

# An overview of occupational therapy publication in non-specific professional journals in the period of 2004 to 2015<sup>1</sup>

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**Abstract:** Introduction: In occupational therapy, scientific journals have been the object of studies in order to understand the trajectories and characteristics of the production of knowledge of the profession. In Brazil, the evaluation of the bibliographical production disseminated in journals has been a prerequisite for the insertion and permanence of researchers in graduate programs. Objective: To characterize the publications on occupational therapy in non-specific journals of the profession classified in strata A1 and A2 by the WebQualis list of the Coordination of Personal Improvement of Higher Education (CAPES) in Physical Education, Speech Language, Physiotherapy and Occupational Therapy areas as to the origin of journals and articles published, as well as the themes, objectives, methods and people addressed. Method: This is a descriptive study of articles and journals published in the period from 2004 to 2015. Data were analyzed by simple descriptive statistics. Results: There was an increase in publications on occupational therapy in these vehicles from 30 articles published in 2004 to 82 in 2015, although it is concentrated in certain journals in European and American countries. A higher frequency of articles with authors related to the universities and countries of North America and Europe was observed, as well as articles with an intervention approach and quantitative methodological approach. Conclusion: Although an increase in publication on occupational therapy has been observed, it has been observed that there is a numerical, thematic and methodological restriction of non-specific occupational therapy journals that publish articles related to the profession.

**Keywords:** *Science, Research, Publications for Science Diffusion, Occupational Therapy, Higher Education.*

## Caracterização de publicações científicas sobre terapia ocupacional em periódicos não específicos da profissão no período de 2004 a 2015

**Resumo:** Introdução: Na terapia ocupacional os periódicos científicos têm sido objetos de estudos no intuito de se compreender as trajetórias e características da produção de conhecimento da profissão. No Brasil, a avaliação da produção bibliográfica difundida em periódicos tem sido pré-requisito para a inserção e a permanência de pesquisadores em programas de pós-graduação. Objetivo: Caracterizar as publicações sobre terapia ocupacional em periódicos não específicos da profissão classificados nos estratos A1 e A2 pela lista WebQualis da Coordenação de Aperfeiçoamento Pessoal de Nível Superior (CAPES) da área de Educação Física, Fonoaudiologia, Fisioterapia e Terapia Ocupacional quanto à origem dos periódicos e artigos publicados, bem como das temáticas, objetivos, métodos e públicos abordados. Método: Trata-se de estudo descritivo dos artigos e periódicos publicados no período

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de 2004 a 2015. Os dados foram analisados por estatística descritiva simples. Resultados: Observou-se aumento de publicações sobre terapia ocupacional nestes veículos, de 30 artigos publicados em 2004 para 82 em 2015, embora concentrada em determinados periódicos de países europeus e americanos. Observou-se uma maior frequência de artigos com autores vinculados às universidades e países da América do Norte e Europa, bem como de artigos com enfoque interventivo e abordagem metodológica quantitativa. Conclusão: Embora tenha sido observado um aumento da publicação sobre terapia ocupacional, observou-se que há uma restrição numérica, temática e metodológica de periódicos não específicos de terapia ocupacional que publicam artigos relacionados à profissão.

**Palavras-chave:** *Ciência, Pesquisa, Publicações de Divulgação Científica, Terapia Ocupacional, Educação Superior.*

## 1 Introduction

As a profession to favor the engagement of people in different occupations, occupational therapy demands and produces empirical and theoretical knowledge related to its contexts of professional intervention and understanding about man, its actions and its relationships to the world (BROWN et al., 2018, 2017; LOPES et al., 2008).

Currently, scientific journals are the main means of publication of knowledge produced related to occupational therapy and the most academically valued (BROWN et al., 2017; LOPES et al., 2016). In recent years, the increase of articles published in the profession has been reported both in Brazil and abroad (BROWN et al., 2018, 2017; LOPES et al., 2016; POTTER, 2010).

Historically, studies and research have been published in scientific journals, specific and not specific to the profession. The specific ones are those that contain the word “occupational therapy” in its title and bring the dissemination of manuscripts related to the category within its scope. The not specific ones are those that although they do not have the name of the profession in their titles, they publish articles on subjects of interest to occupational therapists (BROWN, 1997; BROWN et al., 2018, 2017).

In the last decades, due to the ease of access and wide diffusion, journals and articles related to the profession have been analyzed to understand the characteristics of the production of knowledge contained in them (FOLHA; CRUZ; EMMEL, 2017; LOPES et al., 2016; POTTER, 2010; OLIVER, 2009; BROWN; RODGER; BROWN, 2005). The first research with this approach, developed in the 1980s, aimed at obtaining information to subsidize academic activities in undergraduate courses (JOHNSON; LEISING, 1986). In the following decade, the research analyzed occupational therapy-specific scientific communication vehicles for their target audience, the review process adopted, the editorial staff, and the types of published texts, for example (BROWN et al., 2017).

In the first decades of the XXI century, specific questions about the scientific publication in the profession associated to the characterization of the articles published in certain journals were investigated, such as authorship (LOPES et al., 2016); quality indicators and the selection criteria for publication, the journal’s reputation, the rigor and quality of the review process, and the impact on practices, services and policies (RODGER; MCKENNA; BROWN, 2007); and indicators of impact and citation (BROWN et al., 2018, 2017; FOLHA; CRUZ; EMMEL, 2017).

These studies enable to understand that elements related to the production and diffusion of scientific publication in occupational therapy have been analyzed, mainly in the scope, audience, and influence of the knowledge produced on the practices and services developed by the professional category. In the national context, the production of scientific knowledge by occupational therapists has received attention, mainly, by the greater involvement of these professionals in research and in graduate programs (OLIVER et al., 2016; LANCMAN; MÂNGIA, 2017; MALFITANO, 2015; OLIVER, 2009; BARROS; OLIVER, 2003).

