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ORIGINAL PAPER

A Bibliometric Analysis of the Journal of Religion and Health: Sixty Years of Publication (1961–2021)

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Abstract

In 1961, the *Journal of Religion and Health (JORH)* commenced publishing articles that examined modern religious and spiritual philosophy in relation to psychology and health. The year 2021 marked the 60th anniversary of the founding of *JORH*. This research paper retrospectively analyses the journal's content. It provides insight into *JORH*'s publication trends, citation records, prominent themes, authors' collaboration and its aggregate contribution to the field of religion and health. Over time, the number of publications, citations and downloads of *JORH* articles have substantially increased, as has the journals prominence and diverse contributions to the study of religion, spirituality and health.

Keywords Journal of Religion and Health · JORH · Bibliometric analysis · Bibliographic coupling · Co-authorship analysis · Journal thematic structure

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Introduction

The *Journal of Religion and Health* (hereafter: *JORH*) briefly noted its 60th jubilee year in 2021 during the devasting COVID-19 pandemic (Carey et al., 2021a, p. 3753). Like many celebrations around the world during COVID-19, events were either restricted, cancelled and/or put 'on hold' for a later time. This bibliometric research provides a means to belatedly celebrate the publication jubilee of *JORH,* but to also systematically analyse its contribution over its sixty-year history.

Religion and Health

Over the last six decades, religion and (more recently) spirituality has been increasingly studied within medical and psychological research. Jean-Martin Charcot (1825–1893) and Sigmund Freud (1856–1939) started associating religion with hysteria and neurosis in the late nineteenth century. This was the beginning of a chasm that would split religion and health care treatment for the following century (Koenig, 2009).

Little was known about the connection between religion and chronic mental diseases, such as schizophrenia, bipolar disorder, long-term treatment-resistant depression, and severe personality disorders. The same holds true for mental health problems in children, anxiety disorders (e.g., OCD, PTSD, phobias), sex, eating, and sleeping issues. Due to the significance which religion can have upon patients and their families, the possible influence of religion/spirituality upon life challenging illnesses is a consideration that should never be overlooked (Koenig et al., 2023). The publication of *JORH* over the last sixty years, has helped to remind, if not caution, the various health care disciplines about the relevance of religious and/or spiritual factors influencing health care outcomes.

Background: Journal of Religion and Health

JORH has evolved substantially throughout the course of its existence, reflecting broader shifts in the most contemporary modes of religious and spiritual thought with particular emphasis on its relevance to current medical, psychological, allied health, sociological and theological research. Taking an eclectic approach to the study of human values, health, and emotional well-being, *JORH* publishes peer-reviewed international multidisciplinary original works relating to the bio-psycho-social and spiritual health of individuals, and their communities, in connection with any religion and/or spirituality. As noted in *JORH*'s preface material, the journal was established in 1961 by the Blanton–Peale Institute, which combined the viewpoints of psychology and religion. It offers a theoretical and practical platform for the debate of contemporary subjects for researchers and professionals of all religious faiths and backgrounds. The journal publishes articles that may be clinical, statistical or theoretical, however it seldom publishes book reviews, preferring to give priority space to original research.

JORH was first published in 1961 as a publication of the Academy of Religion and Mental Health, an academic branch of the US Blanton–Peale Institute (founded in 1937). According to Levin (2020, p. 4–5) in his textbook *'Religion and Medicine*,' the publication of *JORH* was one of the most significant results of the 'religion and health movement' in the first half of the twentieth century. Rev. Dr. George Christian Anderson (1907–1976: a mental health chaplain at St. Luke's Hospital, New York) founded *JORH* in 1961 as its first editor with only one issue and seven articles, with the clear intention to correlate "medicine, the behavioural sciences, theology, and philosophy—disciplines dedicated to healing and enhancing our total health" (Anderson, 1961, p. 9). By 1962, Harry C. Meserve become the second *JORH* Editor-in-Chief (EIC) and the longest serving for just over 30 years (see Table 5 Editor list, 1961–2021).

