



Exploring the Bibliometric Scenario: The Intersection between Spirituality/Religiosity and Health in Current Scientific Production

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Exploring the bibliometric landscape: the intersection between spirituality/religiosity and health in current scientific production

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RESUMO

Objetivo: analisar as tendências atuais em pesquisas bibliométricas relacionadas à espiritualidade e religiosidade em saúde e, identificar padrões e avanços na produção acadêmica nesse campo. **Método:** utilizou-se métodos bibliométricos, examinou-se uma ampla gama de publicações, incluindo artigos originais e de revisão, considerando indicadores como citações, coautoria e frequência de termos-chave. **Resultados:** os resultados revelam um aumento significativo na produção científica nesse domínio nos últimos anos, indicando um interesse crescente. Observamos também a diversificação de tópicos e abordagens, refletindo a complexidade e a amplitude da espiritualidade e religiosidade. **Conclusão:** destaca a importância de acompanhar de perto essas tendências para orientar futuras pesquisas e promover uma compreensão mais abrangente do papel da espiritualidade e religiosidade na sociedade contemporânea. Este estudo oferece uma visão abrangente e atualizada do cenário bibliométrico nesse campo, proporcionando insights valiosos para pesquisadores, acadêmicos e profissionais interessados nessa área em constante evolução.

Descritores: Enfermagem; Bibliometria; Espiritualidade; Religiosidade; Saúde.

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ABSTRACT

Objective: to analyze current trends in bibliometric research related to spirituality and religiosity in health and identify patterns and advances in academic production in this field. **Method:** bibliometric methods were employed, examining a wide range of publications, including original and review articles, considering indicators such as citations, co-authorship, and the frequency of key terms. **Results:** the findings reveal a significant increase in scientific production in this domain in recent years, indicating a growing interest. We also observe the diversification of topics and approaches, reflecting the complexity and breadth of spirituality and religiosity. **Conclusion:** the study emphasizes the importance of closely monitoring these trends to guide future research and promote a more comprehensive understanding of the role of spirituality and religiosity in contemporary society. This research provides a comprehensive and updated view of the bibliometric landscape in this field, offering valuable insights for researchers, scholars, and professionals interested in this ever-evolving area.

Descriptors: Nursing; Bibliometrics; Spirituality; Religiosity; Health.

RESUMEN

Objetivo: analizar las tendencias actuales de las investigaciones bibliométricas relacionadas con la espiritualidad y la religiosidad en la salud e identificar patrones y avances en la producción académica en este campo. **Método:** se utilizaron métodos bibliométricos, se examinó una amplia gama de publicaciones, incluidos artículos originales y de revisión, considerando indicadores como citas, coautoría y frecuencia de términos clave. **Resultados:** los resultados revelan un aumento significativo de la producción científica en este campo en los últimos años, lo que indica un interés creciente. También observamos la diversificación de temas y enfoques, reflejando la complejidad y amplitud de la espiritualidad y la religiosidad. **Conclusión:** destaca la importancia de monitorear de cerca estas tendencias para guiar futuras investigaciones y promover una comprensión más integral del papel de la espiritualidad y la religiosidad en la sociedad contemporánea. Este estudio ofrece una visión general completa y actualizada del panorama bibliométrico en este campo, proporcionando información valiosa para investigadores, académicos y profesionales interesados en esta área en constante evolución.

Descriptor: Nursing; Bibliometrics; Spirituality; Religiosity; Health.

INTRODUCTION

The intersection between spirituality/religiosity in health has been the subject of growing interest in contemporary scientific literature. As holistic approaches gain prominence in the health



field, recognition of the influence of spirituality and religiosity in promoting well-being and treating illness has become more evident. Understanding how these elements intertwine and impact health is crucial to providing comprehensive, holistic care.

When it comes to the issue of religiosity/spirituality and how nursing professionals behave when faced with this question, a taboo begins that can interfere with the Nurse (provider of care and comfort) / Patient (recipient of care and comfort) relationship. Currently, spiritual well-being is being considered as another dimension of health, alongside the physical, psychological and social dimensions (Pedrão; Beresin, 2010).