A central element to the strengthening of the profession in this context involves the diffusion of knowledge generated in journals of wide and internationally recognized quality (MALFITANO et al., 2013; OLIVER, 2008). The publication in these journals has been a leading factor for the entry and permanence of professors in the *stricto sensu* postgraduate course (LANCMAN; MÂNGIA, 2017; OLIVER, 2009; LOPES et al., 2008; BARROS; OLIVER, 2003), of institutional indicators and receipt of funding by research promotion agencies; essential for the development of the academic and research activities of the programs (OLIVEIRA, 2015; LOPES et al., 2010).

The regulated and postgraduate education in Brazil started in the 1960s (OLIVEIRA, 2015), the accreditation of occupational therapists as professors in master’s and doctoral programs in the country occurred only in the 1990s (LANCMAN; MÂNGIA,

2017). First, this entry was done in programs of related areas, such as Education, Special Education, and Rehabilitation Sciences. Only in 2009, the first specific post-graduation program of occupational therapy was created (MALFITANO et al., 2013).

In Brazil, post-graduation is organized by the Coordination of Personal and Higher Education (CAPES), which, among other functions, it evaluates masters and doctoral programs in the country. These programs are grouped based on thematic affinities in 49 evaluation areas. These areas are grouped into nine large areas and then, they are grouped into three science colleges (SOMA; ALVES; YANASSE, 2016). Occupational therapy constitutes physical area, physical education and speech therapy, the so-called area 21, located in the great Area of Health, along with other major areas of life sciences. Currently, area 21 has 67 postgraduate programs that offer masters and doctorate courses (RODACKI; GUIRRO; KESKE-SOARES, 2017).

CAPES periodically carries out an evaluation of the graduate programs in the country and one of the evaluation criteria considers the analysis of the intellectual production of professors and students, which can occur in several ways, mainly through the publication of articles in scientific journals (BARATA, 2016; SOMA; ALVES; YANASSE, 2016).

To specifically evaluate this production, CAPES used a set of criteria (Qualis) by several areas of knowledge to classify all publications in scientific journals developed by professors and students of the graduate programs of a given area. This classification results in a list of categorized journals (Webqualis) in eight strata, with different levels of qualification and increasing gradation called C, B5, B4, B3, B2, B1, A2 and A1 (RODACKI, 2016).

Based on this a classification, the articles published by the professors and students of the graduate programs are quantified, with a result as an important indicator of the evaluation process (BARATA, 2016; RODACKI, 2016; SOMA; ALVES; YANASSE, 2016). One of the classification criteria common to all areas is the sum of the titles of journals classified as A1 and A2 that cannot exceed 25% of the total number of journals used in the evaluation year (SOMA; ALVES; YANASSE, 2016). According to the evaluation report for the years 2013-2016 (RODACKI; GUIRRO; KESKE-SOARES, 2017), the area 21 has two specific criteria besides the common criteria to other areas of knowledge: one related to the adherence of journals to themes, objectives and knowledge of the sub-areas that compose area 21, and another one based on bibliometric indicators and on the quality of indexation sources.

Considering the recent insertion of occupational therapy in postgraduate studies (MALFITANO et al., 2013), associated to the existence of a single specific program in the country (RODACKI; GUIRRO; KESKE-SOARES, 2017) and the reduced number of occupational therapists in postgraduate programs (LANCMAN; MÂNGIA, 2017; LOPES et al., 2010), it is hypothesized that a limited number of specific journals of the profession have been classified in the upper strata. Thus, data available on the CAPES Sucupira Platform indicate that only 11 (eleven) specific journals of the profession were used for the publications developed by area 21 programs in the period of 2013 and 2016, with only four (4) in the A1 strata (American Journal of Occupational Therapy and Canadian Journal of Occupational Therapy) and A2 (Occupational Therapy International and Scandinavian Journal of Occupational Therapy) (COORDENAÇÃO..., 2018a).

It is currently important in Brazil to understand the trajectories and characteristics of the knowledge in specific and non-specific journals in the area to favor the processes of publication and dissemination of scientific knowledge developed in the country. In this context, recent bibliometric analyzes have identified that articles of great impact for the profession have been published in both specific and non-specific journals (BROWN et al., 2018, 2017; FOLHA; CRUZ; EMMEL, 2017). Although characterization studies on specific journals have been developed both at the international level (BROWN, 1997; BROWN; RODGER; BROWN, 2005) and in the national level (LOPES et al., 2016; OLIVER, 2009), there are few studies on knowledge production published in non-specific journals (RODGER; MCKENNA; BROWN, 2007; BROWN; RODGER; BROWN, 2005).

Aiming at characterizing the publications of occupational therapy in non-specific journals of the profession, this study sought to answer the following questions:

- 1) What are the non-specific occupational therapy journals with published articles related to the profession? What are the countries of origin of these journals? What is the scope of publication of these journals?
- 2) What are the objectives and types of study that have been published? What types of manuscripts have been submitted? Who are the populations studied in the research?
- 3) Who are the authors who published on occupational therapy in these journals and their geographical and institutional origins?

## 2 Method

A descriptive study of a quantitative approach was carried out to characterize the journals with the number of articles published, the country of origin and the scope of publication of these articles. Also, there was a description of the published articles regarding the thematic areas, the objectives addressed, the methods used and the people investigated. This type of research has been widely used to analyze the scientific literature produced by the profession in previous works (FOLHA; CRUZ; EMMEL, 2017; LOPES et al., 2016; POTTER, 2010; OLIVER, 2008).

### 2.1 Research instrument and journal search selection

This study used the criteria developed by CAPES for the classification of journals (BARATA, 2016). Journals A1 and A2 were selected from area 21 of CAPES. As mentioned before, journals classified in these strata represent approximately 25% of the classified journals related to area 21, which includes occupational therapy, among other areas of knowledge (RODACKI; GUIRRO; KESKE-SOARES, 2017; SOMA; ALVES; YANASSE, 2016).