During the early years of Meserve's editorship, *JORH* increased to four issues per year containing 6–10 eclectic articles per issue and attracted notable authors such as Viktor E. Frankl (1905–1997), Seward Hiltner (1909–1984), and Wayne E. Oates (1917–1999). *JORH* is currently published by Springer Nature producing six issues per year and publishes approximately 40–50 articles per issue; up to approximately 300 articles per year (not including 'online first' articles, which typically exceed another 100). Under the editorial influence of the current Editor-in-Chief, *JORH* has now successfully transitioned from a collection of randomly published articles, to now publishing thematically, thereby transforming each *JORH* issue into a useful anthology with designated specific subject areas to assist both practitioners and researchers.

Despite the fact that religion and health may seem totally unrelated fields of study, some spiritual and religious practices and beliefs have long been identified to aid in the treatment of patients' illnesses (Koenig et al., 2001, 2012, 2023). Given that these two fields have long been intertwined with the goal of preserving human health and the treatment of diseases, it is surprising therefore that there have been so few bibliometric analyses of the published literature with respect to religion and health.

One bibliometric analysis was that of Lucchetti and Lucchetti (2014) who undertook a review from 1999 to 2013 using the *PubMed* database. They found that *JORH* was one of two 'leaders' in health and spiritual/religious publications–the other journal being *Health Progress*. Another bibliometric analysis in this area was that conducted by Şenel and Demir (2018) who specifically examined *JORH* literature utilizing the Web of Science (*WoS*) data base covering a 41-year period: 1975 until 2016. Overall, they found that *JORH* was 'one of the most important leading journals in this area' (Şenel & Demir, 2018). Finally, another broad-based exploration was that of the bibliometric review by Demir (2019) who also utilized the *WoS* database to consider a variety of journals with published articles from 1975 to 2017 and concluded that *JORH* 'was one of the most productive journals' in relation to religion, spirituality and health.

JORH Analytics

The current bibliometric analysis, as part of *JORH's* jubilee year, is the most extensive thus far and covers the last 60 years—during which time *JORH*'s prominence and influence has gradually increased, as indicated by numerous quantitative measures (e.g., citations, impact factors, etc.) and qualitative measures (e.g., peer-reviewed journal rankings). According to Clarivate Analytics, *JORH* had an overall two-year impact factor of 2.732 in 2021, which means that articles published in *JORH* between 2019 and 2020 received an average of 2.732 citations from journals indexed in Web of Science in 2021. The five-year impact factor of *JORH* was 2.639, which indicates that articles published in *JORH* between 2016 and 2020 received an average of 2.639 citations from Web of Science-indexed journals in 2021. *JORH*'s two-year impact factor was 1.162 in 2019 and 1.898 in 2020. The journal impact factor calculation for 2021 is currently calculated as per below:

$$\frac{\text{Citations in 2021 to items published in 2019 (402)} + \text{2020 (844)}}{\text{Number of citable items in 2019 (160)} + \text{2020 (296)}} = \frac{1246}{456} = 2.732$$

Clarivate (the company behind the impact factor) recently made some major adjustments to the way they calculate the impact factor. It's now based on the year an article is published online, and not when it's assigned/included within an actual issue. Clarivate refers to any articles as being 'Early Access' if these are published online first, but not yet included within an actual issue (*JORH* refers to these as 'Online First'). Last year's impact factors (2021) largely reflected a "transition year" in which citations from the Early Access articles were added to the numerator of the impact factor, but excluded from the count of publications in the denominator. As a consequence, the editors of *JORH* anticipated that this would mean many journals would get an impact "boost" from the addition of extra articles being included in the impact calculations, and this was largely the case. They also expected that the 2021/2022 impact factor would return to something closer to normal, which would mean many journals might see a decrease. This however was not the case for *JORH*, which had another year of increase.

Of course, it is important to remember that the impact factor is only one journal metric. In order to ensure a balanced and fair picture of research assessment, we can look at other measures to see the full scope of *JORH*'s development. For example, we can consider the number of article downloads—which, rather impressively, almost doubled under the current Editor-in-Chief's (EIC) efforts during 2021 (from 388,785 in 2020 to 734,384 downloads in 2021) due largely to the current EIC's co-written thematic editorials and increased social network activity in promoting *JORH* content.

Another measure is that of citation score. According to Scopus, *JORH*'s Cite Score was 3.2 (5/547 in the category Religious Studies and 20/123 in the category General Nursing) which implies that articles published in *JORH* between 2018 and 2021 received an average of 3.2 citations from journals indexed in Scopus in 2021. This shows an increase from the 2020 Cite Score which was previously 2.6. The source normalized impact per paper (SNIP) of *JORH* was 1.569, which indicates

that the average citations received by articles in the journal is 1.569 times the average citations received by articles in the same subject area of Scopus-indexed journals in 2021.

