

Spirituality and HIV: a Bibliometric Study in the Health Area

REVIEW

Rebeca Coelho de Moura Angelim¹, Brígida Maria Gonçalves de Melo Brandão²,
Daniela de Aquino Freire², Valesca Patriota de Souza³,
Verônica Mirelle Alves Oliveira Pereira², Fátima Maria da Silva Abrão⁴

Abstract

The study aimed to analyze the bibliometric profile of scientific production in health area on studies that address the theme of spirituality and HIV. The bibliometric research was conducted in the PubMed database. The keywords "HIV" and "Spirituality" were used, considering the period 2006-2015, resulting in a sample of 65 articles. The data showed that about language, it is clear that English was predominant, with 95.4% productions. As the year of publication, 2011 had the largest volume of published articles with 21.5%, and 2010 was no publication recorded. Regarding the journals, the Journal of General Internal Medicine was the most published research on the subject of this study. The quantitative method had a higher prevalence, and the most used instrument was WHOQOL-Bref. The data show incipient publications on Spirituality and HIV, especially at national level, demonstrating the need for more research on this topic.

- 1 Nurse. Ph.D. student in Nursing by the Associate Program in Nursing Post-Graduation of the University of Pernambuco and State University of Paraíba. Recife, Pernambuco, Brazil.
- 2 Nurse. Master degree student in Nursing by the Associate Program in Nursing Post-Graduation of the University of Pernambuco and State University of Paraíba. Recife, Pernambuco, Brazil.
- 3 Nurse. Master in Human Health and Environment. Assistant Professor of the Federal University of Pernambuco. Vitória de Santo Antão, Pernambuco, Brazil.
- 4 Nurse. Ph.D. in Nursing. Coordinator and professor of the Associate Program in Nursing Post-Graduation of the University of Pernambuco and State University of Paraíba. Recife, Pernambuco, Brazil.

Contact information:

Rebeca Coelho de Moura Angelim.

 rebecaangelim@hotmail.com

Keywords

Spirituality; HIV; AIDS; Bibliometrics.

Introduction

Spirituality is a subject of the anthropology, theology, psychology, sociology and philosophy research, contributing to the multiplicity of concepts. [1] Therefore, it can be understood as a personal dimension related to the search for answers to the fundamental questions about life and its meaning, as well as the relationship with the sacred or transcendent, which may or may not leads or culminate in the development of religious rituals and community training. [2] Thus, it is a set of

practices, attitudes, values and feelings that come from a relationship with themselves, with God and with each other, giving meaning to life and personal stories, influencing and being influenced. [3]

Conflictual or friendly relationships between spirituality and science have been an area of increasing interest of academic and the general public. Research on spirituality shows great influence of this theme in the physical and mental health of individuals regarding the scientific evidence. [4] In Brazil, the World Health Organization highlighted the spiritual dimension in its conceptual definition of health, which expanded the scope of research in the area. [5]

Despite the growth studies related to this theme and its interfaces with health, there is still little research on the spirituality expression in people living with HIV. However, it is of great importance, particularly in the diagnostic process of discovery of HIV serology, being characterized by a set of feelings, attitudes and practices show that pain and difficulty for individuals before diagnosis. Thus, there is the importance of the spiritual dimension, since spirituality is directly related to dealing with the disease, the health, and life. [1]

Therefore, considering the relevance of spirituality to live with HIV/AIDS, it was realized the need to conduct the present study aimed at assessing the scientific production of this theme in national and international literature, and contribute to the development of future research. Thus, this study aimed to analyze the bibliometric profile of scientific production in health studies addressing the theme of spirituality and HIV.

Methods

This study is a bibliometric research. The bibliometrics is an area of study of information science, characterized as a descriptive method, a quantitative approach, which enables the identification of the behavior and development of the scientific produc-

tion of a certain area of knowledge, that is, it addresses the production, dissemination, and use of information recorded electronically in an international database. [6, 7]

Using statistical studies of the bibliographic and informational records, the profile of the scientific production of an area can be represented. The techniques used in this study were driven by the fundamentals of the Laws of Bradford, Lotka, and Zipf, respectively focusing on journal production, the productivity of authors and the frequency of occurrence of words, being the best known and overlapping the concept of Bibliometrics.

