

Is Spirituality seen in a new light post-Covid-19? - A bibliometric Analysis

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ABSTRACT

The present study conducts a comprehensive bibliometric analysis of the topic to examine the state of spirituality research in light of the COVID-19 epidemic. The topic of trending research and peer-reviewed publications in spirituality and COVID-19 were the main focus of the study. The authors retrieved 1263 peer-reviewed papers published in journals and books since 2020, from the Scopus database. As intended, the thorough analysis of the trends, scientific output, and thematic focus of spirituality and Covid-19 has been done using the Bibliometric technique. The pandemic was announced in 2019 and the analysis submits that the work on Spirituality in the light of the pandemic kickstarted in 2020. For the researchers in the field, the most elite publications for the research papers are the Journal of Religion and Health”, “Religions”, “Frontiers in Psychology”, “International Journal of Environmental Research” and “Public Health and Journal of Pastoral Care and Counseling”. The author, Arndt Bussing with 13 papers in the field to his credit. Amongst the nations, the most research papers on Spirituality and COVID-19 have been published in the United States of America. The paper also highlights the institutions where the research in the field has been promoted and published. The word map has prominently revealed the most frequented words from the papers for the analysis viz., Covid-19 (632), Spirituality (193), Pandemic (121), Covid-19 and Pandemic (92), and Mental health.

The implications for the researchers in this field are the study of the basic themes like COVID-19 pandemic, mental health, and resilience are crucial topics but, not adequately researched. The emerging themes like palliative care, grief, and death are topics for potential future research. The present study provides the analysis of the research in the field and through that providing the directions of future research as indicated by the bibliometric analysis. These results are intended to help researchers—especially those who are just beginning to study spirituality in the light of COVID-19—choose which aspects of the field to concentrate on, what approaches have been most successful in the past, where to publish their work, which dimensions to investigate, and identify collaborations with authors and institutions.

Keywords: COVID-19, pandemic, Spirituality, Bibliometrics, Mental Health

Introduction

Covid 19 pandemic hit the world with an unexpected reality. Initially, people all across the world were not able to accept its existence, some took refuge in the conspiracy theories surrounding the pandemic, some went deep into depression and then some slowly accepted it and turned within to seek answers to what it means to live. Covid -19 pandemic made people think and look back at how they have been living all these years and whether would they want to continue to do that or if there was something different that they would do if given another chance at a “normal” life! The race to success, as defined by societal norms, had been the way of life and the pandemic brought things to a standstill. World Health Organization declared Covid-19 a pandemic on March 11, 2020. The whole world was brought together but not in ideal circumstances. The abrupt halt from spending 10-16 hours out working to “No socialization, no stepping out of the house, and an unknown disease lurking around” was not easy for many. No strata of the society was left untouched. The scale of human suffering, including deaths, inequality, economic losses, racial discrimination, and other forms of suffering, is staggering (Corpuz, 2021). In Populations, communities, families, and individuals have always sought solace in their religious or spiritual convictions during tough times, whether they be personal, social, or catastrophic. (Roman et al., 2020)

What is Spirituality?

Spirituality is defined as an effort to define and work on life in a context that is beyond the mere mundane existence at the biological level. Developing Spirituality involves recognizing happenings that cannot be explained scientifically and may be attributed to divine intervention or grace (Vinet & Zhedanov, 2011). It is a concept that has been prevalent in the eastern part of the world since civilization started but somewhere with modernization, things changed and Spirituality became more of a concept for the wealthy and the privileged and not for the masses but the pandemic brought to the doorstep of everyone (Vinet & Zhedanov, 2011). Sri Sri Ravi Shankar of Art of Living Foundation opted to provide two live meditations in a day (at no cost) during the lockdown for everyone across the world and stepping into the online world of spreading spirituality. Millions of people participated in these meditations online, most of them were the first timers in the field of meditation. The solace, peace, and reduction of fear (fear being the most prevalent emotion felt during the pandemic), were registered as the outcomes of regular meditation. Our brain neural pattern changes when we practice meditation as explained and verified by many experiments. In an experiment held at a reputed University, it was found that the monks who practiced the Spiritual way of living had a very different brain function than a normal person, leading a regular life with no spiritual practices. (Cromie, 2002)

Mediation is one aspect of Spirituality that is being understood and its widespread practice has started. Another Yale University study discovered that practicing mindfulness meditation lessens self-referential and daydreaming thoughts. And the unknown nature of Covid would cause a lot of minds to wander in terms of the disease, its prevention, cure, the economic fallout, and so on. Meditation controls the “monkey mind.” i.e. the default mode network (DMN) which is always “on” and needs to rest (Walton, 2015).

The other essential and important aspects of Spirituality are the understanding of life flow energies, power of the word, aura and the power of the sub conscious. All these combined together result in the following of spiritual practices.

Spirituality is commonly ignored as a determinant of a person’s well-being. And amongst the various layers of spirituality lies the value of helping people deal with the stressors in life (del Castillo, 2021; Fardin, 2020) and the present generation dealt with the major stressor of Covid 19. Spirituality may be a significant factor in fostering resilience, hope, optimism, calm, and comfort because of its favourable effects on these traits (Roberto et al., 2020). As the global spread of this pandemic proceeds, a new dimension has emerged.

The sanity of the population was challenged not only by the disease and the fear of the unknown but also by the vaccination drive and mandates all across the globe. More spiritually inclined people are less likely to believe in science as indicated by some studies (Rutjens et al., 2023). When attempting to better awareness of vaccine-related science skepticism and vaccination rejection, spiritual beliefs are a crucial issue to take into account.

2. Methodology

This section focusses on the research questions being addressed in the paper as well as the detailed view of the data extraction

2.1. Research Objectives

The primary goal of the paper is to gather, examine, evaluate, and steer the investigation into the relationship between spirituality and COVID-19 indexed in the Scopus database. To the best of our knowledge, no bibliometric study has yet been done on spirituality and Covid-19. The first analysis of the research on the effects of the growth of spirituality during and after COVID-19 is presented in this study.