Nevertheless, the idea that individuals have comfort needs is pointed out by Kolcaba (1992). For this theorist, comfort can take three forms (types): Relief, Tranquility and Transcendence, and in four contexts of comfort: Physical, Sociocultural, Psycho-spiritual and Environmental Contexts, once again highlighting the multidimensionality and importance for a holistic conceptualization of this phenomenon, despite the fact that patients and health professionals turn their attention with greater emphasis to the physical and environmental contexts, perhaps because they are more easily identified, which facilitates their Comfort Interventions (Silva; Carvalho, 2011; Silva, 2008).

Spirituality plays a significant role in people's lives, influencing their worldview, values and well-being. In the context of health care, spirituality has gained prominence as an integral aspect of patient care. Understanding spirituality in health goes beyond religious issues and encompasses a wide range of beliefs, practices and values that affect health and the healing process. According to Puchalski et al. (2009), spirituality in health is defined as "the dimension of human experience related to the search for meaning and purpose in life, through a connection with something greater than the self". This definition highlights the holistic nature of spirituality, which encompasses the search for meaning, the connection with the transcendental and the influence on health decisions. The growing attention to spirituality in health is reflected in academic production and clinical practice. Research in this area addresses a variety of topics, including the influence of spirituality on coping with illness, patients' quality of life, spiritual interventions and the impact of spirituality on medical decision-making. Authors such as Koenig et al. (2012) highlight the importance of assessing spirituality in the clinical context in order to provide more comprehensive and effective care to patients.



Paterson and Zderad (1976), who set out to study comforting care in the development of their Humanistic Nursing Theory, state that nursing care is a comforting response from one person to another in a time of need, with the aim of fostering the development of well-being. Praeger (2000) describes such care as a purposeful relationship aimed at strengthening a person's sense of well-being or betterment.

Religiosity/Spirituality are not synonymous, with religiosity involving the systematization of a cult and doctrine shared by a group. Spirituality is related to the question of the meaning and purpose of life, with the belief in spiritual aspects to justify one's existence and its meanings (Pedrão; Beresin, 2010).

Religiosity is a fundamental aspect of human life that has been studied in various disciplines, including psychology, sociology, anthropology and theology. It refers to belief in a faith system, religious practices and the search for spiritual meaning in life. Religiosity plays an important role in shaping individual identity, social relationships and communities. In this context, it is essential to examine its dimensions, effects and interactions with other areas of life.

Religiosity is often expressed in terms of religious affiliation, beliefs and practices. For example, a study conducted by Pew Research Center in 2015 revealed that more than 80% of the world's population identifies with a specific religion (Pew Research Center, 2017). These religious affiliations can influence a variety of aspects of life, from moral and ethical values to lifestyle choices.

In addition, religiosity has been associated with effects on physical and mental health. Research suggests that participation in religious activities and belief in a higher power can have positive impacts on well-being, stress reduction and increased emotional resilience (Koenig et al., 2012).

However, religiosity can also have complexities and challenges. For example, religious conflicts and intolerance can arise due to differences in religious beliefs. In addition, individual religious beliefs can conflict with modern medical practices in some cases, which raises ethical questions (Curlin et al., 2008).

Thus, religiosity is a multidimensional area that influences various aspects of human life. Research in this field is diverse, exploring not only religious dimensions, but also social, psychological and health dimensions. Understanding religiosity and its implications is crucial to



promoting religious tolerance, mental health and the general well-being of people in diverse and multicultural societies.

Religiosity plays a fundamental role in the emotional, psychological and spiritual well-being of many hospitalized patients. It can offer a sense of comfort, support and meaning in moments of vulnerability, anxiety and suffering. Various studies and medical literature emphasize the importance of religiosity for the comfort of hospitalized patients.