In the strata A1 and A2, there are the journals with the best adherence, bibliometric and indexing indicators related to the large area 21 (RODACKI; GUIRRO; KESKE-SOARES, 2017; RODACKI, 2016). At the time of data collection, stratum A1 of WebQualis of Area 21 was composed of a 122 journals and stratum A2 was composed of 134 journals. Non-specific journals of occupational therapy were selected from 2004 to 2015. This period of search was chosen because it allows the survey and analysis of the most recent knowledge production since as demonstrated in recent investigations (BROWN et al., 2018, 2017; FOLHA; CRUZ; EMMEL, 2017; LOPES et al., 2016), the number of articles published by occupational therapists has gradually increased in recent years mainly due to the involvement of these professionals in research and graduate activities.

### 2.2 Sources of information and search strategies

The journals of each stratum were first obtained through accessing the Sucupira Platform on the CAPES portal. Then, the Web of Science (Clarivate Analytics) database was used to identify texts on occupational therapy published in non-specific journals

listed previously. This identification was made by crossing the descriptor “occupational therapy” in the “title”, “abstract body” and “keywords” filters with the name of each journal in the “publication name” filter.

The access to the Web of Science database took place between January and July of 2016, through the Journals Portal of CAPES. This portal brings together and enables access to international scientific production to Brazilian educational and research institutions (COORDENAÇÃO..., 2018b). Previous studies have used similar methodological strategies, either by using the descriptor (BROWN et al., 2018, 2017; FOLHA; CRUZ; EMMEL, 2017) or by access through the CAPES Journals Portal (GUIMARÃES; MARTINS; BARKÓKEBAS JÚNIOR, 2012).

### 2.3 Inclusion and exclusion criteria

Non-specific occupational therapy journals and texts with the term “occupational therapy” in the title, abstract or keywords were included. Texts without this information were excluded.

### 2.4 The universe of journals and articles

As mentioned before, in the period of data collection, the sum of journals in the upper strata of WebQualis of Area 21 was 256 journals, 122 publications in Stratum A1 and 134 in Stratum A2. In the 256 journals, 851 articles were found; however, after applying the inclusion and exclusion criteria, 182 articles were excluded. Finally, 669 articles were considered as the final sample for categorization and analysis.

### 2.5 Procedures for data collection and analysis

Initially, the titles, abstracts, and keywords were analyzed according to the inclusion criteria presented above, according to previous studies (BROWN et al., 2018, 2017; ANDRESEN; TANG; BARNEY, 2006). Then, a script was created for extracting the data in a Microsoft Excel® Program spreadsheet to obtain the following information: authorship, type of article, country and institution of origin, study objective, design, research approach, population studied and age group. Also, the journals were classified according to the number of articles found, the country of origin, the impact factor and its scope. Scope classification was based on the categorization of journals developed by the Web of



Science database, as performed by recent studies (BROWN et al., 2018, 2017).

The categories extracted from each variable are described below:

- a) Filters selection of the article: Title, Abstract, and Keyword;
- b) Continent and Country of Origin of the 1<sup>st</sup> author: North America, Europe, Asia, Oceania, Africa, and South America;
- c) Institution of origin of the 1<sup>st</sup> author: University or Other institutions;
- d) Authorship: Number of authors per article;
- e) Study objective: Evaluation, Intervention, Services, Foundations, and Training;
- f) Type of Article: Original article, Essay and Experience Report;
- g) The approach of the Original Article: Quantitative, Qualitative and Mixed;
- h) Populations studied: Users, Family and Caregivers, Professionals and Students of occupational therapy and others;
- i) The age group of the studied people (Users): Children, Adolescents, Adults, and Elderly people.

Regarding the objective of the study, this variable was classified according to the main purpose of the studies in 5 categories:

- 1) Evaluation: involving studies for assessment including description, cross-cultural adaptation and psychometric properties of measuring instruments;
- 2) Intervention: including prognostic studies and situational descriptions of the investigated people, use of resources, techniques, methods and treatment processes, and a description of the effectiveness of the interventions;
- 3) Services: addressing the description of services, programs, and actions and includes studies on health plans and economic assessments;
- 4) Professional training: approaching teaching methodologies and experiences of vocational training in occupational therapy;
- 5) Foundations: presenting and discussing theoretical and historical aspects related to

the constitution and practice of occupational therapy and addresses professional perceptions about professional aspects.

As for the types of articles, they were classified in:

- 1) Original Article: based on information generated through empirical research or systematic literature review. More specifically, the Original articles were subdivided into Literature Review studies, with and without meta-analysis; Observational articles, such as qualitative descriptive studies and cross-sectional and longitudinal quantitative studies; and Intervention articles, such as before-and-after studies and randomized, non-randomized clinical essay. Observational and interventional studies were classified according to the quantitative, qualitative and mixed research approach;
- 2) Essay: theoretical and reflective report on a specific topic related to occupational therapy; and
- 3) Experience Report: description of experiences related to the practice of the profession.

For data analysis, the quantitative and descriptive approach of the data was opted, with the use of graphs and tables, similar to other studies (BROWN et al., 2018, 2017; FOLHA; CRUZ; EMMEL, 2017; LOPES et al., 2016; OLIVER, 2008; BROWN; RODGER; BROWN, 2005; BROWN, 1997).

## 3 Results

First, the data are shown by the number of articles published in each journal per year, by their impact factor, country of origin and scope. Next, the texts found in these journals are characterized for the variables mentioned above.

### 3.1 The publication in non-specific journals of occupational therapy of area 21 of CAPES

Of the 256 studies analyzed, 27.34% (n = 70) published at least one article related to occupational therapy, 8.98% (n = 23) published 6 or more articles and 5.47% (n = 14) published 12 or more articles in the last 12 years. This means that in only a limited number of journals, there was a minimum average of one article per year.

The mean impact factor of the journals that published at least one article related to occupational therapy ( $n = 70$ ) was 3,560 in 2015 and in the last 5 years, the mean impact factor was 3,699. These journals are distributed in the United States (60.0%) and in European countries, such as England (17.14%), the Netherlands (7.14%) and Switzerland (4.29%). Countries such as Germany, Australia, Croatia, the United Arab Emirates, Italy, Japan, New Zealand, and Sweden were 1.43% of each journal.