The study investigates the contribution of the researchers, their affiliations, the nations contributing to the research, the emerging trends in the field of Spirituality, and the pandemic. The research takes into account the start of the spiritual inclination in research when the pandemic was declared till the date of data extraction in 2023.

To enable the crisp achievement and representation of the objectives, research questions have been framed (Table 1)

Table 1: Research Questions and their need

Research Questions	Need
RQ1. What is the annual publication trend on COVID-19 and Spirituality?	To determine the annual volume of publications on COVID-19 and Spirituality and the future flow of research in this field.
RQ2 Which discipline contributed the most to the study of COVID-19 and Spirituality?	It will help researchers in expanding research on Covid-19 and Spirituality.
RQ3 Which authors furthered research on COVID-19 and Spirituality?	Researchers will carry out their research more advantageously by focusing on the authors mentioned.
RQ4 Which are the elite publications and affiliations on the research of COVID-19 and Spirituality?	Researchers will be able to identify the journals and universities, that encourage research on Covid-19 and Spirituality. It will influence the citations of their research work in the future.
RQ5 Which countries lead in the research on COVID-19 and Spirituality?	Researchers will undertake their research for the countries that promote work on COVID-19 and Spirituality. Also, take the initiative in discussing it in the countries, where there is a dearth of such studies
RQ 6 What is the keyword and citation network of COVID-19 and Spirituality?	Search on COVID-19 and Spirituality by future researchers will become easier.
RQ 7 In what direction did research on COVID-19 and Spirituality develop?	Researchers will get a direction for all their future research in this domain.

Source-Authors Compilation

2.2 Data Analysis and Extraction

This section describes the search strategy including the identification, screening, and selection of data. The current paper analyzes 1263 papers in the field of Covid 19 and Spirituality (total extracted =1644) when searched in the Scopus database from the year 2020 onwards. The search on the database and its extraction was done on November 8, 2023. The filters (Table 2) were applied to 1644 papers including the ones in English Language only, research papers, articles, and chapters which are published.

Table 2 : Steps in Extraction of Data

STEP-1	Search Key- “Covid-19” AND “Spiritual*”
Date of data extraction- November 8, 2023 Dataset- Scopus	Search Within- Article title; Abstract; Author’s Keyword N= 1644
STEP- 2	Application of Filters
Filter-1 Document Type	Articles and Chapters N=1424
Filter-2 Language	English N= 1340
Filter-3 Publication Stage	Final N=1274

Filter-4 Source Type	Journals and Books N=1263
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Source- Authors compilation

The Scopus database has been taken as the resource for extracting the data. The selection of a database is the most crucial part of the Bibliometric analysis as the results would be beneficial to the researchers only if the source has been validated and all efforts have been made to preserve the quality of the research. Scopus enlists 50% to more than 200% global content when compared to its closest competitor. There are many latest and critical research that are exclusively a part of the Scopus database and are unavailable elsewhere. (Falagas et al., 2008)

In the subject of research, the first publication was released in 2020. The collection is made up of 83 book chapters and 1180 research papers/articles. The papers only cover the last four years, as the study on how Covid-19 affects people's life began in 2020.

Table 3 shows that the Annual Growth Rate of publications is 37.19%, and the Average Citations per document is 7.762. The extracted Scopus data includes 271 publications by a single author and 4332 multi-authored. The pandemic was a global phenomenon and hence the collaborations at the international level amongst the authors is 19.64 %.

Table 3: Details of DATA	
Description	Results
Timeline	2020:2023
Data Sources	675
Number of Documents	1263
Annual Growth Rate %	37.19%
Document Average Age	1.23
Average citations per doc	7.762
References	52419
Document Contents	
Keywords Plus (ID)	2605
Author's Keywords (DE)	3214
Authors	
Authors	4603
Authors of single-authored docs	271
Authors Collaboration	
Single-authored docs	292

Co-Authors per Doc	4.09
International co-authorships %	19.64%
Document Types	
Article	1180
Book chapter	83

*Source-Authors Compilation***2.3. Literature Review**

Table 4 encapsulates the findings from the highly cited and relevant studies on COVID-19 and spirituality.

Table 4 Literature Review of a few highly cited and relevant papers

S.No.	Authors	Title of the paper	Journal	Year of Publication	Major Findings	Number of Citation
1	Oliwia Kowalczyk, Krzysztof Roszkowski, Xavier Montane, Wojciech Pawlischak, Bartosz Tytkowski, Anna Bajek	Religion and Faith Perception in a Pandemic of COVID-19	Journal of Religion and Health	2020	Spirituality is powerful in the times of pandemic.	100
2.	Giancarlo Lucchetti, Leonardo Garcia Góes, Stefani Garbulio Amaral, Gabriela Terzian Ganadjian, Isabelle Andrade, Paulo Othávio de Araújo Almeida, Victor Mendes do Carmo and Maria Elisa Gonzalez Manso	Spirituality, religiosity and the mental health consequences of social isolation during Covid 19 pandemic	International Journal of Social Psychiatry	2020	Spirituality reduces the feeling of stress and impacts physical health.	90

3.	Betty R. Ferrell, George Handzo, Tina Picchi, Christina Puchalski and William E. Rosa	The Urgency of Spiritual Care: COVID-19 and the Critical Need for Whole-Person Palliation	Journal of Pain and Symptom Management	2020	Spiritual care for palliative care patients to ease their anxiety in times of isolation and loneliness holds more importance than it gets in the present system.	68
4.	Nicolette V. Roman, Thuli G. Mthembu, Mujeeb Hoosen	Spiritual care – ‘A deeper immunity’ – A response to Covid-19 pandemic	African Journal of Primary Health Care and Family Medicine (PHCFM)	2020	Spiritual care is known to help patients, families, and healthcare workers. The paper addresses the fear of death addressed by spiritual care.	60
5.	Ilaria Coppola, Nadia Rania, Rosa Parisi, Francesca Lagomarsino	Spiritual Well-Being and Mental Health During the COVID-19 Pandemic in Italy	Frontiers in Psychiatry	2021	Spiritual care aids in elevating mental as well as physical health during tough times.	58
6	Lilia Cervantes, Marlene Martin, Maria G. Frank, Julia F. Farfan, Mark Kearns, Luis A. Rubio, Allison Tong, Andrea Matus Gonzalez, Claudia Camacho, Adrian a Collings, William Mundo, Neil R. Powe, Alicia Fernandez	Experiences of Latinx Individuals Hospitalized for COVID-19 A Qualitative Study	JAMA Network Open.	2021	Spiritual support was identified as an important factor for their recovery from Covid-19. Additionally the spiritual support provided relief from isolation.	58
7	Mohammad Rababa, Audai A. Hayajneh, Wegdan Bani-Iss	Association of Death Anxiety with Spiritual Well-Being	Journal of Religion and Health	2020	Spiritual well-being is considered a significant predictor of extent of death	50