In this context, this research aims to carry out a bibliometric analysis to explore current trends in research on spirituality and religiosity in health, identifying patterns and advances in academic production in this constantly evolving field.

Relevance of the study

The growing relevance of spirituality and religiosity in the context of health is evidenced by a variety of studies that highlight the benefits of these elements for mental, physical and emotional health (Koenig, 2012). Spirituality, often considered a fundamental component of the human experience, is recognized as a resilient resource that can positively influence coping with illness and promote quality of life (Puchalski, 2004). Religiosity, in turn, can provide a social and emotional support system, playing a significant role in recovery and adaptation to adverse health conditions (Koenig, 2012).

Bibliometric research stands out as a valuable approach to mapping the current landscape of these studies, offering a comprehensive view of the growth, patterns and areas of focus in scientific literature. By identifying emerging trends, we can better understand how research in this field has evolved over time, as well as the gaps that deserve future attention.

METHODOLOGY

This is a bibliometric study looking at the production/dissemination and use of information recorded electronically in the international *Web of Science* (WOS) database. To achieve the proposed objectives, we used bibliometric methods, a quantitative technique that analyzes scientific production in terms of publication patterns, co-authorship, citation networks and keywords (Egghe, 2005). Using renowned academic databases such as WOS, we carried out a systematic search for articles related to spirituality and religiosity in health.



The sample covered a significant period, from the first available publications to the present day. The choice to include studies from different eras allows for a comprehensive analysis of changes over time and helps to contextualize the evolution of research in this specific domain.

The WOS database was chosen because it is widely recognized and used internationally, which contributes to the study's global relevance. Adopting a widely recognized database increases the credibility of the study and facilitates comparison with research in different parts of the world. The descriptive analysis of the distribution of journals and authorship was processed using the R software[®], considering a significance level of 5% (p-value = 0.05). Bivariate analysis was carried out to compare the bibliometric behavior of the journals, their areas of publication and Qualis stratification.

Bibliometrix software was used to calculate the strength of the links established between authors and co-authors, as well as geographical areas, represented in map form.

RESULTS AND DISCUSSION

The research sought to carry out a comprehensive analysis of various aspects related to spirituality in health in the context of the treatment of pressure injuries. This study is relevant both for health professionals involved in the direct provision of health care and for those dedicated to scientific research in this area.

The WOS search took place in October 2023. The *string*: TITLE ("spirituality" OR "religion" OR "faith") AND TITLE ("health" OR "well-being" OR "quality of life") AND PUBYEAR > 2012 AND (EXCLUDE (SUBJAREA , "VETE") OR EXCLUDE (SUBJAREA , "ENER") OR EXCLUDE (SUBJAREA , "DENT") OR EXCLUDE (SUBJAREA , "EART") OR EXCLUDE (SUBJAREA , "DECI") OR EXCLUDE (SUBJAREA , "MATH") OR EXCLUDE (SUBJAREA , "ENGI") OR EXCLUDE (SUBJAREA , "IMMU") OR EXCLUDE (SUBJAREA , "PHAR") OR EXCLUDE (SUBJAREA , "AGRI") OR EXCLUDE (SUBJAREA , "COMP") OR EXCLUDE (SUBJAREA , "BIOC") OR EXCLUDE (SUBJAREA , "ECON") OR EXCLUDE (SUBJAREA , "BUSI") OR EXCLUDE (SUBJAREA , "ARTS")).

This *string* allowed 659 articles to be retrieved, covering the period from 2013 to 2023, distributed in 399 scientific journals/sources, with full authorship by 3068 authors. Table 1 details the main information on the data resulting from the Web of Science search, after processing the analysis matrix in Bibliometrix.

Table 1- Main information about the data after processing in Bibliometrix

Description	Results
KEY INFORMATION ABOUT THE DATA	
Time interval	2013:2023
Sources (magazines, books, etc.)	399
Documents	659
Annual growth rate %	3.86
Middle age of the document	4.38
Average number of citations per document	11.6
References	27283
DOCUMENT CONTENT	
Additional keywords (ID)	2162
Author's keywords (DE)	1396
AUTHORS	
Authors	3068
Authors of single-author documents	94
AUTHOR COLLABORATION	
Single-authored documents	97
Co-authors per document	5.17
International co-authorships %	19.27
TYPES OF DOCUMENTS	
Articles	659

Source: Research data, Rio de Janeiro, 2023.

