

## BIBLIOMETRIC ANALYSIS OF SCIENTIFIC RESEARCH ABOUT SEXUALITY AND DEMENTIA IN THE ELDERLY

### *ANÁLISE BIBLIOMÉTRICA DE PESQUISAS CIENTÍFICAS SOBRE SEXUALIDADE E DEMÊNCIA EM IDOSOS*

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**ABSTRACT:** We aimed to map the global scientific research on sexuality and dementia in the elderly to understand the focus and the growth of the area during the past decades. An exploratory study, descriptive and bibliometric with academic works on the database *ISI Web of Knowledge/Web of Science*<sup>TM</sup>. The following descriptors were used: “elder\*”, “dementia\*” and “sexuality\*” in the time-based search between 1945 and 2018. The data analysis was performed with the aid of the software HistCite<sup>TM</sup>. After applied the filters of refinement, there were identified 79 articles, published in 45 different journals indexed in the database in reference, written by 157 authors linked to 96 research institutions located in 19 countries. To achieve these articles there were used 2,312 references with an average of approximately 32 references per article. The international scientific production about sexuality and dementia in the elderly is scarce, and highlights the need for more specific studies on the theme and its potential for exploitation in future studies.

**KEYWORDS:** Aged. Dementia. Sexuality. Bibliometrics.

#### INTRODUCTION

Population aging is a universal phenomenon that occurs in an accelerated manner, (CLEGG et al., 2013; MOREIRA et al., 2018) resulting in changes in the health profile of the elderly, increasing the occurrence of chronic-degenerative diseases, as the dementias (SILVEIRA; VIEIRA; SOUZA, 2018).

Dementia is a syndrome characterized by the impairment of memory associated with the change in one or more cognitive functions, reflecting on physical and mental incapacity, hindering the maintenance of sexuality between couples in elderly patients (WINDLE et al., 2018).

Scientific evidence shows that sexuality and sexual activity coexist in healthy elderly population, being important predictors for quality of life (MOREIRA et al., 2015; DANTAS et al., 2018).

However, sexuality and dementia in the elderly has been related to inappropriate behavior, studies suggest that the presence of dementia syndrome causes decline in sexual intimacy and such activity may be replaced by other modes of demonstration of physical intimacy, as hugs, kisses and touches. In addition, there is a dilemma for the decline of the capacity of decision between elderly

dementiated and their spouses are healthy (NOGUEIRA et al., 2013; LIMA et al., 2015).

Due to the importance attributed to the studies that have focused on the health of the elderly person, especially that seek strategies to improve the quality of life of this population, evidences the need of researchers directed their research to focus on new ways of caring for older people. Therefore, the state of the art theme may benefit because of bibliometric studies (WINGERTER et al., 2018).

The bibliometric studies are consolidated in laws and empirical principles that aim to explore the quantitative aspects of the findings about the available literature, and helps to guide areas and most prolific researchers, journals and institutions that have featured on a given topic or related areas and works most often cited (AREIAS et al., 2016).

In this article, the bibliometric research was applied to answer the following question: “How is the scientific literature on the sexuality of the elderly person with dementia?” In order to answer this question problem, we undertaken the present study, employing bibliometric metrics, to map global scientific research on sexuality and dementia in the elderly to understand the focus and the growth of the area during the past decades.

## MATERIAL AND METHODS

Exploratory and descriptive study of the bibliometric type conducted through the following steps: defining the database and the criteria to be used for the collection, collection of data and the representation and analysis of these (SANTOS; SELIG, 2014).

In this way, there was elected as the database ISI Web of Knowledge/Web of Science™ by his “academic recognition to be considered one of the most comprehensive databases journals that cover several areas of scientific knowledge”, in addition to being important and pioneer in regular meeting of more than 100 knowledge areas (MOURA et al., 2017).

The data collection was carried out in January 2019; we used the period of searching available based on data for full years (1945-2018), in order to allow replication or updating this study without the need to carry it again since its inception.