The SJR (SCImago Journal Rank) of *JORH* was 0.740 in 2021. The SJR measures citations based on how well-known the journal is internationally. It can be used to compare journals in the same field and is the basis for the ranking of journals by subject category. A journal SJR indicator represents the average number of weighted citations a document published in a journal over the past three years has received in a given year. This number is indexed by Scopus. In order to take into account the variations in citation patterns across disciplines, SJR tries to normalize their rankings.

For ease of comparison, the scoring scale reduces everything to a single point. A journal's potential for citation increases if its SJR point value is greater than or closer to one. Higher SJR indicator values are supposed to show that a journal is more prestigious. Apart from these quantitative measures, *JORH* has also been rated highly by peers in the field, as seen through its quartile ranking of Q3 (102/182) in 'Public, Environmental & Occupational Health'. There are four quartiles, Q1, Q2, Q3, and Q4, for each subject category of journals. The top 25% of journals on the list are in Q1, the next 25% are in Q2, the next 50% are in Q3, and the last 75% are in Q4.

Aim

This study used bibliometrics to review 60 years of *JORH* and explore the focus of *JORH*'s articles. Four research questions (RQ) are considered in order to put together a rich bibliometric overview of *JORH*'s achievements:

RQ1 What are *JORH*'s publication and citation trends?

RQ2 What are *JORH*'s most influential articles?

RQ3 What is the level of *JORH*'s author collaboration?

RQ4 What are the major intellectual themes of *JORH*'s research?

Our study is structured as follows: (i) the methodology describes our bibliometric technique, (ii) next the journal's publication pattern and citation record is considered (RQ1), (iii) followed by a section on *JORH*'s most influential articles (RQ2) (iii) this study then looks at *JORH's* author's co-authorship trends (RQ3), (iv) examines *JORH*'s intellectual themes (RQ4), and (v) lastly this review presents a limitation section followed by discussion and conclusions.

Methodology

Data Identification and Retrieval

Similar to previous bibliometric analyses, the metadata for this study comes from Scopus (Baker et al., 2020; Bartol et al., 2014; Donthu et al., 2021a; Donthu et al., 2021b; Norris & Oppenheim, 2007). The value of different data sources for a

bibliometric study, such as Scopus, Web of Science, and Google Scholar, has been the subject of much debate (Franceschet, 2010; Levine-Clark & Gil, 2008). Each platform has advantages and disadvantages. Utilizing any platform requires data base integration and data cleansing (Corbet et al., 2019)

Scopus was selected over Web of Science and Google Scholar for a number of reasons. Scopus, in the first instance, provides citation information for more than 15,000 peer-reviewed ranked publications and offers a far broader scope of coverage (Levine-Clark & Gil, 2008). Scopus, unlike Google Scholar, allows for more comprehensive research. Google Scholar often gives inadequate bibliometric information. Third, other bibliometric research have utilized Scopus to provide substantive reviews (Baker et al., 2021a, 2021b, 2021d; Kumar et al., 2020, 2021). We searched Scopus in May 2022 for articles published in the "*Journal of Religion and Health*" from its inception in 1961 up to and including 2021. A total of 3,227 *JORH* articles were examined for this study.

Study Methods

The hallmarks of high-quality research are the generation of specific aims and the formulation of appropriate research questions, and/or original hypotheses, the empirical confirmation of those research questions and/or hypotheses, and the execution of a comprehensive synthesis of the literature using methods that control for bias and can be readily replicated. Both quantitative and qualitative methods are used in the field of bibliometrics. Despite its roots in library science (Ellegaard & Wallin, 2015), bibliometrics has found application in a wide range of fields, such as the prediction of journal publication trends (Hoffman & Holbrook, 1993), and the performance of journal thematic analysis (Baker et al., 2021;; Burton et al., 2020; Donthu et al., 2020; Goyal & Kumar, 2021; Kumar et al., 2022). We used bibliometric analysis to also assess *JORH* with respect to how different aspects of research and researchers are linked to one another (Ramos-Rodrigue & Ruz-Navarro, 2004).