Regarding the scope, the journals that published at least one article related to occupational therapy have a diversified distribution in 28 different categories of the Web of Science (Table 1). The same journal was classified in more than one category in this database. The categories with the highest number of journals that published at least one article on occupational therapy ( $n = 70$ ) were: rehabilitation 40% ( $n = 28$ ), neuroscience and neurology 25.71% ( $n = 18$ ), sports sciences 18, 57% ( $n = 13$ ) and speech pathology 8.57% ( $n = 6$ ).

### 3.2 Articles published in non-specific occupational therapy journals of area 21 of CAPES

A total of 669 texts related to occupational therapy were analyzed. Regarding the selection filters, few studies presented the descriptor “occupational therapy” in its title (1.35%), or in the combinations between title and keywords (0.60%) and title and abstract body (2.99%). Almost half of the studies were selected because they contained the descriptor in the body of the abstract (48.73%), in the keywords (29.15%) or in the combination between the two of them (10.61%). Only 6.58% of the articles presented the search term in the three filters.

In 2004, 30 texts were published and, in 2015, 82 texts were published, representing a 173% increase in the number of published articles (Figure 1). In 2014, there was a decrease in the number of published studies (71).

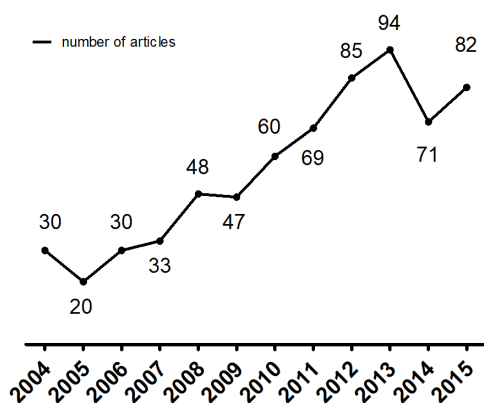
**Table 1.** Distribution of the scope categories of non-specific occupational therapy journals in the strata A1 and A2 of Area 21 of CAPES in the period 2004-2015.

Categories (Scope)	N of articles%	% of articles
Rehabilitation	28	40.00
Neuroscience and Neurology	18	25.71
Sports Science	13	18.57
Audiology and Speech Therapy	6	8.57
Geriatrics and Gerontology	5	7.14
Orthopedics	5	7.14
Pediatrics	5	7.14
Internal and General Medicine	4	5.71
Public, Environmental and Occupational Health	4	5.71
Anesthesiology	3	4.29
Health Care Sciences and Services	3	4.29
Linguistics	3	4.29
Otolaryngology	3	4.29
Psychology	3	4.29
Cardiology (Cardiovascular System)	2	2.86
Engineering	2	2.86
Pulmonology (Respiratory System)	2	2.86
Education and Educational Research	1	1.43
Endocrinology and Metabolism	1	1.43
Complementary and Integrative Medicine	1	1.43
Nutrition and Dietetics	1	1.43
Pathology	1	1.43
Pharmacology and Pharmacy	1	1.43
Physiology	1	1.43
Psychiatry	1	1.43
Radiology, Nuclear and Imaging Medicine	1	1.43
Science and Technology and Other Topics	1	1.43
Surgery	1	1.43

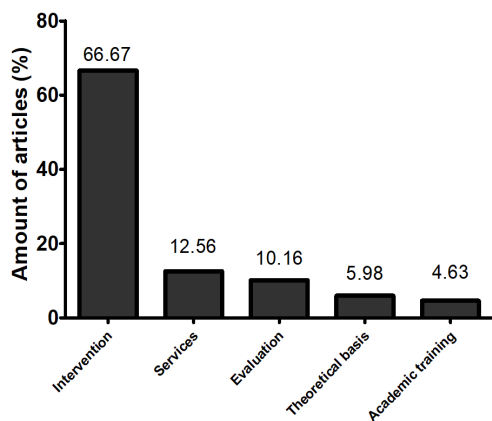
The sum of the absolute and relative frequencies exceeds the total number of journals with at least one published article related to the profession ( $n = 70$ ) because one journal has been classified by the database in more than one category.

In the number of authors per the study, there were articles with single authorship and until 19 authors. However, approximately 74% ( $n = 497$ ) of the studies had 2 to 6 authors. From 2004 to 2015, the highest average number of authors per work was in 2013, with 4.95 authors, and the lowest was in 2005, with 1.05 authors.

About the country of origin of the texts, almost 70% were from countries of North America (39.01%) and Europe (29.45%). Countries in Asia (17.34%) and Oceania (11.81%) also have an important volume of productions. Countries of South America (1.49%) and Africa (0.90%) had less frequency in the dissemination of the knowledge in non-specific journals to the profession.



**Figure 1.** Number of articles published in non-specific journals of occupational therapy in area 21 of CAPES in the period 2014-2015.

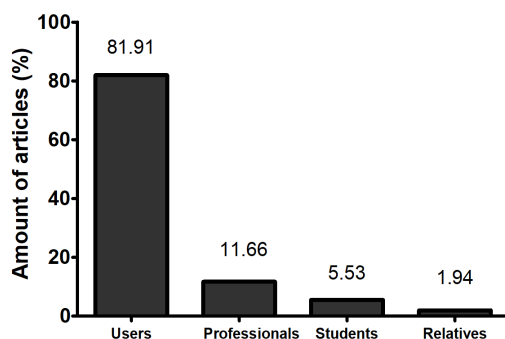


**Figure 2.** Distribution of articles published in the study period of 2004-2015 ( $n = 669$ ) in non-specific journals of occupational therapy in area 21 of CAPES, according to the objectives of the study.