In this research, there was a search in the database Public Medline (PubMed) using the keywords "HIV" and "Spirituality," MeSH members (Medical Subject Headings), used for indexing articles in PubMed. These keywords were combined with the Boolean operator AND to refine the studies according to the theme.

PubMed was chosen because it is a public access database, created and maintained by the US National Library of Medicine (NLM's - NLM), which covers regular life sciences, comprising more than 26 million records of biomedical literature citations of Medical Literature Analysis and Retrieval System Online (MEDLINE). [8] Thus, it is a rich database content and data sources for research, making it ideal for carrying out a bibliometric study.

The search and data collection was in May 2016. The inclusion criteria for the selection of the sample were publications in the last 10 years (January 2006 to December 2015) as articles without language restriction and available in full text for free. There were studies excluded that did not meet the subject investigated such as dissertations, doctoral theses and book chapters.

For data collection, an instrument inserted in Microsoft Excel was used, containing a structured script developed by the researchers, enabling display the results and create tables and figures. The following bibliometric indicators were investigated

in the analysis of the selected articles: year of publication, authors, journals, language, article mode, descriptor and/or keywords, type of study and data collection instrument. Data were analyzed quantitatively using absolute frequencies and percentages.

To get data of the authors, such as index H, institution, country, the number of publications and number of citations, a survey was conducted in the Scopus database, which besides covering journals and thousands of citations in the scientific area; it also offers profiles of the authors. The research of the impact factor of the main journals was carried out in the Journal of Citation Reports, base showing bibliometric indicators of scientific journals.

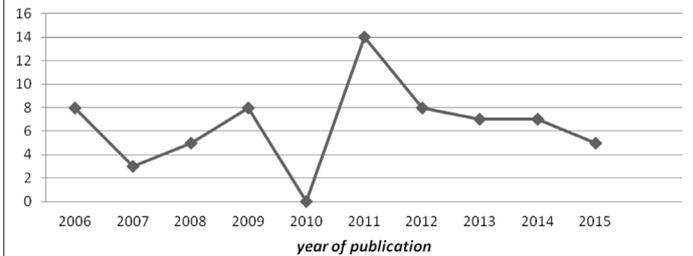
Results

There were 74 articles between 2006 and 2015 identified through the selected keywords into the search instrument. Using the exclusion criteria, there were 9 publications eliminated. Therefore, this study analyzed 65 articles.

Concerning the language, it was found that English was predominant, with 62 (95.4%) and 3 productions in Portuguese. As the year of publication, all years included in the study, except for 2010, presented a publication with an emphasis in 2011, which included 14 articles (21.5%), as shown in **Figure 1**.

Regarding the journals in which the articles were published, they were distributed in 44 journals, including the Journal of General Internal Medicine was the most published research on the subject of this study, followed by AIDS Patient Care STDS (which had the highest impact factor) and the Journal of Religion and Health, according to **Table 1**. The three journals have QUALIS A2, A2, and B2, respectively, according to the Sucupira Platform of Higher Education Personnel Improvement Coordination (CAPES) of 2014. It is also noted that from all journals, only three are Brazilians and showed no significant amount of publication.

Figure 1: Distribution of articles per year of publication in the period 2006-2015 (N=65).



Source: Research data.

Table 1. Distribution of journals and their impact factors in the period 2006-2015.

Journal	N	%	Impact factor
Journal of General Internal Medicine	8	12.3	3.494
AIDS Patient Care and STDs	4	6.1	3.578
Journal of Religion and Health	4	6.1	0.977
AIDS Research and Treatment	3	4.6	1.414
AIDS and Behavior	2	3.1	3.063
Journal of Clinical Interventions in Aging	2	3.1	2.133
Culture, Health and Sexuality	2	3.1	1.833
Global Public Health	2	3.1	1.978
Journal of the Association of Nurses in AIDS Care	2	3.1	1.398
Plos One	2	3.1	3.234
Other	34	52.3	-
Total	65	100	-

Source: Research data

Concerning the authorship, 15 authors stood out as the top producers of the subject, producing between 3 and 7 articles each, with satisfactory H-index and a considerable number of publications and citations in the academic area. It is highlighted the fact they are all connected to institutions located in the United States (US), as shown in **Table 2**.