Similar to the work of Hoffman and Holbrook (1993) and Martnez-López et al. (2018), we performed bibliometric analysis upon 2600 *JORH* publications in order to discover publishing patterns, citation data, important articles, authorship patterns, and topic clusters. To analyse *JORH*'s publication record, we used Excel. To analyse its publishing patterns, we used a wide range of metrics, such as the number of citations received by each article, the number of citations received annually, and the number of cited articles (Alonso et al., 2009). The total number of *JORH*'s publications is denoted by the symbol "TP"; the total number of citations (TC) is a metric used to assess the significance and impact of a study (Meer et al., 2018) the total number of cited publications which have received at least one citation (TCP); and the total citations per publication (TC/TP) are used to determine a publication's significance.

We analysed the present trends in authors' collaboration, the most prominent (Baker et al., 2020) authors in *JORH*, as well as the patterns of publishing and citation in the journal. We also used VOSviewer (Andersen, 2019) and Gephi to analyse co-authorship networks (Baker et al., 2020; Donthu et al., 2020). In addition

to revealing patterns of co-authorship, thematic maps may reveal the essence of a scholarly work. Referencing patterns may be discovered via analysis of a text's conceptual context (Donthu et al., 2021). Therefore, we used bibliographic coupling (Kessler, 1963) using VOSviewer and Gephi to calculate the breadth of the connections between the works that are mentioned by each other (Baker et al., 2020). Similarities or relationships between referenced sources provided the basis of bibliographic coupling (Kessler, 1963).

Results

JORH's Publication Trends and Citation Records

Our first research question (RQ1) examined *JORH's* publication trends and citation records. As Fig. 1 shows, *JORH* experienced significant increase in the number of publications from 238 during 1961–1970 to 1844 publications during 2011–2021. *JORH*'s extraordinary publication growth in the last decade was predominantly due to the editorship of Reverend Curtis W. Hart (Weill Cornell Medicine, NY), whose considerable encouragement, commitment and at times overwhelming workload, saw a significant increase in publications and the proliferation of new authors entering the field of religion, spirituality and health. Hart became the second longest serving *JORH* Editor-in-Chief, but handled, or co-handled, the largest number of submissions in *JORH's* history to date (see Table 5 and Fig. 1). Publication trends look to continue to grow under the current Editor-in-Chief Associate Professor Lindsay B. Carey, and likewise *JORH's* citations.

JORH's Leading Authors

Table 1 lists the 20 authors with the most *JORH* publications between 1961 and 2021. One of *JORH*'s Associate Editors, Professor Harold G. Koenig, has the most

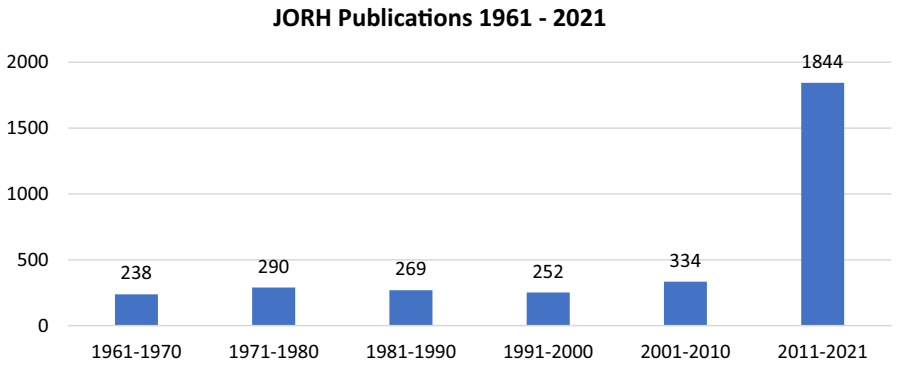

Fig. 1 *JORH*'s Publication Trend by Decade (1961–2021: $N = 3227$ articles). Refer to Table 5 for additional detail about the Editors/Chief Editors for the above time frames