The descriptors were defined from the catalog Descriptors in Health Sciences (DeCS) and the Medical Subject Headings (MeSH), being selected the following search terms: “dementia\*”; “sexuality\*” and “elder\*”. Other terms commonly used, such as “older” or “frail”, are not part of the search terms to be synonyms of “elder” inside the library of the DeCS. The quotation marks indicate the exact representation of terms with more than one word and the asterisks the possibilities of plural form of keywords. These Terms represent the malicious association in compliance with the objective of the study.

The collection was performed from the pursuit of these terms in the “topic”, which represents the title of articles, abstracts and keywords of the author and keywords (keywords plus).

After the search, there was conducted a refinement of jobs found through the application of filters offered by the search mechanism of the base; no filter of refinement to knowledge areas, countries or languages of studies covering all records of publications that had the three terms in association. The results were excluded articles from events or considered still in editing (conference proceedings) and records from “proceedings papers”, “editorial material” and “letter”, resulting only final and complete “article” and “review” (articles and

reviews). In this way, there were identified 79 studies, which were used as a set of articles for the bibliometric analysis proposed in this article.

Then, the analysis of the material by means of export of data to the software package of HistCite™ bibliometric analysis, in order to organize the information and facilitate the analysis. The following items were analyzed: the trajectory of the Annual evolution of publications; the journals with a greater quantity of records; the authors with a larger quantity of publications; and the quantity of items distributed by country of origin of the authors. In addition to these data generated by the software, there were elucidated aspects of most cited 15 articles and 15 of the globally most cited articles locally, in order to identify their main contributions to the theme related to sexuality and dementia in the elderly.

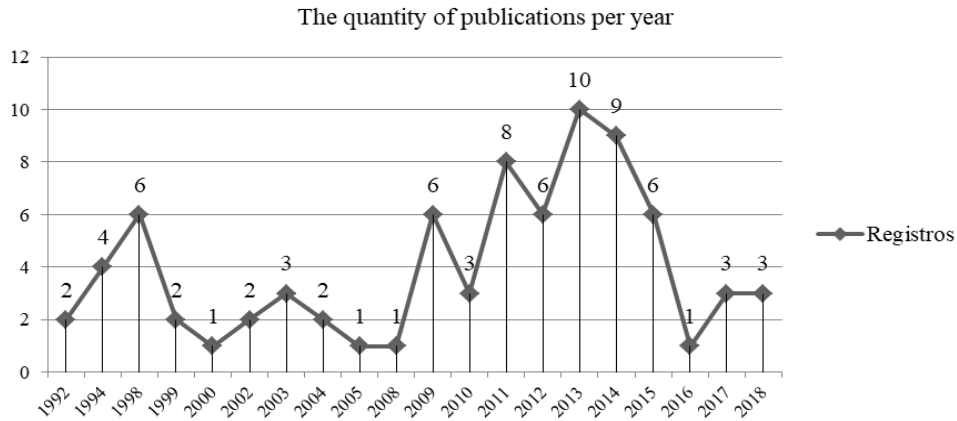
Because it is a bibliometric study, it was necessary to submit the project of this research to the Committee of Ethics in Research with Human Beings. However, the researchers undertook to maintain the ethical principles recommended for the research of this nature, respecting the ideas, citations and referencing the authors and their publications.

## RESULTS

The search performed for the period 1945 to 2018, only returned the first result of article for the year 1992, and for this reason, the temporal space evaluated the results from 1992 to 2018.

After performing the bibliometric survey, 79 articles were identified that bring in its scope the descriptors related to research. These articles are published in 45 different journals indexed in the database in question and were written by 157 authors who have ties with 96 research institutions, located in 19 countries. To achieve these articles were used 2,312 references, with an average of approximately 32 references per article.

The evolution of scientific production about sexuality and dementia in the elderly is demonstrated in Figure 1, which shows the annual number of publications in the studied period, pointing out that the international interest on the subject started in 1992 and has been increasing since then, with some peaks and occasional setbacks in this time interval.



**Figure 1.** Distribution of publications on sexuality and dementia in the elderly in the period of 1992 to 2018. *ISI Web of Knowledge/Web of Science™*. São Paulo-SP, Brazil, 2019.

With the purpose of identifying the most representative international journals in the area of research on sexuality and demencia in elderly people, the 45 journals were analyzed for the amount of articles published on the topic, and the total number of citations.