As for the mode of studies, it was observed that from the 65 articles, there was one editorial, one

Table 2. Distribution of the 15 most productive authors, as the number of articles published in the study, H-index, institution, country, number of publications and citations.

Author	N° of articles	H-Index	Institution	Country	N° of publications	N° of citations
Ironson G	7	56	University of Miami	EUA	156	8346
Tsevat J	7	42	University of Cincinnati	EUA	171	5822
Leonard AC	6	26	University of Cincinnati	EUA	55	2736
Cotton S	5	15	University of Cincinnati	EUA	46	982
Mrus JM	5	19	Janssen	EUA	50	1654
Kremer H	4	12	University of Miami	EUA	26	313
Szaflarski M	4	13	University of Alabama at Birmingham	EUA	25	590
Dilorio C	4	27	Rollins School of Public Health	EUA	96	2562
Sherman SN	4	18	University of Cincinnati	EUA	40	1182
Holstad MM	4	8	Emory University	EUA	20	215
Dalmida SG	3	4	Emory University	EUA	10	54
Bormann JE	3	12	Department of Veterans Affairs	EUA	37	699
Feinberg J	3	42	University of Cincinnati	EUA	146	8097
Laderman G	3	5	Emory University	EUA	12	105
Peterman AH	3	33	The University of North Carolina Chapel Hill	EUA	55	4376

Source: Research data

letter to the editor, 6 articles integrative review or systematic and 57 were from research, and of them, 33 used the quantitative method, 19 qualitative and 5 qualitative/quantitative.

On research instrument, from the 65 articles of the study, 53 used at least one instrument and in the 12 articles remaining, it was not clear if some instrument was used. Of the 53 articles applying an instrument, the most common of these was the questionnaire (41.5%), as **Table 3**. It is important to list the types of the questionnaire as WHOQOL-BREF, SF-36, WHOQOL-HIV-BREF, HRQOL, MVQOLI, HAT-QoL and WHOQOL-120 HIV and was the WHOQOL-BREF as mentioned.

In the analysis of descriptors and/or keywords in the articles, it was found that 11 studies did not have. Of the 54 remaining studies, it was found the presence of a total of 147 descriptors and/or keywords, which the most used were: "spirituali-

Table 3. Data collection instruments used in the articles. 2006-2015.

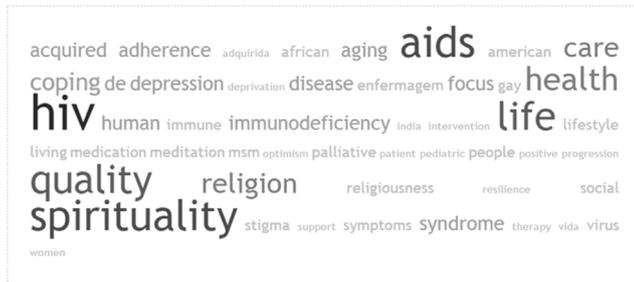
Instruments	N	%
Questionnaire	22	41.5
Interview	15	28.3
Scale	7	13.2
Questionnaire and interview	5	9.4
Questionnaire, Record and interview	3	5.7
Form	1	1.9
Total	53	100

Source: Research data

ty" (17,7%), followed by "HIV" (14.9%), "quality of life" (10.8%), "HIV/AIDS" (8.16%), "AIDS" (8.8%), "religion" (5.4%), "coping" (3.4%) "African American" and "depression" (2.04), as shown in **Figure 2** below.

Another article discussed was regarding the mention of theoretical references, standing only 11 ar-

Figure 2: Word cloud with the descriptors and/or keywords mentioned in the articles analyzed.