Table 1 Most frequently published *JORH* authors between 1961 and 2021

Author	TP	LAP	TCP	TC	TC/TP	TC/TCP
Koenig H.G	64	13	60	1862	29.09	31.03
Lucchetti G	21	4	21	369	17.57	17.57
Capps D	20	19	19	102	5.10	5.37
Carey L.B	20	14	20	316	15.80	15.80
Büssing A	19	11	19	224	11.79	11.79
Hart C.W	19	19	10	21	1.11	2.10
Krause N	18	13	18	291	16.17	16.17
Levin J	16	15	16	520	32.50	32.50
Moss III D.M	13	9	9	32	2.46	3.56
Galiatsatos P	12	9	9	72	6.00	8.00
Gostečnik C	11	7	8	25	2.27	3.13
Hvidt N.C	11	1	10	114	10.36	11.40
Handal P.J	11	2	11	234	21.27	21.27
Meissner W.W	11	11	7	33	3.00	4.71
Cvetek R	10	0	7	24	2.40	3.43
Fins J.J	10	6	7	57	5.70	8.14
Zarzycka B	9	5	9	77	8.56	8.56
Rosen I.M	9	9	3	8	0.89	2.67
Lucchetti A.L.G	9	0	9	241	26.78	26.78
Slavič T.R	9	0	6	23	2.56	3.83

This table shows the authors with the most *JORH* publications between 1961 and 2021. *TP* Total publications, *LAP* Lead authored publications, *TCP* Total cited publications, *TC* Total citations, *TC/TP* Total cites per publication, and *TC/TCP* total cites per cited publication

publications (n = 64)—although it should be noted that nearly all of these publications were achieved prior to his appointment as a *JORH* editor in 2021. Koenig is followed by Giancarlo Lucchetti (n = 21). Other authors following the ranked list are Donald Capps (1939–2015) and Lindsay B. Carey with 20 publications each. In contrast to the total number of publications, lead authored publications are highest for Donald Capps, Curtis W. Hart and Lindsy B. Carey who is also a *JORH* editor—although similar to Koenig, most of Carey's publications were before he became a *JORH* editor in 2020. Arndt Büssing and Curtis W. Hart, had 19 publications each.

Overall, Harold G. Koenig has the most citations (1862) among the top 20 *JORH* contributors, followed by Jeff Levin (520), Giancarlo Lucchetti (369), and Lindsay Carey (316). The authors with the most total citations *per* publication are Jeff Levin and again Harold Koenig, with 32.50 and 29.09, respectively. Table 1 shows that the works of the top 20 *JORH* authors have all been cited at least once, but the majority have been cited multiple times. Generally, *JORH* has attracted well-known authors

who are subject matter experts in their relevant fields and whose works have been widely cited beyond *JORH*.

JORH's Leading Countries

Table 2 shows the top 20 countries with the most *JORH* authors between 1961 and 2021. Authors with ties to the United States have the most publications (1699) and citations (16,484). Iran comes in second with 157 publications and 1471 citations. Turkey, United Kingdom, and Australia are other countries prominently linked with *JORH* authors. Regarding publications and citations, authors affiliated with the USA and Iran outnumber those affiliated with other countries. However, Table 2 indicates that *JORH* publishes research from authors worldwide, which is consistent with one of its goals.

Table 2 Countries most often affiliated with *JORH* authors between 1961 and 2021

Country	TP	TCP	TC	TC/TP	TC/TCP
United States	1699	1391	16,484	9.70	11.85
Iran	157	141	1471	9.37	10.43
Turkey	122	100	880	7.21	8.80
United Kingdom	112	100	1069	9.54	10.69
Australia	104	97	1171	11.26	12.07
Canada	87	75	694	7.98	9.25
Saudi Arabia	68	61	1120	16.47	18.36
Brazil	62	56	656	10.58	11.71
Israel	60	49	515	8.58	10.51
Poland	55	48	621	11.29	12.94
Malaysia	54	50	776	14.37	15.52
India	53	43	440	8.30	10.23
Germany	44	41	405	9.20	9.88
China	41	38	501	12.22	13.18
South Africa	38	35	276	7.26	7.89
Pakistan	36	34	291	8.08	8.56
Netherlands	26	21	414	15.92	19.71
Spain	26	25	248	9.54	9.92
Italy	24	21	220	9.17	10.48
Sweden	24	23	363	15.13	15.78

This table reports countries most often affiliated with *JORH* authors between 1961 and 2021. *TP* Total publications, *TCP* Total cited publications, *TC* Total citations, *TC/TP* Total cites per publication, and *TC/TCP* Total cites per cited publication. The sum of citations exceeds that shown in Table 1; when authors of co-authored articles have affiliations with more than one country, each country receives a citation