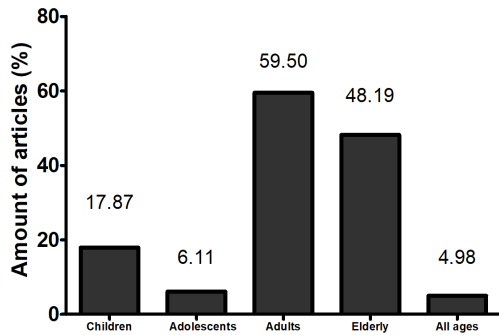
Regarding the objectives of the studies, 66.67% (Figure 2) of the main subject of the texts was to discuss strategies of intervention in occupational therapy, mainly illustrating the effectiveness of certain methods, techniques, and resources in a group of individuals. Other studies sought to discuss the prognosis of patients in initial and final times of certain services (12.56%). Aspects related to evaluation, such as cross-cultural adaptation and psychometric properties of measuring instruments were identified (10.16%). Studies focused on theoretical aspects and professionalization (5.98%) or related to the academic training of professionals (4.63%) were less frequently observed.

Regarding the types of articles published, the predominance of original articles (93.12%) was found to be detrimental to essays (4.04%) and experience reports (2.84%). In the types of original articles developed ( $n = 623$ ), more than half of them were observational (54.74%), followed by experimental/interventional (29.86%) and systematic review articles (15.41%). Trying to understand the research approaches of the original articles with field research ( $n = 526$ ) and not including articles of literature review, the most frequent analysis was the quantitative one (81.56%), followed by articles with a qualitative approach (14.07%) and mixed (4.37%). Regarding the studied population (Figure 3), there was a predominance of studies aimed at client (81.91%) of occupational therapy services. The sum of the variables exceeds 100% of the sample because some studies focused on more than one target population.

Figure 4 shows the distribution of the articles involving users and relatives/caregivers ( $n = 442$ ) and addressing mainly adults (59.50%) and elderly



**Figure 3.** Distribution of the articles published in the study period of 2004-2015 ( $n = 669$ ) in non-specific journals of occupational therapy in area 21 of CAPES, according to the target population of the study.



**Figure 4.** Distribution of the articles published in the study period of 2004-2015 in non-specific journals of occupational therapy in area 21 of CAPES, according to the age group of articles aimed at users and relatives and caregivers ( $n = 442$ ).

people (48.19%). Adolescents (6.11%) were the least studied population. Again, the sum of the variables exceeds 100% of the sample because some studies focused on more than one age group.

## 4 Discussion

First, the data obtained in this study do not address the journals individually used by occupational therapists and researchers linked to the postgraduate programs of area 21, since the analysis was performed based on the list from the productions of all sub-areas of the area of knowledge, including also other professional and academic fields. Although with restrictions, they may reflect patterns and trends of journals classified in the upper strata.

Non-specific occupational therapy journals represent the possibility of an interdisciplinary dialogue between occupational therapy and related areas and an increase in the visibility of the profession, favoring its strengthening and scientific and social recognition (POTTER, 2010; ANDRESEN; TANG; BARNEY, 2006; JOHNSON; LEISING, 1986). However, less than 1/3 ( $n = 70$ ) of the non-specific occupational therapy journals listed in Webqualis strata A1 and A2 of area 21 of CAPES published at least one article related to the profession. Also, only 5.47% of the journals had a minimum frequency of one article per year in the period studied. The mean impact factor of these journals (3,560) in 2015 is three times higher than the mean of the impact factors of specific occupational therapy journals (1,059) identified in the Journal Citation Reports,

a bibliometric indicator of the Web of Science. The journal of the profession with the greatest impact factor in the period of data collection was the American Journal of Occupational Therapy with 1,806 from 2015.

Although a reasonable number of journals ( $n = 70$ ) with impact factor had published articles related to occupational therapy in the period studied, and few journals ( $n = 14$ ) had a minimum annual regularity of publication in the field. Analyzing the focus and the scope of these journals, specific population and themes are observed, mainly related to the physical health and rehabilitation of certain health conditions. Pioneering studies in the 1980s on the production of knowledge in occupational therapy already identified this contribution of the literature published in not specific channels to the profession (JOHNSON; LEISING, 1986).

Differences in the impact factor of specific and non-specific journals indicated the need for reflection by researchers in the area. Some studies showed that the impact factor is not a very strong metric of the journals of the area and occupational therapists authors do not consider this measure a priority for the selection of a journal for the publication of their work (RODGER; MCKENNA; BROWN, 2007). Thus, to inquire about what to publish in each journal, specific or not, is an important issue nowadays and certainly beyond the criterion impact factor.

Also, due to the WebQualis list of the Area 21 of publications of the graduate programs of all the sub-areas that compose it, such as physical therapy, physical education and speech therapy (RODACKI, 2016), it is possible to suppose that occupational therapy, has a lower influence on the composition of the upper strata of the area because it presents the fewest masters and doctoral courses and researchers in Area 21 (RODACKI; GUIRRO; KESKE-SOARES, 2017). Thus, the number of publications and the difference in the impact factor between specific and non-specific journals may reflect this numerical difference between the sub-areas.

The evidence of the descriptor “occupational therapy” has been more often located in the body of the abstract and in the keywords, rather than the title. This could be explained by the fact that they are non-field-specific journals. On the other hand, the topics related to methods, techniques, resources, evaluation tools and services offered may reflect objects



of common studies and of interdisciplinary interest, in which occupational therapy has traditionally been inserted. Previous studies on specific journals have already indicated this trend of research in the profession (BROWN, 1997).

The predominance of the English language is directly related to the use of the term “occupational therapy”, justifying and to some extent restricting, the retrieval of journals that published in this language. Although there is an effort to expand the publication in other languages, such as Spanish, English still predominates in the scientific communication of the current world scenario, whether primary in the countries that speak the language or secondary in those countries whose mother tongue is another language (BROWN et al., 2018, 2017; BROWN, 1997).

The identification of the increase production of knowledge of occupational therapy indicates that these journals have been increasingly considered important vehicles of knowledge dissemination of the profession and to the fact that other researchers have recently analyzed them to identify the scientific publication of the field (BROWN et al., 2018, 2017; ANDRESEN; TANG; BARNEY, 2006).