Table 1 shows the list of journals most representative as to the quantity of publications on

the topic under study. You can observe the relationship between the number of citations and the number of articles published in each one of the journals, and by means of this indicator it is possible to have an initial information regarding the impact of articles identified in these journals under the total number of citations received.

**Table 1.** The most published journals (1992-2018).

Journals	Number of articles	Quotes	Quotes/Quantity
<i>Sexuality and Disability</i>	14	128	9,1
<i>International Psychogeriatrics</i>	8	105	13,1
<i>British Journal of Social Work</i>	3	17	5,6
<i>American Journal of Geriatric Psychiatry</i>	2	7	3,5
<i>Health &amp; Social Care in The Community</i>	2	27	13,5
<i>International Journal of Nursing Studies</i>	2	19	9,5
<i>Journal of Gerontological Nursing</i>	2	5	2,5
<i>Nursing Ethics</i>	2	51	25,5

*ISI Web of Knowledge/Web of Science™*. São Paulo-SP, Brazil, 2019.

In response, the authors were identified that most have publications on the theme, their institutional affiliation and the country of origin of the institution. Among the authors with more publications on the theme in ISI Web of Knowledge/Web of Science™, are M. Bauer with 6 publications, R. Nair with 7 and D. Fetherstonhaugh with 4, being that these authors belong to a same University, La Trobe University in Australia.

The most representative countries, which have the largest part of scientific production in the field studied were: United States of America, United Kingdom, Australia, Belgium and Brazil. Although the United States of America have the largest number of publications, with 22 articles, which represents 28% of the papers published, Australia, with 17 articles (22% of the total), figure as being

the country of bond of imposition of the most cited authors.

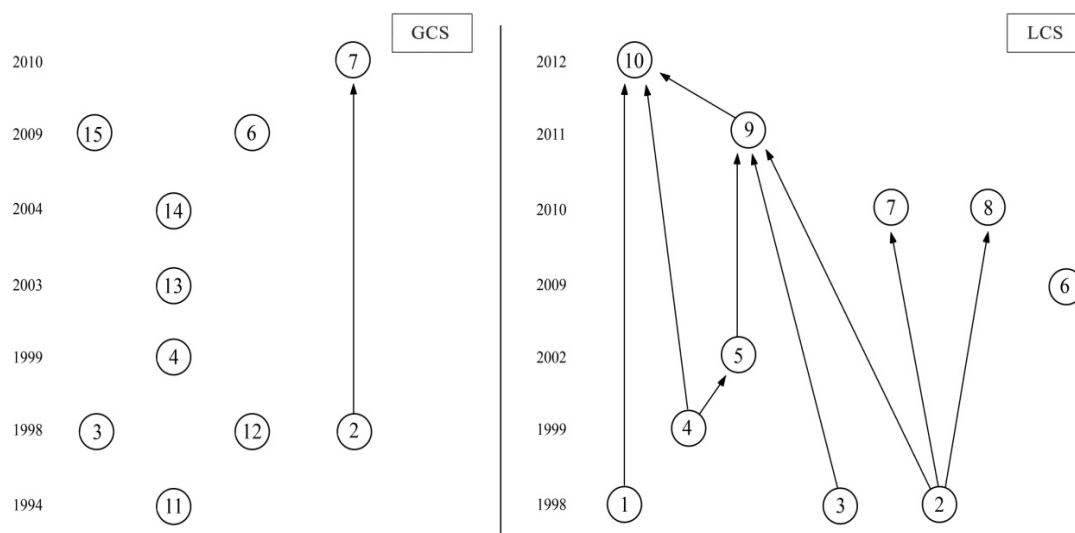
The classification of scientific studies by the number of citations received shows works that are considered the fundamental bases for the theme.

Although it will take some time until the articles begin to be cited by other researchers, the evaluation of quotations in the present study sought to establish the state of the art in the area of research on sexuality and dementia in the elderly. It has been based on articles that have the title of the work the terms used in searches and indexed in one of the journals with greater number of citations in the theme identified earlier.