Table 3 Most cited articles published in *JORH between* 1961 and 2021

Author	Title	TC	C/Y
Bonelli and Koenig (2013)	Mental Disorders, Religion and Spirituality 1990 to 2010: A Systematic Evidence-Based Review	285	35.63
Levin and Schiller (1987)	Is there a religious factor in health?	205	6.03
Hall et al. (2008)	Measuring religiousness in health research: Review and critique	169	13.00
de Jager Meezenbroek et al. (2012)	Measuring Spirituality as a Universal Human Experience: A Review of Spirituality Questionnaires	167	18.55
Dukes (1984)	Phenomenological methodology in the human sciences	164	4.43
Gearing and Lizardi (2009)	Religion and suicide	142	11.83
Green and Elliott (2010)	Religion, health, and psychological well-being	140	12.72
Haque (2004)	Psychology from Islamic perspective: Contributions of early Muslim scholars and challenges to contemporary Muslim psychologists	126	7.41
Kul et al. (2014)	Does Ramadan Fasting Alter Body Weight and Blood Lipids and Fasting Blood Glucose in a Healthy Population? A Meta-analysis	120	17.14
Lucchetti et al. (2012)	Validation of the Duke Religion Index: DUREL (Portuguese Version)	117	13.00
Pirutinsky et al. (2020)	COVID-19, Mental Health, and Religious Coping Among American Orthodox Jews	111	111.00
Johnson and Spilka (1991)	Coping with breast cancer: The roles of clergy and faith	108	3.60
Pahnke and Richards (1966)	Implications of LSD and experimental mysticism	106	1.93
Ivtzan et al. (2013)	Linking Religion and Spirituality with Psychological Well-being: Examining Self-actualisation, Meaning in Life, and Personal Growth Initiative	103	12.88
Peres et al. (2007)	Spirituality and resilience in trauma victims	102	7.29
Gullatte et al. (2010)	Religiosity, spirituality, and cancer fatalism beliefs on delay in breast cancer diagnosis in African American women	99	9.00
Larson et al. (1989)	The impact of religion on men's blood pressure	98	3.06
Hungelmann et al. (1985)	Spiritual well-being in older adults: Harmonious interconnectedness	95	2.64
Unterrainer et al. (2014)	Religious/Spiritual Well-Being, Personality and Mental Health: A Review of Results and Conceptual Issues	93	13.29
Muldoon and King (1995)	Spirituality, health care, and bioethics	89	3.42

TC Total citations, and *C/Y* citations per year

JORH's Most Influential Articles

Our second research question (RQ2) identifies *JORH's* most influential articles. Table 3 lists the 20 most cited *JORH* papers. With 285 citations, Bonelli and Koenig (2013) top the list. This article examines the original research on religion, religiosity, spirituality, and related terms. There is strong evidence linking religious participation to improved mental health in the areas of depression, substance abuse, and suicide; some evidence linking it to improved mental health in stress-related disorders and dementia; insufficient evidence linking it to improved mental health in bipolar disorder and schizophrenia; and no data linking to improved mental health in other mental disorders.

Levin and Schiller (1987) ranks second with 205 citations. This research examines epidemiologic studies that use religion as an independent construct and finds that most epidemiologists have a very limited understanding of religion. Hall et al. (2008), with 169 citations, examines the most popular religiousness measures used in the literature on religion and health, paying close attention to their limits and arguing that extra care must be taken to prevent over-generalization.

de Jager Meezenbroek et al. (2012), with 167 citations, reviews 10 surveys that inquire into spirituality as a shared human experience. Psychometric qualities, item construction, and confounding with well-being and distress are assessed in questionnaires. The multidimensional Spiritual Well-Being Questionnaire (SWBQ) is extolled, particularly given the fact that none of the other surveys met all the research requirements. However, the SWBQ does have a number of limitations as indicated by Koenig et al. (2021). According to these researchers, the inclusion of general mental health well-being questions can confound the findings with regard to spiritual well-being.