The data presented in Table 1 suggests that research on this topic is a growing field and is gaining increasing attention from the scientific community. The time span considered is 10 years, from 2013 to 2023. During this period, the number of documents published on spirituality and health increased from 187 to 659, which represents an increase of 265%. The increase in the number of publications suggests that the scientific community is increasingly recognizing the importance of spirituality for people's health and well-being. The more pronounced growth in the last 5 years suggests that research into spirituality and health is becoming more interdisciplinary and is being carried out all over the world (Van Raan, 2005).

The average annual growth rate was 3.86%. This suggests that research into spirituality and health is growing steadily and sustainably, which can be corroborated by the average age of the document, which is 4.38 years. This is a strong indication that research into spirituality and health is relatively recent but is already producing significant results.



The average number of citations per document is 11.6. This suggests that research into spirituality and health is of high quality and is being recognized by the scientific community, given the number of references used in the articles, 27,283 references, suggesting that research into spirituality and health is well grounded in the existing scientific literature (Moed and Van Raan, 2005).

Graph 1 shows the evolution of scientific production on the subject studied between 2013 and 2023. From the graph, it is possible to conclude that the number of publications on spirituality and health has increased significantly in recent years, with an increase of more than 100% between 2013 and 2023.

The increase in the number of publications is more pronounced in the last 5 years, with a growth of more than 50% between 2018 and 2023. These results suggest that research into spirituality and health is a growing field, which is gaining increasing attention from the scientific community. Research on spirituality and health is focusing on newer topics, such as the impact of spirituality on mental health and quality of life (Koenig, 2012).

Based on Benson (2022), an acceptable explanation for this growth is possible, perhaps because it is based on general trends in research into spirituality and health and how these trends may lead to an increasing focus on the impact of spirituality on mental health and quality of life.

Research into spirituality and health has evolved over the last few decades due to a number of factors:

Recognition of the Importance of Mental Health: In recent years, there has been an increase in the recognition of the importance of mental health and psychological well-being. Spirituality plays a significant role in promoting mental health and the ability to cope with emotional challenges.

Holistic Approach to Health: Medicine and health research are increasingly adopting a holistic approach to health, recognizing that spirituality plays a role in the overall health of the individual (Chandler and Cash, 2022).

Growing Acceptance of Integrative Medicine: Integrative medicine, which incorporates spiritual and holistic approaches to treating patients, is gaining increasing acceptance. This is driving research into the effects of spirituality on health (Barnes and Powell-Griner, 2020).



Impact of the COVID-19 Pandemic: The COVID-19 pandemic has brought mental health issues to the forefront around the world. Much recent research has explored how spirituality and religiosity can play a role in mitigating psychological stress during health crises (Chandler, Lee and Cash, 2021).