With these criteria, there were selected 15 articles, which were analyzed with the tool Historiograph/HistCite™. It was possible to identify

the articles that are related among themselves, mainly due to the references used and/or cited (Figure 2), where each “circle” represents an article, whose number identifies the work (author/s, year). Each “arrow” shows the links between articles, being that the direction of the arrows indicates the relationship between work and a later study that cites; the side “GCS” represents the overall citation of 15 articles on the theme that received a greater

quantity of quotes in the ISI Web of Knowledge/Web of Science™; and the side “LCS” represents the quotient of citation site, which corresponds to 15 articles on the theme that received a greater quantity of citations of the articles selected. By means of this graphical representation, it delineated the time line and the main articles of the subject studied.



#### Legends:

- 1 - Archibald (1998)<sup>13</sup>
- 2 - Davies et al. (1998)<sup>14</sup>
- 3 - Harris; Wier (1998)<sup>15</sup>
- 4 - Ehrenfeld et al. (1999)<sup>16</sup>
- 5 - Aizenberg et al. (2002)<sup>17</sup>
- 6 - Frankowski et al. (2009)<sup>18</sup>
- 7 - Davies et al. (2010)<sup>19</sup>
- 8 - Dourado et al. (2010)<sup>20</sup>
- 9 - Elias; Ryan (2011)<sup>21</sup>
- 10 - Benbow; Beeston (2012)<sup>22</sup>

- 11 - Mendez (1994)<sup>23</sup>
- 12 - Mattiasson; Hemberg (1998)<sup>24</sup>
- 13 - Hubbard et al. (2003)<sup>25</sup>
- 14 - Hall; O'Connor (2004)<sup>26</sup>
- 15 - Hayes et al. (2009)<sup>27</sup>

**Figure 2.** Top 15 most cited articles Global Citation Score e Local Citation Score in ISI Web of Knowledge/Web of Science™. São Paulo-SP, Brazil, 2019. Historiograph/HistCite™. São Paulo-SP, Brazil, 2019.

To observe the relationship between the texts, it may be identified in the circles called “article authority” or “article” that are key references from others who also receive large quantities of citations (MOURA et al., 2017). They are Archibald (1998) and Davles et al., (1998). In addition to the articles authority, also appear “articles hub” or “articles”, which are those that condense important information from previous work by connecting them to other more recent, also receiving large amounts of citations (MOURA et al., 2017). They are Davies et al., (2010), Elijah; Ryan

(2011) and Benbow; Beeston (2012). The article of Davies et al., (2010) made no reference to dementia, which is why their analysis there will be detailed in this study.

## DISCUSSION

The results of the bibliometric review pointed to scarcity of scientific evidence about sexuality and dementia in the elderly in the database ISI Web of Knowledge/Web of Science™.

With respect to the evolution of scientific production, Figure 1 emphasizes that the number of published articles remained low between the years of 1992 and 2010, with discreet peaks in 1998 and 2009. In the year 2013, these results showed its apex, with 10 records of productions, stressing the relevance and importance of the topic, indicating that there is a renewed interest in the international scientific community to disseminate knowledge in this field of study; however, there are still deficiencies to be remedied.

In case of the eight most cited journals (table 1), these have approximately 44% of the total number of articles retrieved. The *Sexuality and Disability* has the largest number of publications, with approximately 18% of the total number of articles. However, the *Nursing Ethics* has only 2 publications and 51 citations, which considerably increases its impact factor regarding the subject studied, since the number of citations that the journal obtained can serve as an indicator of the relevance of the work.

With regard to authors and institutions more representative in the theme, the most cited authors are gathered in only 4 universities in 3 countries, with emphasis to the La Trobe University, on Australia, with 19 publications, approximately 24% of the work, a sum of articles is greater than the other countries together. The university in question is one of the most prestigious of Australia, has the oldest School of Nursing of this country and its Department of Public Health is recognized as a leader in politics and administration of health and by the distinguished contribution made by its social scientists and behavioral disorders (HOU COURSES, 2017).

Although the figure 1 point (the first records of scientific evidence in 1992, the relation between the items in Figure 2 identified that the “authority” or “base” articles were published in 1998 (Archibald, 1998; DAVIES et al., 1998). As to “Articles hub” or “connection”, were published in 2010 (DAVIES et al., 2010), 2011 (ELIJAH; RYAN, 2011) and 2012 (BENBOW; BEESTON, 2012).