Source: Research data.

ticles. The references were: social determinants of health model Dahlgren and Whitehead; transactional model of stress and coping; theory of formative assessment and reflexive; transcultural theory Madeleine Leininger, theory of Betty Neuman Systems and transpersonal caring theory of Jean Watson; Grounded Theory (theory based on a phenomenon built on a systematic data analysis procedure) philosophy of Martin Buber (potentiality of human relations); theory of resource mobility; theory of selection, optimization and compensation (SOC Theory) Bates and Bates; five personality factors model (extroversion, socialization, conscientiousness, neuroticism and openness to experience); social cognitive theory and religious coping model Pargament.

Discussion

Spirituality is a topic that has been expanding and becoming the subject of studies in the health area, particularly in people living with HIV/AIDS, because it is a contagious and incurable disease. Thus, this study investigated the scientific production through quantitative bibliometric indicators.

Thus, it is noteworthy that the bibliometric analysis allows the evaluation of the scientific production in a particular area of knowledge, and it is considered a useful instrument to measure the impact of certain authors and journals. Therefore, it is a multidisciplinary method that allows the identification of

varying phenomena and its trends according to the goal set by the researchers. [9]

The results of the databases analysis involve some considerations: 95.4% of scientific articles are in English, and most of the authors are affiliated with institutions located in the United States of America, reflecting the increased interest of American researchers for this theme, which allows inferring that many researchers still do not exploit this area or even do not have enough knowledge to expose the link between HIV and spirituality. For the year of publication, it was observed that there was no linearity in the publications on this topic, except 2011.

It is noticed that the number of studies has increased in 2011 due to The Joint United Nations Program on HIV/AIDS (UNAIDS) reporting a new estimate that 34 million people worldwide were infected HIV at the end of 2010, which meant an increase of cases of 17% since 2001. [10] Thus, it is understood that with a significant number of affected people by the world, there is a concern in studying the ways of coping with the disease, and the use of spirituality.

It was observed that the magazine that showed publications in the period studied was the Journal of General Internal Medicine, a journal that seeks to promote the production and dissemination in the patient intensive care and related areas, and exposure to clinical research on key problems faced by professionals and patients in critical condition. This journal has Qualis A2, a stratum considered high, revealing quality in scientific research published.

The Higher Education Personnel Improvement Coordination (CAPES) defines Qualis as a formal instrument that enables the stratification of the scientific production quality, providing a list of the classification of ways used by graduate programs to publicize their production. The classification of the journal is updated annually containing eight classes: A1, A2, B1, B2, B3, B4, B5 and C in descending order of magnitude, that is, A1 corresponds to the highest

level, while C is the last level and corresponds to the journals with an impact factor of zero. [11]

Regarding the type of publication as stated, there was a predominance of original articles with 87.7%, followed by review articles with 9.2% and last editorial with 3.1%. Original articles are works resulting from scientific research describing original data findings related to experimental or observational aspects, helping to add new information or to corroborate the available knowledge of the investigation.

Review articles and editorials represent a small portion of the sample of this study. However, not diminishing their significance levels as review articles can gather in an orderly manner the results of previous research on the topic, assisting in explaining and understanding of differences found by other researchers. [12] The editorial can provide a different perspective on the subject, by correlating the production of knowledge to a particular issue, which could impact directly on the subject investigated. [13]

Of the articles analyzed, 16.9% used a theoretical reference to scientifically support the study. On this point, it is worth mentioning that the theoretical references are developed based on actions that provide critical thinking, within a hierarchy of goals previously established to solve or say the situation. Therefore, the theoretical thinking is subject to constant review and may be modified without generating any change in the real world because their main interest is not to dominate the world, but to observe it and, if possible, understand it. [14]

As for the methodology used in the articles, the quantity was the most used. This method is characterized by the use of quantification, both information gathering methods, and in the treatment of these through statistical techniques, from the simplest to the most complex. Therefore, this type of methodology has a differential intended to ensure the accuracy of the work carried out, leading to a result with little chance of distortion. [15]