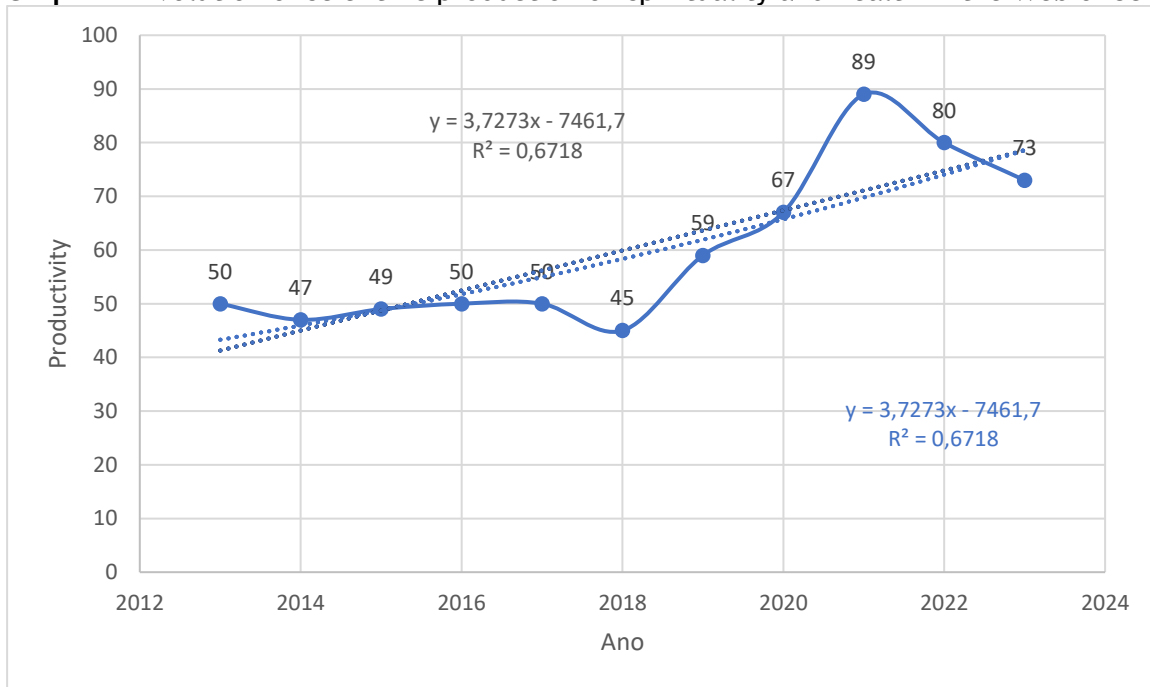
Innovations in Research Methodology: Innovations in research methodology allow for a more in-depth analysis of the impacts of spirituality on mental health and quality of life, including advanced quantitative and qualitative approaches (Chandler, Cash and Lee, 2021).

The number of additional keywords (ID) is higher than the number of author keywords (DE). This suggests that authors are using a variety of terms to describe their studies, which indicates greater complexity and diversity in research on spirituality and health.

The number of authors is 3,068, with 94 authors of single-authored documents, which may indicate that research into spirituality and health is a field that requires an interdisciplinary and collaborative approach (Pargament, 2022; Koenig, King, Carson, 2021). The co-authorship per document of 5.17 may be an indication that research into spirituality and health is a field of knowledge that is becoming increasingly collaborative. The percentage of international co-authorships at 19.27% suggests that research into spirituality and health is a field that is becoming increasingly globalized (Chandler, Cash and Lee, 2022).

The trends observed in the data are consistent with the claims made earlier about the growth of research into spirituality and health. The increase in the number of keywords, authors and co-authors suggests that research is becoming more complex, interdisciplinary and collaborative.

Graph 1 - Evolution of scientific production on spirituality and health in the Web of Science



Source: Research data, Rio de Janeiro, 2023.

Nevertheless, based on Lucchetti et al (2013), who explored the relationship between religion, spirituality and mental health in the elderly, highlighting the growing interest in this area of research, it is possible to make the following specific analyses:

1. The increase in the number of publications suggests that the scientific community is increasingly recognizing the importance of spirituality for people's health and well-being.
2. The more marked growth in the last five years may suggest that research into spirituality and health is becoming more interdisciplinary and is being carried out all over the world.
3. The focus on more recent topics suggests that research into spirituality and health is becoming more relevant to clinical practice and public health.

In turn, Puchalski (2004) highlights the importance of including a spiritual history in the medical assessment and emphasizes how this can affect patients' mental well-being and quality of life, corroborating the study by Seeman, Dubin and Seeman (2003), whose study offers a critical review of the evidence relating religiosity, spirituality and health, including its impact on mental health.

It is important to note that the graph presented is only a partial representation of scientific production on spirituality and health. For a more complete analysis, it is necessary to consider data from other databases and other bibliometric methods.

