sources	% of Journals	Number of indexed articles	% of indexed articles	Number of cited articles	Total number of citations	Citation rate	Average time of first citation (years)
Psycinfo	21	36	6,55	13	49	0,36	4,69
WofS	26	48	8,73	23	90	0,48	1,65
CINAHL	12	19	3,45	7	27	0,37	2
Scopus	47	113	20,55	58	276	0,51	2,4
PubMed	20	33	6,00	11	25	0,33	4,36
SciELO	30	64	11,64	8	29	0,13	2,75
LILACS	48	337	61,27	*	*	*	*
BIREME	62	373	67,82	*	*	*	*
Google Scholar	98	543	98,73	391	3352	0,72	2,71

* Information not found in databases.

DISCUSSION

Data analyzed on the number of journals used to disseminate articles by Brazilian occupational therapists shows that, although approximately half of the studies had been published in the two main national journals in the field, the other half were dispersed throughout a large volume of journals indexed in various sources. This finding has also

been observed for national bibliographical publications in relation to other fields of knowledge⁶.

Previous studies of the bibliographical production of occupational therapists linked to research groups in Brazil have also demonstrated this dispersion, and have warned that, although it may bring some benefits to the profession through enhanced visibility of the profession, it could also be detrimental to its development as a field of knowledge^{16,17}.

In addition, it may hinder the identification and recovery of studies to support other research and interventions in the field¹⁸.

It should be noted that this diversity might reflect the training of occupational therapists in research and production of knowledge. The postgraduate training of occupational therapists in Brazil has mainly been conducted within other academic disciplines, such as psychology, education, public health, and sociology, as there were no specific graduate programs for occupational therapists²¹.

Some professionals initially sought specific postgraduate OT training in other countries, which may be associated with the possibility of OT publications in international journals. Another factor that may have encouraged the dispersion of these articles is the involvement of OT researchers as guides in non-specific graduate programs, which requires involvement and dialogue with other fields of knowledge²².

It is important to note that, despite the institutionalization of Brazilian science in postgraduate studies, which began its activities in the 1950s and 1960s⁷, specific post-graduate OT training only began in Brazil more recently, in 2009, with the opening of a Master's Program in OT at the Federal University of São Carlos and a Doctoral Program in 2015²².

Undoubtedly, the development of postgraduate studies has influenced and changed the OT publication profile. The search for indexed journals in broad coverage databases has important consequences in different specialist areas nationally in Brazil² and within OT¹⁸. This can be noticed in the change in the profile of the journals prioritized by occupational therapists for the dissemination of their work, especially with a growing predominance of specialized journals and of their use. It should also be noted that there is currently greater pressure for a more comprehensive indexation of the specific journals of the profession¹⁸, as is the case in other countries and specializations¹.

The growth in publications of Brazilian occupational therapists is noteworthy. In 2016, more OT studies were published than all OT articles published up until 2000. These data follow the national growth trend^{4,5}, which has increased Brazilian scientific representation within Latin America⁷ and in the world^{1,14}.

This growth has been associated with economic expansion, the strengthening of research groups and postgraduate courses, as well as the consequent development of Masters and Doctoral programs in the country^{2,6,14}. In Brazil, the increase in the number of occupational therapists with Masters and Doctoral degrees, and their involvement as advisors in specific and non-specific graduate programs, have been crucial factors for the growth in publications^{17,18}.

Recent research shows that the publications of Brazilian occupational therapists come mainly from higher educational institutes, especially public institutes¹⁸. Historically within Brazil, the public universities have been mainly responsible for producing research and disseminating knowledge^{5,13}. However, given their role as professionals in the field of specialized intervention, the participation of occupational therapists who work in the management and care domain needs to be encouraged and valued, making the development of scientific collaboration between professionals and researchers a central demand for the profession today²³. However, the data obtained here may reflect a distancing of research associated with professional practice.

Regarding the origin of the articles, it is noteworthy that most of the texts derive from the southeastern region of Brazil. This is likely to be related to the socioeconomic differences between Brazilian regions, to the historical processes whereby research and graduate studies were established in the country, and to disparities in the distribution of financial contributions, infrastructure, and human resources^{2,5,11,14}. Particularly in the case of OT, the historical processes of professional establishments and consolidation occurred earlier in the Southeast than in other regions of the country²¹, as well as the involvement of professionals and researchers in graduate programs¹⁸.

The reduction of regional disparities in the context of scientific production has been identified as a challenge to the consolidation of research development in the country^{5,14} and governmental and scientific efforts, although not yet adopted as a priority¹¹, have been directed towards meeting this challenge^{2,14}. The need to develop strategic policies capable of fostering development consistent with regional needs and potentialities is a central issue¹¹. The opening of graduate programs in OT in less developed regions could help to reduce these differences in regional publications.