Among the different data collection techniques, there was an emphasis on the use of questionnaires. It is worth noting that this instrument is seen as a research technique with some issues to be submitted to a group of people, with the objective knowledge of opinions, beliefs, feelings, interests, expectations and situations experienced by the population. In addition to the above, the use of questionnaires allows researchers the ability to reach a large number of people with anonymity ensuring the reliability and illegibility of the research. [16, 17]

Among the studies that used questionnaires as data collection instruments, it was observed that the abbreviated version of the WHOQOL-Bref was used, excelled by its easy application given the objectives previously established in each study. This instrument consists of 26 questions, and the two first refers to the overall quality of life responses following a Likert scale, and also the instrument has 24 facets which comprise four domains: physical, psychological, relationships social and environment. [18]

With regard to the topic discussed in the articles found, according to the descriptors and/or keywords mentioned, the subject of quality of life was identified, which is why the amount of articles using WHOQOL-, an elaborate instrument of the World Health Organization (WHO), in a multicenter collaborative study to evaluate the quality of life in an international and cross-cultural perspective. [19] On this subject, it is worth mentioning that despite the increased survival of people living with HIV/AIDS, quality of life is not always linked to all, realizing the importance of spirituality, considering that involves the whole process of treatment to be related to the search for answers to fundamental questions about life and its meaning, regardless of religious beliefs and practices. [20, 21]

It is also noted that individuals with HIV/AIDS are treated on many occasions of excluding and stigmatizing manner, including leading the existence of depressive symptoms. Therefore, another important

issue is the spirituality and HIV, found in this study, through the depression descriptor. Based on this, it is of great value to incorporate spirituality in living with the disease, because it is a practical support to the patient, giving meaning to life and personal stories, influencing following medical treatment with maintaining the quality of life patient. [22, 23]

Spirituality among the themes addressed in the studies is seen as a coping tool for people living with HIV, and an essential factor in maintaining the quality of life. Also, from these findings, it is possible to get an idea of the gaps which need to be further investigated in this area because the number of publications is in an unimpressive number of cases of individuals with HIV.

Given this, it is highlighted the importance of the inclusion of spirituality in individuals living with HIV, considering spirituality directly related to how to deal with the disease, the health, and life. Also, spirituality is constituted as a hopeful way in which the individual can design goals for their life, living with the disease and maintaining the quality of life. Thus, embracing spirituality, along with its religious dimension in the care of people with HIV is seen as an exciting method for the development of trust and autonomy of the individual before their clinical reality.

Conclusion

In this study, it can be seen that in 65 articles analyzed; there was a significant predominance of publications in English. The year 2011 was the one that had the highest volume of articles published. In 2010, there was no record. The Journal of General Internal Medicine was what got the most research on the topic. The quantitative method had a higher prevalence and the most widely used data collection instrument was WHOQOL. There were 54 papers presenting keywords and descriptors, and the three most cited were "spirituality," "HIV" and "quality of life." Moreover, it is noteworthy that 15

authors were responsible for the highest record of articles on the subject, with satisfactory H-index and a considerable number of publications and citations. Another interesting point is that all are linked to US institutions.

A limitation found in this study is the fact that the search for articles was conducted in one portal.

However, to achieve an increased, interdisciplinary knowledge about the spirituality of relative well-being of the patient with HIV, it is of great value to encourage studies on this subject, especially in Brazil, to understand the influence that spirituality has about dealt with the disease, the health, and life.