		and Religious Coping in Older Adults During the COVID-19 Pandemic			anxiety, which was a pronounced emotion during the pandemic.	
8	Francesco Chirico and Gabriella Nucera	An Italian Experience of Spirituality from the Coronavirus Pandemic	Journal of Religion and Health	2020	The paper highlights the relevance of spiritual skills in disaster management and advocates spiritual skills as a new dimension to the medical curriculum.	48
9.	Son Chae Kim, Carlota Quiban, Christine Sloan, <u>Anna Montejano</u>	Predictors of poor mental health among nurses during COVID-19 pandemic	Nursing Open	2020	The study of nurses during the pandemic reveals that spirituality, high resilience, and family functioning are good coping mechanisms for nurses to fight anxiety, depression, and stress during tough times.	46
10.	Filipe Prazeres , Lúcia Passos, Andreia Teixeira	COVID-19-Related Fear and Anxiety: Spiritual-Religious Coping in Healthcare Workers in Portugal	International Journal of Environment Research Public Health	2021	The healthcare workers in Portugal, with higher levels in the various dimensions of Spirituality (hope/optimism) showed less coronavirus-related anxiety.	42

A very significant paper by Kowalczyk et al (2020), with 100 citations, analyses the importance of spirituality and the impact of restrictions on religious gatherings during the pandemic. The study demonstrates the effectiveness of spirituality during pandemics with the use of a survey.

A part of the survey concludes that those who are afflicted with dread, suffering, or illness frequently go through a "spiritual renewal." The pandemic may churn out a "new generation", one with the maturation of spirituality.

Lucchetti (2020) is also the highest-cited paper in our area of study. Building on the faith that spirituality is highly associated with critical moments in life and the pandemic classifies as one. According to the study conducted after the survey of 485 participants, spirituality influences health outcomes, lessens the negative consequences of social isolation, and lessens the sense of suffering. Betty et al (2020) in their paper which has a citation of 68 talk of an often-ignored segment that has been left vulnerable by Covid 19-the palliative care patients. Given the loneliness coupled with isolation and added vulnerability the role of spirituality has been studied in this paper. The paper finds the healthcare system without spiritual care is a faulty system that needs to incorporate Spirituality as a default piece of care.

Nicolette et al (2020) with 60 citations discuss a similar point of view as Luchheti but unlike the latter, Nicolette supports the inclusion of Spiritual care for all stakeholders, the patients, families, and the health care workers and addresses the coming to terms with the ultimate death. COVID-19 and death were considered synonyms hence the fear. Spiritual health care aims to promote well-being and quality of life while living in the same environment, with special reference to the pandemic. The clinics which provide spiritual care to the patients were contributing significantly to the well-being of the patients.

Coppola (2021) studied the concept of spirituality during the pandemic with reference to Italy, with 58 citations. The study focuses on spiritual health, gender perception of mental health, and family support during the pandemic. The study concludes that spirituality contributes positively to mental as well as physical health.

Cerventes (2021) studied only in part the spiritual support aspect of Covid-19, where it is highlighted, that people prayed and sought spiritual guidance during the pandemic. Spiritual support was identified as an important factor in their recovery from Covid-19. Additionally, the spiritual support provided relief from isolation. The study was based on the responses of 60 Latinx adults who were hospitalized and released after treatment. The paper had 58 citations.

Rabbada (2020) measures the relationship between death anxiety and religious and spiritual well-being. Gender-wise difference has been observed, where women have higher levels of religious and spiritual coping levels and lesser death anxiety as compared to males. Spiritual well-being is considered a significant predictor of the extent of death anxiety, which was a pronounced emotion during the pandemic.

Fancesco Chirico and Gabriella Nucera (2020) in their letter to the editor-in cheif, Journal of Religion and Health (48 citations) is a unique citation. It is a biographical exploration of the authors during the pandemic and the importance that they have seen being assigned to spiritual skills, especially for healthcare workers. Their experience in the times of the pandemic highlights their reliance on their faith and spirituality and the deaths of the priests who helped those in need of spirituality to reduce the stress and the psychological sufferings of affected people. As a result of their work and observations, they advocate spiritual skills to be added as a new dimension to the medical curriculum.

A cross-sectional research on how 320 participating nurses dealt with the COVID-19 epidemic and its impact on their mental health was carried out by Son Chae Kim in 2020. Resilience, spirituality, and high family functioning all predicted two-to six-fold decreased risks of moderate-to-severe stress, anxiety, or depression.

Prazeres (2021) in their paper on the fear and anxiety of healthcare workers during the pandemic has been cited 42 times. A study of 222 healthcare workers in Portugal during the pandemic was conducted in order to evaluate their Fear of COVID-19, Coronavirus Anxiety, spirituality, and religiosity, through the scales developed. The participants of the study with higher levels in the various dimensions of Spirituality (hope/ optimism) showed less coronavirus-related anxiety.

These highly relevant and cited studies are an indication on what the researchers are interested in and how the research in the field can be taken forward. The pandemic marred with death anxiety, depression, fear, and loneliness was worsened by social distancing. All these mentioned studies hail the importance of spirituality during the Covid-19 pandemic, some focusing on its importance to healthcare workers, others for recovering patients or terminally ill patients and their families.