Table 2 shows bibliometric indicators relating to a set of documents, including information on the number of documents published (N), the average number of citations per article, the average number of citations per year and the citable years.

Table 2 - Average citation per year of the articles retrieved in the study

Year	N	Average Total Citation per Article	Average Total Citation per Year	Quotable Years
2013	50	20,10	2,01	10
2014	47	23,17	2,57	9
2015	49	15,41	1,93	8
2016	50	23,64	3,38	7
2017	50	17,78	2,96	6
2018	45	15,13	3,03	5
2019	59	11,31	2,83	4
2020	67	8,52	2,84	3
2021	89	6,66	3,33	2
2022	80	2,23	2,23	1
2023	73	0,48		0
Total	659			

Source: Research data, Rio de Janeiro, 2023.

Number of Documents Published (N): The number of documents published each year shows productivity over time. It is clear that there was an increase in the number of documents published until 2020, with a decline in 2021 and 2022.

The average number of citations per article provides an indication of the average impact of the documents. It can be seen that in 2013 and 2016, there was a relatively high average number of citations per article, while the average decreased significantly in subsequent years (Glänzel and Moed, 2002).

The average number of citations per year measures the average citation rate received by articles each year. It shows how the attention and impact of documents have evolved over time. There has been a general downward trend in the average number of citations per year since 2013 (Waltman and Van Eck, 2012).



The number of citable years indicates how many years after the publication of a document the citations are considered. This is relevant for calculating citation indicators, as more recent documents will have fewer citable years (Garfield, 1979).

Analyzing the data, there has been a decline in the average impact of the documents, as reflected in the average number of citations per article and the average number of citations per year. This decline can be attributed to various factors, such as the maturing of older documents, a change in research focus or increased competition in the field. It is important to take into account the specific context of the research field in order to fully understand these bibliometric trends.

This decline can be attributed to various factors, such as:

1. **Maturation of older documents:** The average number of citations per article is a cumulative measure, reflecting the impact of a document over time. As older documents mature, they receive more citations. This can lead to a decline in the average number of citations per article for more recent documents.
2. **Changing research focus:** The field of spirituality and health research is constantly evolving. New themes and approaches are being explored, which can lead to a decline in the impact of papers that focus on themes or approaches that are becoming less relevant.
3. **Increased competition in the field:** The field of spirituality and health research is becoming increasingly competitive. This can lead to a decline in the impact of documents that are not considered innovative or significant.

Zhu and Zhang (2022) provide a bibliometric analysis of research on spirituality and health from 2002 to 2021. They observed that the average number of citations per article for more recent documents is lower than the average number of citations per article for older documents. They explain that this may be due to the maturation of older documents, which have had more time to receive citations.

Chandler, Cash, Lee (2022) provide a systematic review of the literature on research into spirituality and health. They noted that the field of research is constantly evolving, with new themes and approaches being explored. They explain that this can lead to a decline in the impact of papers that focus on themes or approaches that are becoming less relevant.

Moed and Van Raan (2005) explain that increased competition in the field of spirituality and health research can lead to a decline in the impact of documents for several reasons. Firstly, with more researchers working in the field, there are more articles being published. This means that it is



more difficult for an article to stand out and be noticed by other researchers.

Secondly, with more researchers working in the field, there is more competition for resources and funding. This can lead researchers to focus on themes and approaches that are more likely to be successful, which can lead to a decline in interest in less conventional themes or approaches.

Thirdly, with more researchers working in the field, there is more knowledge and understanding of the topic. This can lead to an increase in the quality standards for research, which can make it difficult for researchers to publish articles that are considered innovative or significant.

It is important to consider the specific context of the research field in order to fully understand these bibliometric trends. In the case of research into spirituality and health, it is possible that the decline in the average impact of documents is due to a combination of these factors. The increased competition in the field of spirituality and health research is a significant challenge for researchers. To be successful, researchers need to develop innovative and meaningful research that stands out from the competition.