Based on this information concerning regional disparities, debates, and active collective engagement by the Brazilian OT scientific community is essential to facilitate the production and the dissemination of scientific knowledge coming from the different regions of the country. This is especially the case given that all the regions of the country currently conduct undergraduate courses in OT and have research groups²⁰.

Concerning the number of authors, a considerable number of studies were published with 2 to 6 authors. This may indicate the importance of certain types of scientific collaboration^{5,10,23}. The data showed a predominance of collaboration between authors from the same institution or from different institutions in the same state. Few texts involved collaboration between authors from different

federal units, and rarely were there studies involving international collaboration.

The growth of scientific collaboration occurs differently in different knowledge fields¹⁰ and this collaboration has been the focus of recent reflections in the current literature^{8,12,13}. Although there have been some important concerns raised about certain types of scientific collaboration, especially from the international point of view^{8,17}, the potential contribution of increased collaboration to the production of Brazilian OT knowledge in different geographical and institutional spheres is considerable, which in turn requires further debates, studies, reflections and action within the scientific community.

Investigations using databases of scientific articles and journals have not been undertaken recently in OT¹⁵. To date the focus of investigations has been on characterizing the articles and periodicals published in relation to the topics they cover, methodologies used, the specificity of journals in relation to the relevant field, citations made and received, and mainly the extent of coverage of the databases investigated in relation to the production of relevant knowledge to OT¹⁵.

In this study, most articles were indexed in BIREME and LILACS. These databases developed as a set of initiatives aimed at disseminating knowledge production in Latin American countries through access to references and full texts in scientific journals from different fields of knowledge¹⁶. That most articles were indexed in these two databases is likely to be because they were the first indexing databases of the Revista de Terapia Ocupacional da Universidade de São Paulo and of Cadernos de Terapia Ocupacional da Universidade de São Carlos, the main journals specific to the OT field¹⁸.

On the other hand, other sources presented significant coverage of indexed articles related to the OT profession. Previous studies have indicated that there is a dispersion of OT knowledge internationally in different databases, and a combination of bases is necessary for a comprehensive coverage¹⁵.

Concerning citations, there was a higher average number of citations per article, as well as a larger total number of citations received in the Scopus and Web of Science databases. These databases have been widely used to identify the visibility obtained using national surveys, through the number of citations received^{1,6,12}. The databases with the shortest time interval between publication and the first citation were Web of Science, CINAHL, and Scopus. The decrease in this time interval is one of the observed contributions of the impact of the Internet on scientific communication³.

It should be noted that the number of articles cited at least once and the total number of citations received in the databases can be considered relatively small and

not substantial in relation to the more traditional areas of Brazilian science, such as physics, and biological and biomedical sciences⁹, although the different size and types of knowledge fields mean that citation numbers are not conclusive in themselves as indicators of professional output².

The smaller number of citations is likely related to the recent insertion of OT into the country's graduate system, which is the main driving force in the production and diffusion of national research^{2,13}. The effect of this can be seen from the fact that only approximately 13% of articles published in the databases were cited at least once, whereas with Google Scholar, which retrieves citations from several types of documents available on the internet, the retrieval rate rose to more than 70%. This difference may also be associated with an initial characteristic of the field in which studies are mainly diffused through non-indexed books and journals, as observed in other specialized fields within Brazil^{10,16,17}.

In respect of these indicators, the number of citations that published articles receive is currently considered an important measure of the impact of the scientific production^{8,9}. However, analyzes based solely on these indicators present some limitations and are the subject of recent reflections within contemporary literature^{1,12}.

The data obtained for this study and our considerations of that data face some limitations as to generalizability. Although the number of information databases investigated was significant, those identified unlikely to cover all the specialist knowledge disseminated by Brazilian OT professionals. The use of the descriptors in Portuguese and English only may not have identified publications diffused in other languages, which is a further limiting factor of this study. In addition, the inclusion of only articles with the descriptor "occupational therapy" and its correlates in the title, abstract and keywords may have limited the scope of the productions of Brazilian occupational therapists in other areas of knowledge.

For these reasons, there is a need for future investigations that include other databases, with further enhancement of the variables and approaches used in this study, to facilitate a more comprehensive and targeted understanding of Brazilian OT scientific literature.

CONCLUSION

The growth in the publication of Brazilian specialist scientific articles in the last 15 years is formidable, with an emphasis on a greater diffusion in national journals. Most publications come from public universities located in the south-east of the country, reproducing the same regional patterns of scientific publications as apply in other areas of expertise. Relevant articles are mainly published in specific

national journals of the field, although there is an important dispersion in non-specific journals of the profession. The total number of citations and the number of papers cited at least once can be considered relatively insignificant compared to other areas of knowledge in the country, but the figures are rising.

Finally, we hope that the information from this research can support debates and reflections within the national scientific community to foster strategic interventions with the purpose of increasing the growth and consolidation of Brazilian OT research production and knowledge diffusion.

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