3. Results and discussions

This section of the research paper discusses the findings of analysis in the following broad criteria which are further defined in terms of the seven Research Objectives.

3.1. Research Question 1: What is the annual publication trend on COVID-19 and Spirituality?**Table 5: Publications in the field of Covid 19 and Spirituality from 2020-2023**

YEAR	DOCUMENTS
2020	122
2021	366
2022	460
2023	315

This research objective shows the year-wise publication trend in the area of Covid-19 and Spirituality and which subject area has been leading the interest in the area.

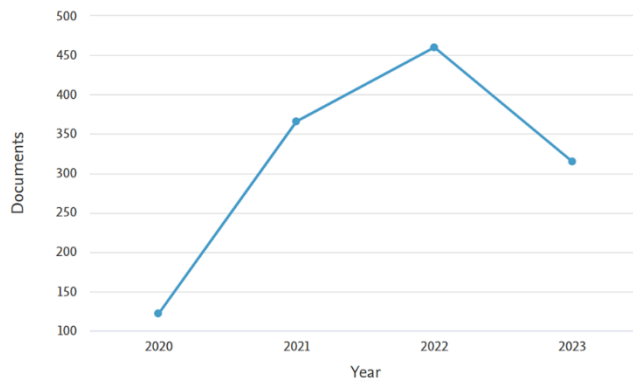
Publications by the Years**Documents by year***Figure 1: Publications by the Years*

Figure 1 and Table 5 on the yearly publication trends imply that the focus of the researchers on the possible effects of the Covid-19 pandemic on Spirituality started building up right from the year the pandemic was announced i.e. 2020. In 2020, 122 publications have been enlisted in Scopus. 2022, saw the maximum number of publications (460 publications). The emphasis on mental health during the pandemic has been rising and steps to go back to the roots, through spirituality is being studied and researched at a large scale. The trend of publication in 2023, is also encouraging with more than 300 papers till November 8, 2023.

3.2. Research Question 2: Which discipline contributed the most in the study of Covid-19 and Spirituality?

Documents by subject area

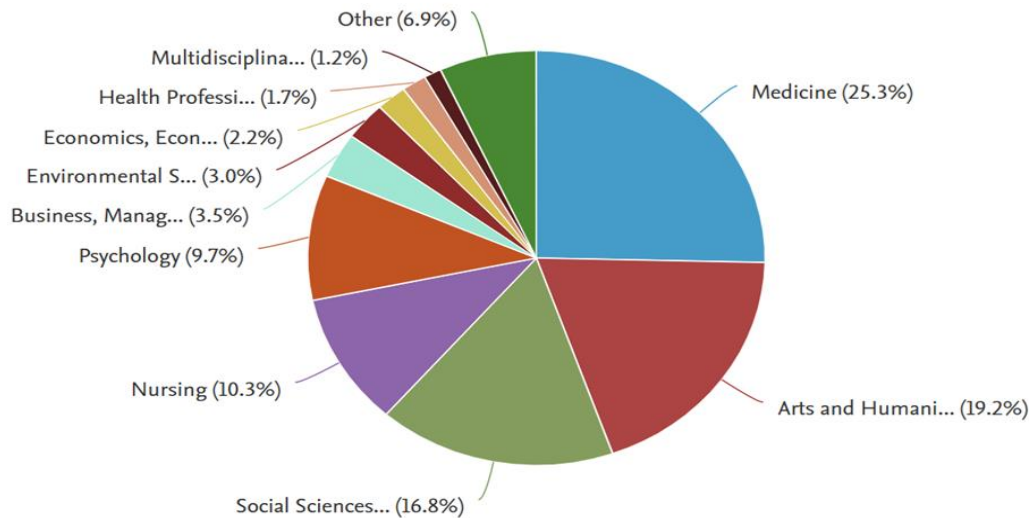


Figure 2: Documents by Subject Area

Figure 2 highlights that the Medicine and Nursing research constitutes more than 35% of all the research that has been done on COVID-19 and Spirituality. Arts and Humanities (19.2%) and Social Sciences Research (16.8%) follow. More research can be done in the field of Psychology (9.7%) to empirically establish the relationship between Spirituality and the pandemic.

3.3 Research Question (RQ) 3 Which authors furthered research on COVID-19 and Spirituality?

MOST INFLUENTIAL AUTHORS

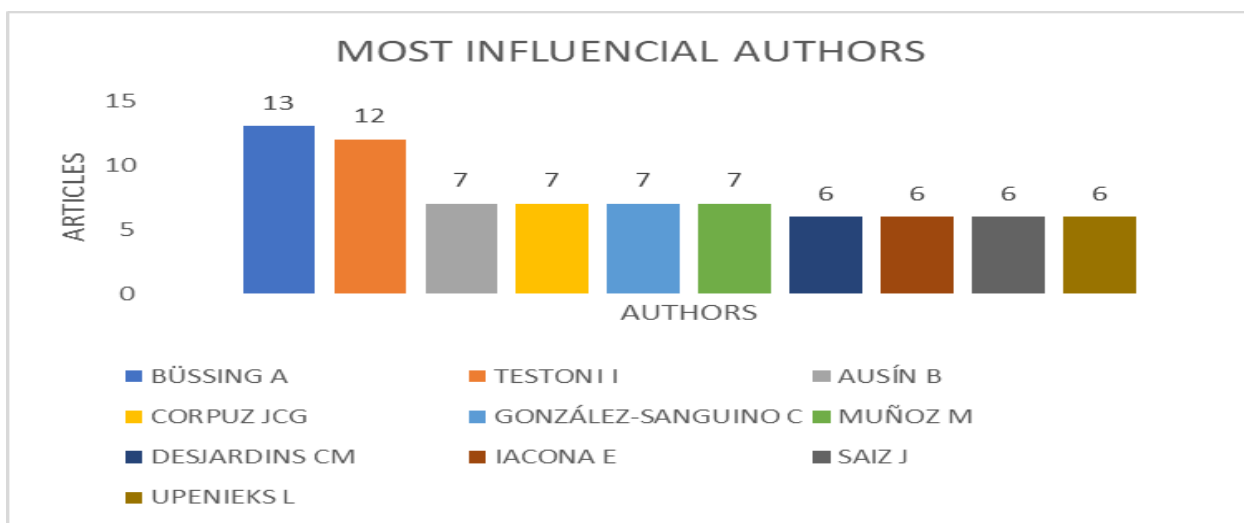


Figure-3 Most Influential Authors

Figure 3 focuses on the most influential authors in the field. The Bibliometric analysis enlists the ten most relevant authors' contributions in the field, enabling researchers to find the right collaboration partner or mentor within the research field of Spirituality and Covid 19. Arndt Büssing and his team have contributed the maximum in the field with 13 research papers followed by Testoni I, et al with 12 papers contributed.