Previous research has identified an increase in the volume of published articles on occupational therapy in databases and in specific journals of the profession (BROWN et al., 2017; POTTER, 2010). This growth trend in non-specific journals was also observed in this study. This increase may be a reflection of both the expansion of research activities and the dissemination of the profession, and the increase in the productive capacity of researchers in the area, observed by the greater involvement in researcher orientations and the publication of the researches developed in graduate studies (BROWN et al., 2017; FOLHA; CRUZ; EMMEL, 2017; LOPES et al., 2016; POTTER, 2010; OLIVER, 2008, 2009).

On this last aspect, there was an increase of authors in the articles analyzed. This growth may be related to the establishment of collaboration networks due to the complexity of the research objects and as a possible strategy with the goal of boosting scientific production (OLIVER, 2008, 2009).

Although the WebQualis list is generated from graduate activities developed at the academy (BARATA, 2016; RODACKI, 2016; SOMA; ALVES; YANASSE, 2016), the publications in these journals were produced both by authors affiliated

with the university environment and by authors linked to non-academic institutions. The academic environment was predominant as expected. Previous studies have identified a longitudinal change in the origin of the publications, since these works were initially developed by professionals linked to the professional practice and are currently more related to the research activities carried out in the universities (FOLHA; CRUZ; EMMEL, 2017; LOPES et al., 2016; BROWN; BROWN, 2005). In studies of North American and European countries, some occupational therapy studies indicate that this concentration has a strong influence on what is thought and what is considered important for the profession in the world scene (HAMMELL, 2011). However, these influences often do not reflect the demands and needs of occupational therapists located in other geographic and social contexts, as in the Brazilian context (MALFITANO, 2015; OLIVER, 2008, 2009).

The identification of the main categories of non-specific journals produced a profile on their scope of publication, most frequently in the categories of rehabilitation, neurosciences, and neurology and sports sciences. As described in the database investigated, the first category included studies on therapy and strategies aimed at assisting in the rehabilitation of the physical, mental and social capacities of people with some kind of health condition or the process of a specific development cycle, such as in the case of human aging.

This result was expected since the list of journals analyzed in this research came from the publications of the masters and doctoral programs of four professional and academic areas that historically have been involved in the intervention with people in the rehabilitation process.

The existence of a certain profile of journals with specific scopes may not comprehensively reflect the reality of the production of knowledge related to the profession in Brazil, and this is a limitation of the possibilities of diffusion of the works developed in the country in these journals. These reflections have been repeatedly pointed out by some occupational therapists linked to post-graduate studies in area 21 (LANCMAN; MÂNGIA, 2017; MALFITANO, 2015; OLIVER, 2009; BARROS; OLIVER, 2003).

More frequently in the professional intervention, the analyzed studies indicated themes involving the evaluation of users and the services offered, essential

for the practice based on evidence and for the character of a constitution with applied researches to the detriment of the basic ones. Regarding the research objectives, despite the predominance of proposals related to the intervention, the articles were focused on the fundamentals of the profession and on vocational training. This range may be related to the diverse population studied in the specific and non-specific journals, such as researchers, assistance professionals and students (BROWN, 1997).

The emphasis on the greater frequency of quantitative research approaches and the observational and intervention studies are attributed to the fact that their objectives seek to verify and demonstrate the efficiency of a resource, technique or evaluation method. This trend is driven by the demand for research that provides evidence to support professional practices (GUTMAN, 2008).

Due to the criteria adopted by the CAPES evaluation system, with better strata for journals according to their impact factor and that demonstrate significantly high bibliometric indicators, the profile of journals classified in the upper strata tends to change a little, unless incisive strategic policies and actions are carried out in favor of classification alternatives.

Although authors highlighted the misuses and errors of WebQualis, especially in the guide for the choice of journals in the diffusion of the studies in the graduate area (BARATA, 2016; RODACKI, 2016), the list of WebQualis has substantially influenced the actions developed in the academic environment (SOMA; ALVES; YANASSE, 2016; OLIVEIRA, 2015; OLIVER, 2008, 2009; BARROS; OLIVER, 2003).

The characterization proposal developed in this study was not intended to identify the choice of a type of research to be followed and disseminated in the periodicals evaluated. Due to the important challenges posed to post-graduation for occupational therapists in area 21, the collection of information collected here is directed towards the understanding of a panorama, a fundamental action for the elaboration and implementation of individual and collective strategies. This is a demand repeatedly addressed by researchers of the area in the country (LOPES; CRUZ; MALFITANO, 2017; LOPES et al., 2014, 2016; OLIVER et al., 2016).

#### 4.1 Limitations and recommendations for future researches

The use of the term “occupational therapy” to identify the articles is a limitation of this study since it is possible to have a large number of articles on occupational therapy that do not necessarily adopt the term in the title, abstract or keywords. Thus, the data reported in this study should be analyzed with caution, relativizing the criteria used for this investigation.

The choice by the WebQualis analysis of area 21 is also a limitation by the fact that there are advisory occupational therapists in other postgraduate programs that are not in area 21. Also, the descriptive categorization for classification of the studies found may not have been sufficient to the understanding of the distribution of knowledge production in occupational therapy in Brazil.

Further studies with other criteria, databases, and classifications for a broader understanding of occupational therapy production in the country are suggested. A good criterion would be to use the authorship of publications by occupational therapists in the health area, for example. Also, investigations on publications disseminated in specific journals of the profession are essential for understanding the field of current knowledge in the area.

The publication on occupational therapy in journals of related areas is essential for the dissemination of the knowledge produced by the profession, given that occupational therapy is a profession of interdisciplinary character, with essential dialogue with other areas of knowledge.

## 5 Conclusion

This research sought to answer questions about the non-specific journals of occupational therapy but they published studies and research related thereto during the period from 2004 to 2015. Specific information about the population studied, reported here as the people who transmit information in these journals and the scope, translated into the themes, objectives, methods, and populations investigated are the objectives of the study.

Few non-specific occupational therapy journals of relevant international prestige listed in the Webqualis of the area 21 of CAPES published articles related to the profession according to the criteria adopted for this research. Those journals that published more frequently had themes involving a profile

of a certain population, which may, in part, limit the spaces of dialogue and discuss with different actors and professional practices. These journals are concentrated in a few countries, which may restrict the possibilities of scientific dissemination arising from other contexts, realities and different ways of thinking and doing science.