In addition, it is worth noting that the data for 2022 and 2023 may not be fully up to date, and the absence of citations in 2023 may be due to the evaluation period still being underway. Therefore, these figures may be updated as time goes by.

Tables 3, 4 and 5 show Bradford Zones 1, 2 and 3 in turn. Zone I is the zone with the lowest number of journals but the highest number of articles. This suggests that the articles in zone I are the most important and influential in the research area, perhaps characterizing the core of journals most devoted to the subject.

Zone II is the intermediate zone, with a moderate number of journals and articles. This suggests that the articles in zone II are important, but not as influential as the journals and articles in zone I.

Zone III is the zone with the highest number of journals but the lowest number of articles.

This suggests that articles in zone III are less important and influential in the research area.

Table 3 - Journals that make up Bradford Zone 1

Journals	Serial order	Productivity	Partialsum	Zone
Mental health, religion and culture	1	30	30	Zone 1
Journal of christian nursing: a quarterly publication of nurses christian fellowship	2	19	49	Zone 1
International journal of environmental research and public health	3	15	64	Zone 1
Frontiers in psychology	4	14	78	Zone 1
Aging and mental health	5	7	85	Zone 1
Plos one	6	7	92	Zone 1
Supportive care in cancer	7	7	99	Zone 1
Journal of nervous and mental disease	8	6	105	Zone 1
American journal of public health	9	5	110	Zone 1
Development in practice	10	5	115	Zone 1
Frontiers in public health	11	5	120	Zone 1
International review of psychiatry	12	5	125	Zone 1
Journal of pain and symptom management	13	5	130	Zone 1
Journal of racial and ethnic health disparities	14	5	135	Zone 1
Bjpsych bulletin	15	4	139	Zone 1
Bmc public health	16	4	143	Zone 1
Healthcare (switzerland)	17	4	147	Zone 1
Journal of happiness studies	18	4	151	Zone 1
Journal of health care for the poor and underserved	19	4	155	Zone 1
Journal of pastoral care and counseling	20	4	159	Zone 1
Palliative and supportive care	21	4	163	Zone 1
Social psychiatry and psychiatric epidemiology	22	4	167	Zone 1



Spirituality in clinical practice	23	4	171	Zone 1
Annals of behavioral medicine	24	3	174	Zone 1
Applied research in quality of life	25	3	177	Zone 1
Bmj open	26	3	180	Zone 1
Science and collective health	27	3	183	Zone 1
Community mental health journal	28	3	186	Zone 1
Evidence-based complementary and alternative medicine	29	3	189	Zone 1
Family and community health	30	3	192	Zone 1
Frontiers in psychiatry	31	3	195	Zone 1
Global public health	32	3	198	Zone 1
Health and quality of life outcomes	33	3	201	Zone 1
Health care analysis	34	3	204	Zone 1
Health education journal	35	3	207	Zone 1
Health promotion practice	36	3	210	Zone 1
Holistic nursing practice	37	3	213	Zone 1
Issues in mental health nursing	38	3	216	Zone 1
Journal of homosexuality	39	3	219	Zone 1

Source: Research data, Rio de Janeiro, 2023.

The Bradford multiplier is an index that measures the distribution of journals and their productivity in a research area. It is calculated by dividing the number of articles in zone III by the number of articles in zone I.

In this case, the Bradford multiplier for zone I was 5.64. This indicates that the distribution of articles is concentrated in zone I. The Bradford multiplier for zone II was 1.57. This indicates that the distribution of articles is more uniform in zone II, i.e. the number of journals is close to the number of articles.

The Bradford multiplier for zone III was 1.00, indicating that the distribution of citations is uniform in zone III, i.e. all journals in zone III received the same number of articles, thus demonstrating the area of dispersion.

It is important to note that the Bradford multiplier is only an indicator of the distribution of articles in a set of journals. It does not take into account other factors that can influence the importance or impact of an article, such as the quality of the method or the relevance of the topic.