3.4. Research Question (RQ) 4: Which are the elite publications and affiliations on the research of COVID-19 and Spirituality?

Most Influential Sources

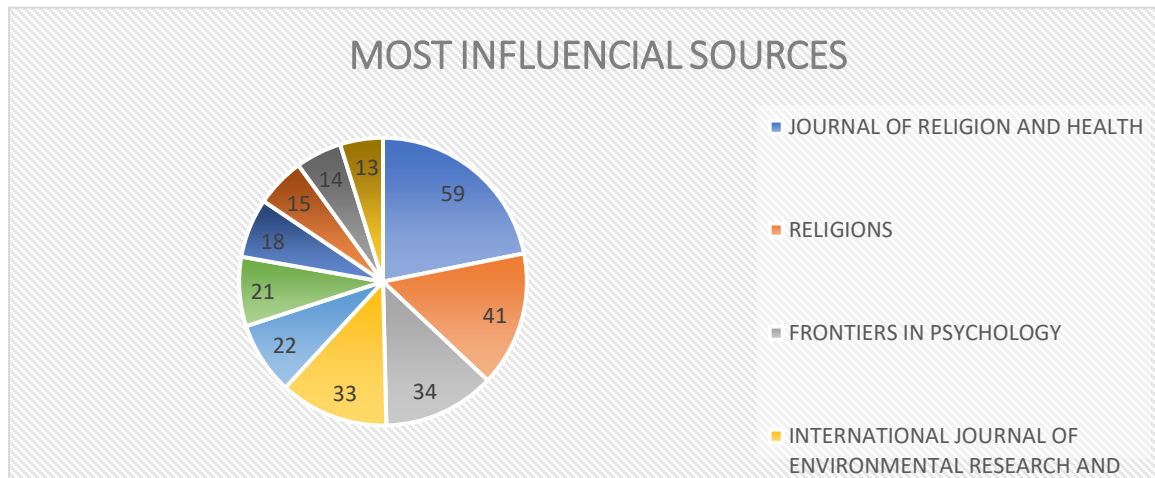


Figure-4 Most Influential Sources

Figure 4 illustrates that the Journal of Religion and Health has 59 publications in all in the field of Covid 19 and Spirituality. Religions, Frontiers in Psychology, International Journal of Environmental Research and Public Health, and Journal of Pastoral Care and Counseling are next in the elite list with 41, 34, 34, and 22 publications each respectively. The researchers focusing on the specific area of research can focus on any of these top five journals (Table 6), as the interest of the journals is inclined towards the field of Covid 19 and Spirituality.

Table 6: Source Production from 2020-2023(Nov)

Year	Journal Of Religion And Health	Religions	Frontiers In Psychology	International Journal Of Environmental Research And Public Health	Journal Of Pastoral Care And Counseling
2020	7	3	3	0	3
2021	27	16	10	10	13
2022	47	34	28	24	21
2023(November 8,2023)	59	41	34	34	22

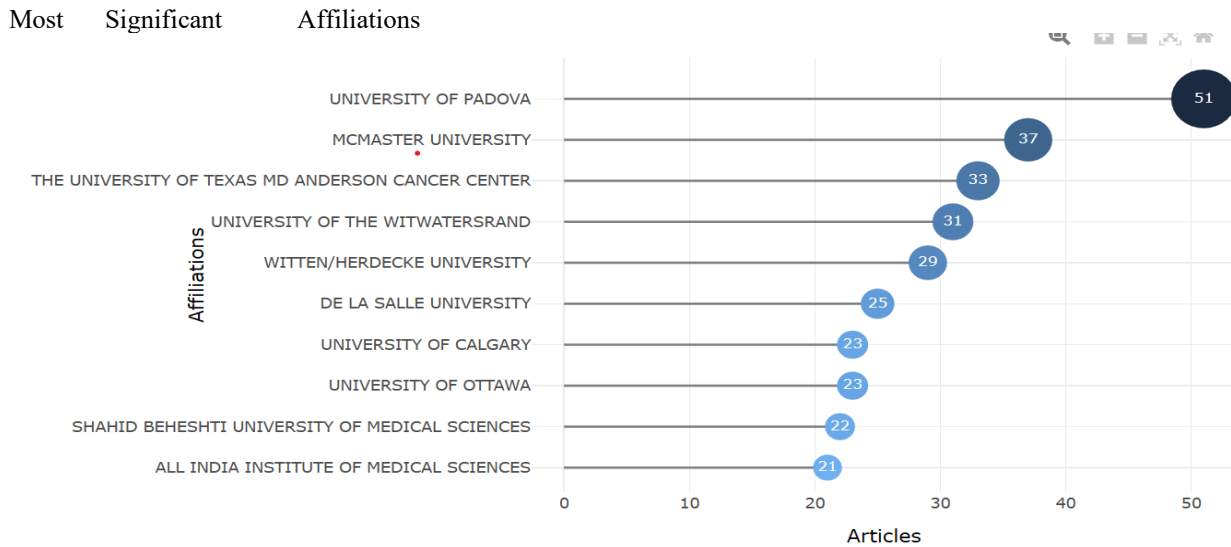


Figure-5 Most Significant Affiliations

Figure 5 represents the most relevant affiliations in the field of Covid-19 and Spirituality. The University of Padova leads the pack with 51 publications, McMaster University with 37 publications, The University of Texas and Anderson Cancer Center, University of the Witwatersrand, Witten/Herdecke University and De La Salle University, with 33, 31, 29, and 25 respectively. The remaining universities also have more than 20 publications each.