References

1. Santo CCE, Gomes AMT, Oliveira DC. A espiritualidade de pessoas com HIV/aids: um estudo de representações sociais. *Rev Enf Ref.* 2013; 3(10):15-24.
2. Koenig HG, Montagem A. The Duke University Religion Index (DUKEL): A Five-Item measure for use in epidemiological studies. *Religions.* 2010; 1:78-85.
3. Santo CCE, Gomes AMT, Oliveira DC, Marques SC. Adesão ao tratamento antirretroviral e a espiritualidade de pessoas com HIV/Aids: estudo de representações. *Rev enferm UERJ.* 2013; 21(4):458-63.
4. Koenig HG. Religion, spirituality, and health: the research and clinical implications. *ISRN Psychiatry.* 2012; 2012:1-33.
5. Gobatto AC, Araujo TCCF. Religiosidade e espiritualidade em oncologia: concepções de profissionais da saúde. *Psicol USP.* 2013; 24(1):11-34.
6. Araújo RF, Alvarenga L. A bibliometria na pesquisa científica da pós-graduação brasileira de 1987 A 2007. *Enc Bibli: R Eletr Bibliotecon Ci Inf.* 2011; 16(31):51-70.
7. Vaz DC, Silva CRL, Figueiredo MA. A utilização da bibliometria na análise do referente conforto. *Cogitare Enferm.* 2010; 15(4):736-41.
8. Pubmed [Internet]. Pubmed ajuda. EUA, 2016. [Cited 2016 Aug 17]. Available: http://www.ncbi.nlm.nih.gov/books/NBK3827/#pubmedhelp.PubMed_Quick_Start
9. Silva MR, Hayashi CRM, Hayashi MCPI. Análise bibliométrica e cientométrica: desafios para especialistas que atuam no campo. *InCID: R Ci Inf e Doc.* 2011; 2(1):110-129.
10. The Joint United Nations Programme on HIV/AIDS (UNAIDS) [Internet]. World AIDS day report. 2011 [Cited 2016 Jun 14]. Available from: http://files.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/JC2216_WorldAIDSday_report_2011_en.pdf

11. Brasil. Ministério da Educação. Classificação da Produção Intelectual. 2016 [Internet]. [Cited 2016 Aug 10]. Available from: <http://www.capes.gov.br/avaliacao/instrumentos-de-apoio/classificacao-da-producao-intelectual>
12. Almeida ECE, Guimarães JA. A pós-graduação e a evolução da produção científica brasileira. São Paulo: Senac; 2013. 101 p.
13. Souza WER. O catálogo editorial e a bibliografia como fontes de pesquisa: avanços e desafios na era digital. InCID: R Ci Inf e Doc. 2016; 7(esp.):3-6.
14. Schutz A. Sobre fenomenologia e relações sociais. Rio de Janeiro: Vozes; 2012.
15. Yin RK. Estudo de Caso: planejamento e métodos. 5th ed. Porto Alegre: Bookman; 2015.
16. Chaer G, Diniz RRP, Ribeiro EA. A técnica do questionário na pesquisa educacional. Evidência. 2011; 7(7):251-266.
17. Santos IE. Manual de Métodos e Técnicas de Pesquisa Científica. 11th ed. São Paulo: Impetus; 2015. 368 p.
18. Fleck MPA et al. Application of the Portuguese version of the abbreviated instrument of quality life Whoqol-bref. Rev saúde pública. 2000; 32(2):178-83.
19. Cunha GH, Fiuza ML, Gir E, Aquino Pde S, Pinheiro AK, Galvão MT. Quality of life of men with AIDS and the model of social determinants of health. Rev Latinoam Enferm. 2015; 23(2):183-91.
20. Tran BX. Quality of life outcomes of antiretroviral treatment for HIV/AIDS patients in Vietnam. Plos One. 2012; 7(7):1-8.
21. Santo CCE, Gomes AMT, Oliveira DC. A espiritualidade de pessoas com HIV/aids: um estudo de representações sociais. Referência. 2013; 10(3):15-24.
22. Lyon ME, Garvie P, Me J, Malow R, McCarter R, D'Angelo LJ. Spiritual Wellbeing among HIV-Infected Adolescents and their Families. J. Relig Health. 2014; 53(3):637-653.
23. Hussen SA, Tsegaye M, Argaw MG, Andes K, Gilliard D, Rio CD. Spirituality, social capital and service: factors promoting resilience among expert patients living with HIV in Ethiopia. Glob Public Health. 2014; 9(3):286-298.

Publish in International Archives of Medicine

International Archives of Medicine is an open access journal publishing articles encompassing all aspects of medical science and clinical practice. IAM is considered a megajournal with independent sections on all areas of medicine. IAM is a really international journal with authors and board members from all around the world. The journal is widely indexed and classified Q2 in category Medicine.