Considering the CAPES classification, this study may indicate what the Post-Graduation Programs of the area 21 have published about occupational therapy. In addition to the national scenario, it was identified who and from whom are the interlocutors who disseminate studies in journals of recognized scientific and international reputation, used by Brazilian researchers.

Thus, obtaining information about the population studied and the characteristics of the studies published on occupational therapy in these journals could contribute to identify the scientific vehicles that do not bring the area at its core but offer space for the publication of studies of the profession. Such information could help in choosing the channels where it would be possible to publish the knowledge produced by the profession.

This study provided information on the scopes of interest of knowledge dissemination of these journals, which may help in understanding a cut in the panorama of the scientific dissemination in occupational therapy, and to encourage the elaboration of actions capable of strengthening the dissemination of the knowledge of the profession and contribute to the Brazilian research in the international scope.

## References

- ANDRESEN, E. M.; TANG, J. J.; BARNEY, K. F. The importance of occupational therapy contributions to health services research. *Occupation Participation and Health*, Thorofare, v. 26, n. 3, p. 108-116, 2006. <http://dx.doi.org/10.1177/153944920602600304>.
- BARATA, R. B. Dez coisas que você deveria saber sobre o Qualis. *Revista Brasileira de Pós-Graduação*, Brasília, v. 13, n. 30, p. 13-40, 2016.
- BARROS, D. D.; OLIVER, F. C. Contribuindo para a discussão do Qualis de terapia ocupacional no Brasil. *Revista de Terapia Ocupacional da Universidade de São Paulo*, São Paulo, v. 14, n. 2, p. 52-63, 2003. <http://dx.doi.org/10.11606/issn.2238-6149.v14i2p52-63>.
- BROWN, G. T. Characteristics of occupational therapy journals of WFOT member countries: a descriptive survey. *Occupational Therapy International*, New York, v. 4, n. 2, p. 116-134, 1997. <http://dx.doi.org/10.1002/oti.51>.
- BROWN, G. T.; BROWN, A. Characteristics of the occupational therapy journal of research: the first twenty years. *Occupational Therapy in Health Care*, London, v. 19, n. 3, p. 73-92, 2005. [http://dx.doi.org/10.1080/J003v19n03\\_06](http://dx.doi.org/10.1080/J003v19n03_06). PMID:23927748.
- BROWN, G. T.; RODGER, S.; BROWN, A. Publication practices of English language occupational therapy journals. *British Journal of Occupational Therapy*, London, v. 68, n. 2, p. 85-92, 2005. <http://dx.doi.org/10.1177/030802260506800205>.
- BROWN, T. et al. Highly cited occupational therapy articles in the science citation index expanded and social sciences citation index: a bibliometric analysis. *The American Journal of Occupational Therapy*, Rockville, v. 71, n. 6, p. 7106300010p1-7106300010p11, 2017. <http://dx.doi.org/10.5014/ajot.2017.023747>. PMID:29135433.
- BROWN, T. et al. A bibliometric analysis of occupational therapy publications. *Scandinavian Journal of Occupational Therapy*, Oslo, v. 25, n. 1, p. 1-14, 2018. <http://dx.doi.org/10.1080/11038128.2017.1329344>. PMID:28508696.
- COORDENAÇÃO DE APERFEIÇOAMENTO DE PESSOAL DE NÍVEL SUPERIOR – CAPES. *Plataforma Sucupira*. Brasília, 2018a. Disponível em: <<https://sucupira.capes.gov.br/sucupira/public/consultas/coleta/veiculoPublicacaoQualis/listaConsultaGeralPeriodicos.jsf>>. Acesso em: 7 mar. 2018.
- COORDENAÇÃO DE APERFEIÇOAMENTO DE PESSOAL DE NÍVEL SUPERIOR – CAPES. *Portal de Periódicos*. Brasília, 2018b. Disponível em: <[http://www.periodicos.capes.gov.br/index.php?option=com\\_pcontent&view=pcontent&alias=missao-objetivos&Itemid=102](http://www.periodicos.capes.gov.br/index.php?option=com_pcontent&view=pcontent&alias=missao-objetivos&Itemid=102)>. Acesso em: 7 mar. 2018.
- FOLHA, O. A. C.; CRUZ, D. M. C.; EMMEL, M. L. G. Mapeamento de artigos publicados por terapeutas ocupacionais brasileiros em periódicos indexados em bases de dados. *Revista de Terapia Ocupacional da Universidade de São Paulo*, São Paulo, v. 28, n. 3, p. 358-367, 2017.
- GUIMARÃES, B. M.; MARTINS, L. B.; BARKOKÉBAS JUNIOR, B. Issues concerning scientific production of including people with disabilities at work. *Work*, Reading, v. 41, p. 4722-4728, 2012. Suplemento 1. PMID:22317448.
- GUTMAN, S. A. Research priorities of the profession. *American Journal of Occupational Therapy*, Rockville, v. 62, n. 5, p. 499-501, 2008. <http://dx.doi.org/10.5014/ajot.62.5.499>. PMID:18826009.
- HAMMELL, K. W. Resisting theoretical imperialism in the disciplines of occupational science and occupational therapy. *British Journal of Occupational Therapy*, London, v. 74, n. 1, p. 27-33, 2011. <http://dx.doi.org/10.4276/030802211X12947686093602>.