3.5. Research Question (RQ) 5: Which countries lead in the research on Covid-19 and Spirituality?

The United States of America has 1086 publications, followed by Iran (344), Canada (274), UK (229), and India (223). The focus on research in the USA is far ahead as compared to the second-best in the race. The interest of the Western world (USA, Canada, and UK) towards understanding spirituality, especially in the scenario of the pandemic is well highlighted by the statistics in Figure 6. India and Iran are the only two eastern countries with more than 200 publications.

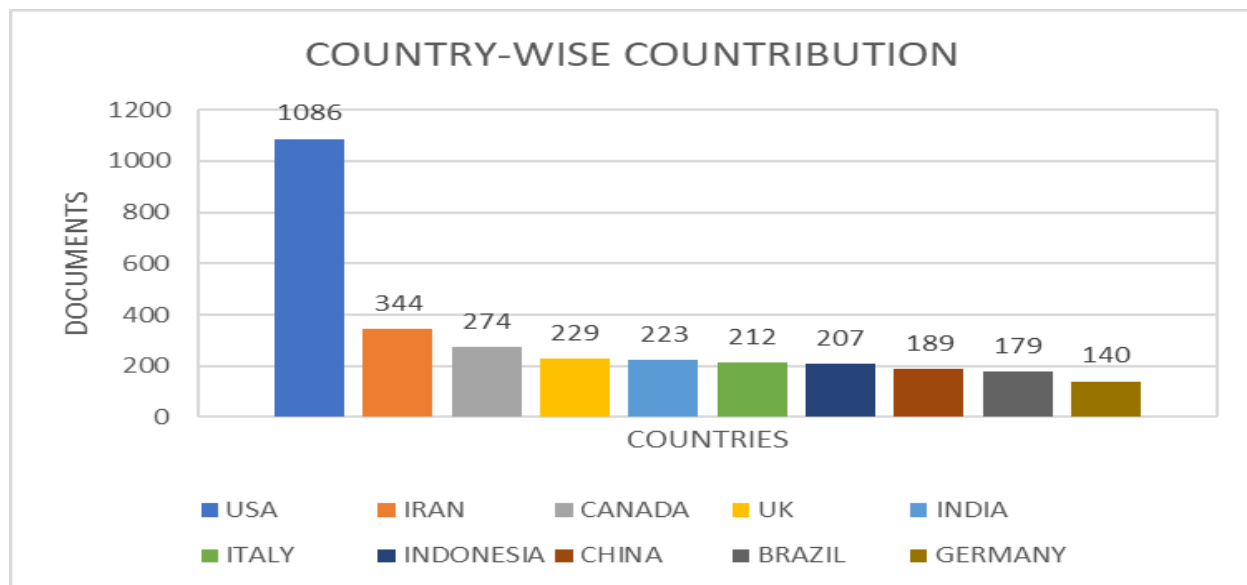


Figure 6: Country-wise Contribution

3.6. Research Question (RQ) 6: What is the keyword and citation network of COVID-19 and Spirituality?

A word cloud is a visual depiction of a collection of words in which the size of each word indicates how frequently or significantly it occurs in the text or dataset under consideration. Word cloud using author's keywords for the 1263 documents in Figure-7 shows that Covid-19 (632), Spirituality (193), Pandemic (121), Covid-19 and Pandemic (92) and Mental health (78) are the top five most frequently used keywords. These keywords give the researcher an insight into the core concepts of a document. By way of word-cloud the researcher can also identify the emerging trends and topics of discussions in the dataset.

Word- Cloud

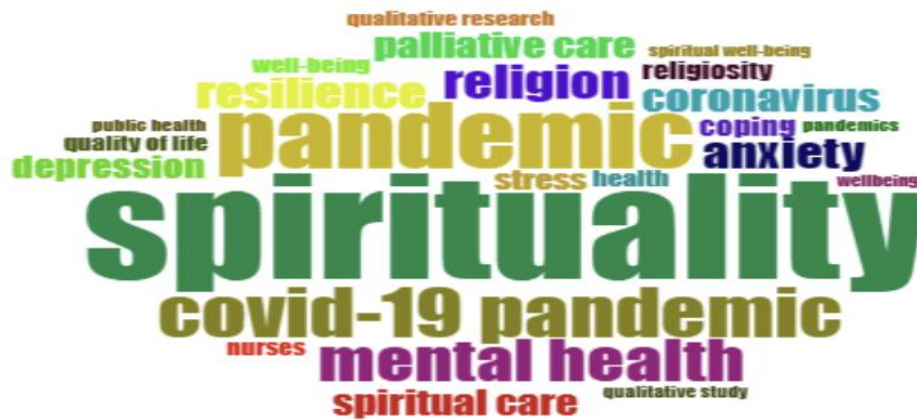


Figure-7 Word- Cloud

Research area particular issues and essential material may be immediately and effectively explored through the use of keyword frequency analysis (Guo X, 2022). Figure- 8 shows VOS-viewer generated co-occurrence network of all keywords that occurred more than 10 times in the Scopus dataset. The overall strength of the co-occurrence linkages with other keywords was computed for each term. The frequency with which two keywords were used simultaneously in the article was indicated by the strength of the link between them. The highest total link strength keywords were chosen. A total link strength of 2309 was found in the dataset. A total of 662 linkages were used to separate 64 items into seven groups. The top 5 repetitions in 1263 documents published between 2020-2023 were Covid-19 (occurrence-630, total link strength-934), Spirituality (occurrence-193, total link strength-409), Pandemic (occurrence-120, total link strength-250), Mental health (occurrence-78, total link strength-186), religion (occurrence-60, total link strength-133).