Archibald (1998), considered as “article authority”, aimed to investigate the types of sexual manifestations by elderly people with dementia in residential care. The results of this study pointed to the issue of gender and the involvement of the spouse or caregiver by exerting a significant influence on the sexuality, related to the replacement of sexual activity by other modes of demonstration of physical intimacy, as hugs, kisses

and touches, as well as evidenced in other studies (DEROUESNÉ, 2005).

Another article considered authority, and which is said to be among the most cited globally and locally, is the Davies et al., (1998), in which aimed to analyze the literature on sexuality and intimacy in Alzheimer's sufferers and their partners. The results indicated that dementia can cause changes in sexual functioning, reflecting on the harmful effects on the couple and their quality of life, if not treated. Stressed the importance of assistance on the part of health professionals free of stereotypes, highlighting the importance of the permanent education process in the formation of human resources and qualified in relation to the topic (ROBINSON; DAVIS, 2013).

The “articles hub” of Davies et al., (2010), highlighted among the most cited globally and locally. Aimed to identify issues of intimacy and sexuality that caregivers of elderly with mild cognitive decline and dementia may experience. The results showed that the caregivers reported a reduction of sexual expression because of physical limitations (DEROUESNÉ, 2005; DAVIES et al., 2012; ROBINSON; DAVIS, 2013).

The study of Benbow and Beeston (2012), reviewed the literature on sexuality, aging and dementia. Identified that despite the sexual activity decrease with the increase of age, many healthy elderly remain sexually active, including people living with dementia.

It is the pioneering of this study to address the bibliometric indicators of scientific production about sexuality and dementia in the elderly. Although many studies on this theme come growing, the literature still has become scarce.

In this context, it is relevant to consider the advanced age as an important aspect of quality of life and reflect on how the elderly dementiated deal with the dyad be healthy elders x sexuality and be elderly with dementia x sexuality, as are seen in society and how they deal with the stereotypes linked to expression of their sexuality.

The limitations of this study relate to the use of a single database, the ISI Web of Knowledge/Web of Science<sup>TM</sup>, for analysis. It is possible that relevant studies published before this period or indexed in other databases were not contemplated; and the lifting of studies was also limited to the literature reviewed by peers, therefore, unpublished data, such as thesis, dissertations and documents of institutional ownership were not included.

## CONCLUSIONS

There is a lack of studies involving sexuality of elderly with dementia. Only 79 studies were found in the database mentioned in the period investigated.

The bibliometric indicators used in this article are important to characterize the state of the art related to the theme. But the results suggest the

implementation of new research regarding the sexuality of older people with dementia, since the discussions on this issue will need to be expanded in view of the lack of studies in this area. Because it is a specific population, it is relevant to the discussion of this theme in the training of health professionals, because they constitute a possible revision of concepts established throughout life and of care inherent to the sexuality of the elderly dementiated.

**RESUMO:** Mapear a pesquisa científica global sobre sexualidade e demência em idosos para entender o foco e o crescimento da área nas últimas décadas. Estudo exploratório, descritivo e bibliométrico com trabalhos acadêmicos na base de dados *ISI Web of Knowledge/Web of Science*<sup>TM</sup>. Foram usados os descritores: “*elder\**”, “*dementia\**” e “*sexuality\**” no recorte temporal entre 1945 e 2018. A análise dos dados foi realizada com auxílio do *software HistCite*<sup>TM</sup>. Após aplicados os filtros de refinamento, foram identificados 79 artigos, publicados em 45 periódicos distintos indexados à base de dados em questão, escritos por 157 autores vinculados a 96 instituições de pesquisa, localizadas em 19 países. Para a consecução desses artigos foram utilizadas 2.312 referências, com uma média de aproximadamente 32 referências por artigo. A produção científica internacional sobre sexualidade e demência em idosos é escassa e destaca a necessidade de estudos mais específicos sobre o tema e o seu potencial de exploração em futuros estudos.

**PALAVRAS-CHAVE:** Idoso. Demência. Sexualidade. Bibliometria.

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