- JOHNSON, K. S.; LEISING, D. J. The literature of occupational therapy: a citation analysis study. *American Journal of Occupational Therapy*, Rockville, v. 40, n. 6, p. 390-396, 1986. <http://dx.doi.org/10.5014/ajot.40.6.390>. PMID:3521298.
- LANCMAN, S.; MÂNGIA, E. F. Terapia ocupacional e programas de pós graduação: considerações sobre a situação. *Revista de Terapia Ocupacional da Universidade de São Paulo*, São Paulo, v. 28, n. 3, p. 1-2, 2017.
- LOPES, R. E. et al. XI Encontro Nacional de Docentes de Terapia Ocupacional: refletindo sobre os processos de formação acadêmica e profissional. *Revista de Terapia Ocupacional da Universidade de São Paulo*, São Paulo, v. 19, n. 3, p. 159-166, 2008. <http://dx.doi.org/10.11606/issn.2238-6149.v19i3p159-166>.
- LOPES, R. E. et al. Pesquisa em terapia ocupacional: apontamentos acerca dos caminhos acadêmicos no cenário nacional. *Revista de Terapia Ocupacional da Universidade de São Paulo*, São Paulo, v. 21, n. 3, p. 207-214, 2010. <http://dx.doi.org/10.11606/issn.2238-6149.v21i3p207-214>.
- LOPES, R. E. et al. II Seminário Nacional de Pesquisa em Terapia Ocupacional: caminhos para a institucionalização acadêmica da área. *Revista de Terapia Ocupacional da Universidade de São Paulo*, São Paulo, v. 25, n. 2, p. 167-176, 2014. <http://dx.doi.org/10.11606/issn.2238-6149.v25i2p167-176>.
- LOPES, R. E. et al. A divulgação do conhecimento em Terapia Ocupacional no Brasil: um retrato dos seus periódicos. *Cadernos de Terapia Ocupacional da UFSCar*, São Carlos, v. 24, n. 4, p. 777-789, 2016. <http://dx.doi.org/10.4322/0104-4931.ctoAO0798>.
- LOPES, R. E.; CRUZ, D. M. C.; MALFITANO, A. P. S. Estamos no nosso melhor momento. *Cadernos Brasileiros de Terapia Ocupacional*, São Carlos, v. 25, n. 3, p. 447-448, 2017. <http://dx.doi.org/10.4322/2526-8910.ctoED22503>.
- MALFITANO, A. P. S. Editorial: doutorado em terapia ocupacional: desafios para a produção de conhecimento na área e sua consolidação acadêmica. *Cadernos de Terapia Ocupacional da UFSCar*, São Carlos, v. 23, n. 4, p. 683-684, 2015. <http://dx.doi.org/10.4322/0104-4931.ctoED12304>.
- MALFITANO, A. P. S. et al. Programa de pós-graduação stricto sensu em terapia ocupacional: fortalecimento e expansão da produção de conhecimento na área. *Revista Brasileira de Atividade Física & Saúde*, Florianópolis, v. 18, n. 1, p. 105-111, 2013. <http://dx.doi.org/10.12820/2317-1634.2013v18n1p105>.
- OLIVEIRA, J. F. A pós-graduação e a pesquisa no Brasil: processos de regulação e de reconfiguração da formação e da produção do trabalho acadêmico. *Práxis Educativa*, Ponta Grossa, v. 10, n. 2, p. 343-363, 2015. <http://dx.doi.org/10.5212/PraxEduc.v.10i2.0004>.
- OLIVER, F. C. Pesquisa e produção bibliográfica em terapia ocupacional: contribuições ao debate sobre parâmetros de avaliação da produção acadêmica brasileira. *Revista de Terapia Ocupacional da Universidade de São Paulo*, São Paulo, v. 19, n. 2, p. 108-120, 2008. <http://dx.doi.org/10.11606/issn.2238-6149.v19i2p108-120>.
- OLIVER, F. C. Disseminação do conhecimento e periódicos científicos: contribuições para o debate em Terapia Ocupacional. *Cadernos de Terapia Ocupacional da UFSCar*, São Carlos, v. 17, p. 69-85, 2009. Número Suplementar.
- OLIVER, F. C. et al. III Seminário Nacional de Pesquisa em Terapia Ocupacional: contribuições para o desenvolvimento da área. *Revista de Terapia Ocupacional da Universidade de São Paulo*, São Paulo, v. 27, n. 3, p. 361-368, 2016. <http://dx.doi.org/10.11606/issn.2238-6149.v27i3p361-368>.
- POTTER, J. Mapping the literature of occupational therapy: an update. *Journal of the Medical Library Association*, Chicago, v. 98, n. 3, p. 235-242, 2010. <http://dx.doi.org/10.3163/1536-5050.98.3.012>. PMID:20648258.
- RODACKI, A. L. F. Qualis: implicações para a avaliação de programas de pós-graduação das diferentes áreas do conhecimento: uma análise preliminar. *Revista Brasileira de Pós-Graduação*, Brasília, v. 13, n. 30, p. 65-76, 2016.
- RODACKI, A. L. F.; GUIRRO, R. R. D. J.; KESKESOARES, M. *Relatório de avaliação: educação física: avaliação quadrienal 2017*. Brasília: CAPES, 2017. Disponível em: <<http://www.capes.gov.br/images/stories/download/avaliacao/relatorios-finais-quadrinial-2017/20122017-EDUCACAO-FISICA-quadrinial.pdf>>. Acesso em: 6 mar. 2017.
- RODGER, S.; MCKENNA, K.; BROWN, T. Quality and impact of occupational therapy journals: authors' perspectives. *Australian Occupational Therapy Journal*, Melbourne, v. 54, n. 3, p. 174-184, 2007.
- SOMA, N. Y.; ALVES, A. D.; YANASSE, H. H. O Qualis Periódicos e sua utilização nas avaliações. *Revista Brasileira de Pós-Graduação*, Brasília, v. 13, n. 30, p. 45-61, 2016.

## Author's Contributions

Otavio Augusto de Araujo Costa Folha and Débora Ribeiro da Silva Campos Folha carried out the data collection and categorization, text design, analysis, organization of the sources and writing of the text. Daniel Marinho Cezar da Cruz, Patrícia Carla de Souza Della Barba and Maria Luísa Guillaumon Emmel carried out the analysis and review of the text. All authors approved the final version of the text.

## Notes

- <sup>1</sup> Material of research project called “Occupational Therapy as a field of research in Brazil: Trajectories, characteristics and challenges” carried out during the first author’s doctorate in the Post-Graduation Program in Occupational Therapy of the Federal University of São Carlos (PPGTO/UFSCar).