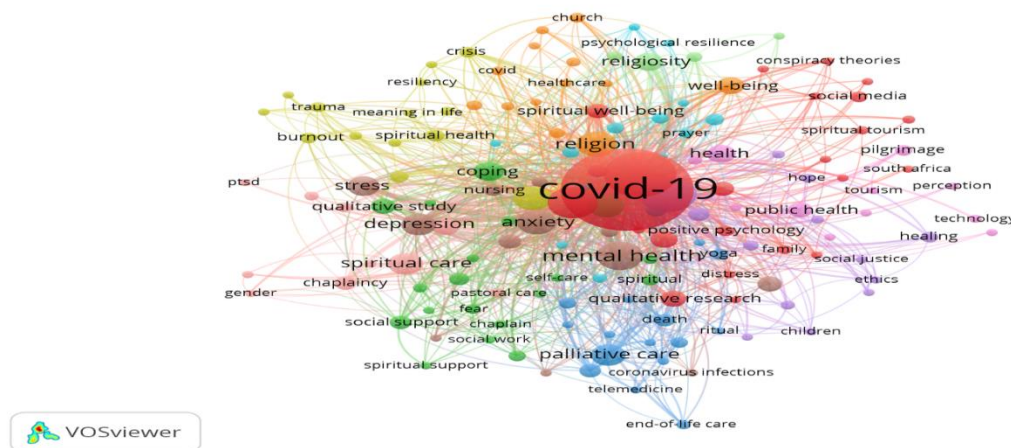


Figure 8 Keyword Co-Occurrence Network

3.7. Research Question (RQ) 7: In what direction research on Covid-19 and Spirituality develop?

Thematic Map

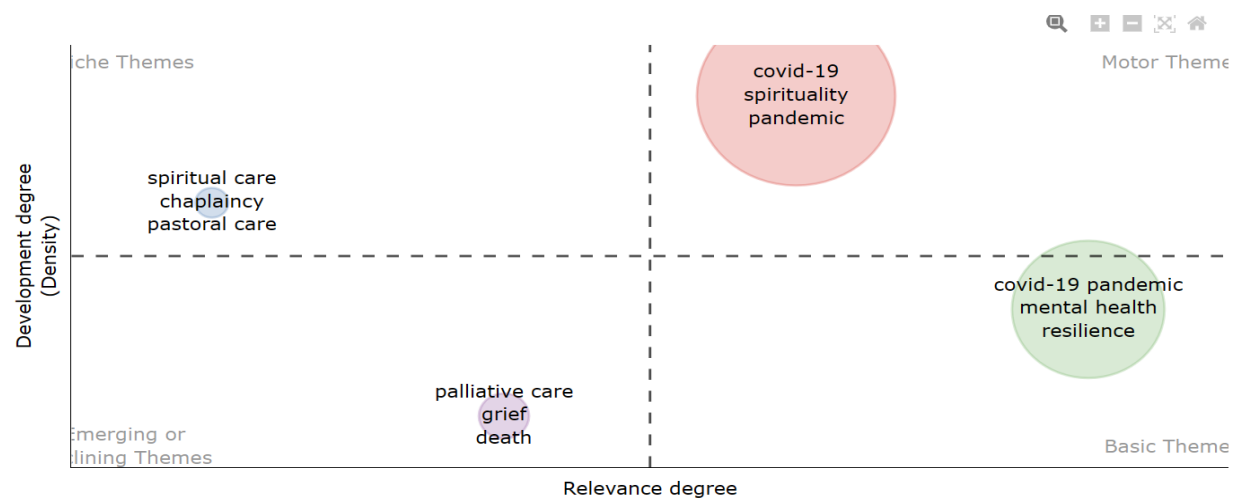


Figure 9 Thematic Map

It is relevant to understand the themes that dominate the past, present, and future course of research in the field of “Covid-19” and “Spirituality”. The four quadrants of the thematic map refer to the driving (Q1), specialized (Q2), disappearing/emerging (Q3) and underlying (Q4) themes.

Figure 9 shows the driving or motor motifs in the upper-right quadrant. Their great density and centrality make them stand out, suggesting that these themes are deep and significant to the research question.

Themes in this quadrant are well-researched hence, appropriate for systematic literature review and bibliometric analysis. Hence, covid-19, spirituality and pandemic are well researched themes and therefore, capable for structuring.

Basic themes, which encompass both fundamental and transversal subjects, are located in the lower-right quadrant. Their low density and high centrality define them. These subjects are fundamental to an area of study and are linked to more general problems that cut across the discipline's many academic subfields.

As a result, important subjects like resilience, mental health, and the COVID-19 pandemic remain understudied. Actually, since 2020, significant study has been conducted on these issues. Emerging or declining subjects are those in the lower-left quadrant. They are underdeveloped and peri-urban due to their low density and centrality. Therefore, there is opportunity for more study on topics like bereavement, dying, and palliative care.

The upper-left quadrant contains the isolated and highly developed motifs, sometimes known as niche themes. Due to their highly developed internal linkages (high density), but negligible external ties, they are only moderately relevant for the field (low centrality). Themes like spiritual care, chaplaincy and pastoral care occupy this quadrant indicating their moderate relevance to the research area.

The most cited papers in the field of “Covid-19 and Spirituality”, in order to decipher what the researchers are interested in. Citations help in measuring the interest in a particular paper has generated amongst peers in the field of similar research. Table 7 shows the top 10 cited papers in the field of COVID-19 and Spirituality, including their title, journal, year of publication, the number of citations, and the total citations per year.