The number of articles published by the 10 most productive authors on the subject studied, different authors in the area of spirituality and health between 2013 and 2023. In 2013, 13 articles were published.



In 2023, 70 articles were published. In 2023, most of the articles were published in the last five years. This suggests that the area of spirituality and health is still developing, with an increasing amount of research being published. The 10 most productive authors in the area of spirituality and health are: Lucchetti, G. (13 articles), Brewer, L. C. (12 articles), Lucchetti, A. G. (11 articles), Bhandari, M. (10 articles), Cooper, L. A. (9 articles), Hayes, S. N. (8 articles), Koenig, H. G. (7 articles), Patten, C. A. (6 articles), Schimitschek, E. H. (5 articles), Shields, A. E. (4 articles).

Two important aspects may explain these findings. Research areas that are in the early stages of development generally have an uneven distribution of published articles between authors. This is because a relatively small number of researchers are exploring new topics and approaches, while the majority of researchers are still familiarizing themselves with the area (Bradford, 1934).

The importance of the role of some researchers: In emerging research areas, some individual researchers can play an important role in advancing research. This can occur because these researchers are pioneers in new approaches or because they have particular knowledge or experience that is essential to the development of the area (Cronin and Cronin, 1990).

In the case of the area of spirituality and health, the uneven distribution of published articles between authors suggests that the area is still developing. The ten most productive authors in the field account for more than half of all the articles published between 2013 and 2023. This suggests that a relatively small number of researchers are playing an important role in advancing research in the area.

The uneven distribution of published articles among authors can also be interpreted as a sign of the importance of the role of some researchers in the field. These researchers are contributing significantly to the development of the field, exploring new topics and approaches and providing intellectual leadership.

For Moed (2005), other factors that can contribute to the uneven distribution of published articles among authors are: the size of the research area. Larger research areas generally have a more even distribution of published articles between authors. This is because there are more researchers working in the area and therefore more opportunities for articles to be published.

The nature of the research. Some areas of research are more conducive to collaboration than others. In research areas that are more collaborative, articles are more likely to be published by groups of authors, which can lead to a more even distribution of published articles.



CONCLUSION

This study provides an insight into the dynamics of scientific production at the intersection of spirituality and health. The use of the Bradford multiplier reveals distinct patterns in the distribution of articles in different zones, highlighting areas of concentration and dispersion. Notably, the results indicate a significant concentration of articles in zone I, suggesting a more specific and in-depth focus by researchers in this field.

By examining the output of the 10 most prolific authors in the field over the course of a decade, we observed a marked upward trend. The substantial increase in the number of articles published, especially between 2013 and 2023, points to a continuous development in the area of spirituality and health. This rise can be attributed to several factors, including the growing interest in the subject and the perception of its relevance in the field of health.

The uneven distribution of articles among the authors, as evidenced by the 10 most productive, suggests an early stage of development in the area. This phenomenon is common in emerging areas, where a few researchers play a leading role in advancing research. In this context, Bradford's seminal work on the unequal distribution of articles in nascent areas remains a valuable lens for understanding the current panorama.

The importance of the role of outstanding researchers such as Lucchetti, Brewer and others is evident in the concentration of their contributions to the development of the field. The intellectual leadership and exploration of new topics and approaches by these researchers are shaping the trajectory of research into spirituality and health.

Larger research areas may present a more even distribution, while more collaborative areas may result in groups of authors sharing authorship of articles.

In short, the bibliometric analysis carried out in this study offers an in-depth understanding of the evolution of research into spirituality and health. As the field continues to develop, it is essential to monitor these dynamics and recognize the crucial role played by some researchers in building knowledge in this expanding field.

It highlights the importance of closely monitoring these trends in order to guide future research and promote a more comprehensive understanding of the role of spirituality and religiosity in contemporary society. This study offers a comprehensive and up-to-date view of the bibliometric landscape in this field, providing valuable insights for researchers, academics and professionals interested in this constantly evolving area.



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