Table- 7 : Top-10 Most Cited Papers

S No.	Author/Year/Source	DOI	Paper Title	Total Citations	Total Citations/Year
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1	González-Sanguino C, 2020, Brain Behaviour And Immunity	https://doi.org/10.1016/j.bbi.2020.05.040	Mental health consequences during the initial stage of the 2020 Coronavirus pandemic (COVID-19) in Spain	889	222.25
2	Singh Rp, 2020, Diabetes & Metabolic Syndrome Clinical Research & Reviews	https://doi.org/10.1016/j.dsx.2020.04.041	Internet of Things (IoT) applications to fight against COVID-19 pandemic	468	117
3	Geng Dc, 2021, Journal Of Forestry Research	https://doi.org/10.1007/s11676-020-01249-w	Impacts of COVID-19 pandemic on urban park visitation: a global analysis.	237	79
4	Walsh F, 2020, Family Process	10.1111/famp.12588	Loss and Resilience in the Time of COVID-19: Meaning-Making, Hope, and Transcendence	223	55.75
5	Mehta S, 2020, Journal Health Management	10.1177/0972063420940834	The New Consumer Behaviour Paradigm amid COVID-19: Permanent or Transient?	161	40.25
6	Selman Le, 2020, Journal Of Pain Symptom Management	10.1016/j.jpainsymman.2020.04.024	Bereavement Support on the Frontline of COVID-19: Recommendations for Hospital Clinicians	141	35.25
7	Ausin B, 2021, Journal Gender Studies	10.1080/09589236.2020.1799768	Gender-related differences in the psychological impact of confinement as a consequence of COVID-19 in Spain	138	46
8	Ramkissoon H, 2020, Frontiers In Psychology	10.3389/fpsyg.2020.02248	COVID-19 Place Confinement, Pro-Social, Pro-environmental Behaviors, and Residents' Wellbeing: A New Conceptual Framework	124	31
9	Kowalczyk O, 2020, Journal Of Religion And Health	10.1007/s10943-020-01088-3	Religion and Faith Perception in a Pandemic of COVID-19	122	30.5

10	Fountoulakis Kn, 2021, Journal Of Affective Disorders	https://doi.org/10.1016/j.jad.2020.10.061	Self-reported changes in anxiety, depression and suicidality during the COVID-19 lockdown in Greece	119	39.67
11.	Koenig Hg, 2020, Journal Of Religion And Health	10.1007/s10943-020-01035-2	Maintaining Health and Well-Being by Putting Faith into Action During the COVID-19 Pandemic	110	27.50
12	Lucchetti G, 2021, International Journal Of Social Psychiatry	10.1177/0020764020970996	Spirituality, religiosity and the mental health consequences of social isolation during Covid-19 pandemic	109	36.33

4. Conclusion

The construct “COVID-19 and Spirituality” started being studied in 2020, when the pandemic was announced by the WHO on March 11, 2020. (Rao, 2023). It is early in its bibliometric research journey to be studied, but since the pandemic is waning away, the lessons learned from it and researched should not fade away. Also, the number of publications in the field in the last four years has been substantial (n=1263). There has been no study undertaken to enlist and summarize the findings from the literature in the field of Covid-19 and Spirituality to be used by researchers, practitioners and policymakers. The paper presents the Bibliometric Analysis of the scientific publications in the field of COVID-19 and spirituality since 2020, as that is when the work in the field began. The study enlists the various dimensions and themes of research and honors the distinguished scholars and affiliated institutes that have immensely contributed to the area of research. An effort has been made to enlist and explain the top ten cited papers in the field to encourage the researchers in the field to take the lead from what is being read and cited the most. The Scopus database yielded 1263 papers since 2020. The investigation also eases the way for interested researchers to find suitable publishing venues for the field under study. Journal of Religion and Health, Religions, Frontiers in Psychology, International Journal Of Environmental Research and Public Health, and Journal of Pastoral Care and Counseling have been the front runners in publishing studies on covid 19 and spirituality. The most prolific author in the field in terms of the maximum number of authored papers is Ardnt Bussing with 13 papers in the field to their credit. Similarly, our results show that the United States has been the most successful nation in research on COVID-19 and spirituality over time. University of Padova (51), Italy tops the list in terms of its contributions and relevance. Thematic interpretation reveals that religiosity, spirituality, anxiety, COVID-19, depression, spiritual care, chaplaincy, and qualitative research are crucial topics not adequately researched. This can be attributed to the fact that research on the topic started in 2020 for obvious reasons. The research has pointed out that spirituality has gained more traction during the times of pandemic as the former reduces the ill effects of the tough situations on the overall well-being of all concerned, in particular the health workers, patients, and their families. Another area of exploration and deep diving is the suggestion of including spirituality in the medical curriculum since the healthcare workers during the COVID-19 pandemic were ill-equipped to handle the mental well-being of the patients as well as themselves. The research in the field has shown the maximum growth in 2022 with 460 papers published. The rise of studies on Spirituality since Covid 19 is attributed to the fact that people started looking within when they were forced to live in isolation away from the routine, which they have known to be the “normal” way of living. The area should grow further to yield meaningful inferences for the practitioners as well as the policymakers.

5. Limitations of the study

However, there were several limitations to the study. The list is not exhaustive, according to the authors, as the study solely employed the Scopus database. Since Scopus is thought to offer thorough coverage of trustworthy publications and is therefore seen as sufficient, all other databases (Web of Science, PubMed, etc.) have not been included in this research (Heradio et al., 2016; Shen & HO, 2020). However, expanding the study with data from additional databases such as Pubmed, Web of Science, and so on would undoubtedly improve it.

The paper provides the Bibliometric analysis of the research work done from 2020-2023 since the impact of COVID-19 on Spirituality had to be analyzed. The study has been done to give a direction to future researchers to continue working on the evolution of spirituality in the times and after COVID-19.

6. Future research

The future research in the field can be done in the following areas. COVID-19 is a pandemic and Spirituality is also a universal feeling, so collaborations should be formed across the world to study this combination and how spirituality can be incorporated in the lives of all stakeholders across the world.

It would be interesting to evaluate if some concepts were applied by the healthcare workers or any other efforts taken by NGOs to help the patients, families, and the healthcare worker

To make the work more inclusive, other essential databases might be added, such as PubMed and Web of Science to the Scopus extractions. .

The study's bibliometric analysis offers insights into the work that has been done and indicates a new course of action for academics who want to investigate the subject of spirituality in times of pandemic. The markers of upcoming research in the field are laid out in this publication. The study provides a summary for scholars looking to explore, collaborate, and seek advice.

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