Dukes (1984), with 164 citations, analyses the constraints of phenomenological research and evaluates verification processes pertinent to phenomenological investigations. According to the author, phenomenological methodology varies from standard techniques in both goal and practise. Gearing and Lizardi (2009), with 142 citations, presents the practical guidelines for incorporating religiosity into suicide risk assessment. According to these researchers, suicide rates, suicide risk, and protective factors for suicide, vary across religions. It is essential to assess for the degree of religious commitment and involvement to accurately identify suicide risk. Green and Elliott (2010), with 140 citations, compared the effects of religiosity on health and well-being, controlling for work and family. The results indicated that people who identify as religious tend to report better health and happiness, regardless of the types of religious affiliation, religious activities, work and family, social support, or financial status.

Co-Authorship Trends

Our third research question (RQ3) examines *JORH* author's collaboration patterns. Figure 2 shows the network of the most often published *JORH* authors. Node size denotes an author's network connectivity, whereas the link between authors

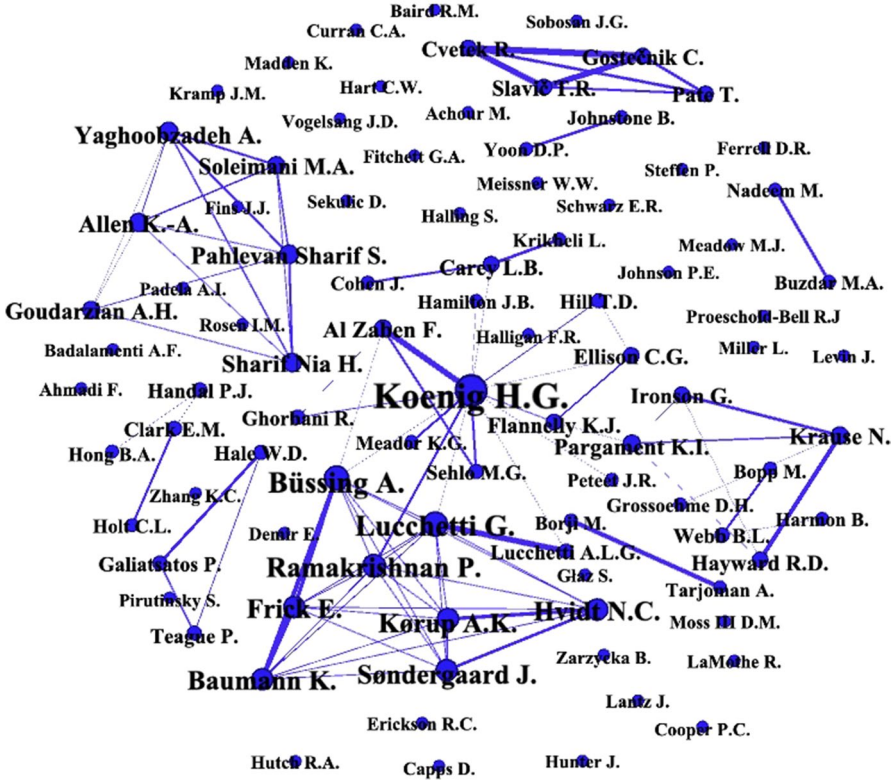

Fig. 2 *JORH* Author Network Collaboration. Note Authors who contributed at least five *JORH* publications. The thickness of the lines represents the link strength/frequency between *JORH* authors

represents the degree of co-authorship. Although the network has many well-known *JORH* authors, they are not necessarily the most active contributors. As a result, an author's quantity of *JORH* publications does not always imply that person's relevance in the collaborative network. As Fig. 2 indicates, based on node size, Harold G. Koenig is one of the network's most prominent authors and frequent contributors—and has been for many years, even prior to becoming a *JORH* Associate Editor. While authors like Parameshwaran Ramakrishnan, Alex Kappel Kørup, and Klaus Baumann are *not* among the 20 most well-known authors, nevertheless they are still prominent in the network. The co-authorship network sheds light on the dynamics of collaboration of "invisible collages" (Crane, 1969). Authors who blend intellectual traits to produce high-quality writing create a visual collage. Figure 2 demonstrates that an author's network popularity is based on that person's ability to collaborate with other authors rather than on production.

Figure 3 shows the country network associated with *JORH* authors. Authors from the United States, Saudi Arabia and the United Kingdom are at the network's centre, while Iran, Canada, Brazil, Australia, China, Denmark, and Germany are also

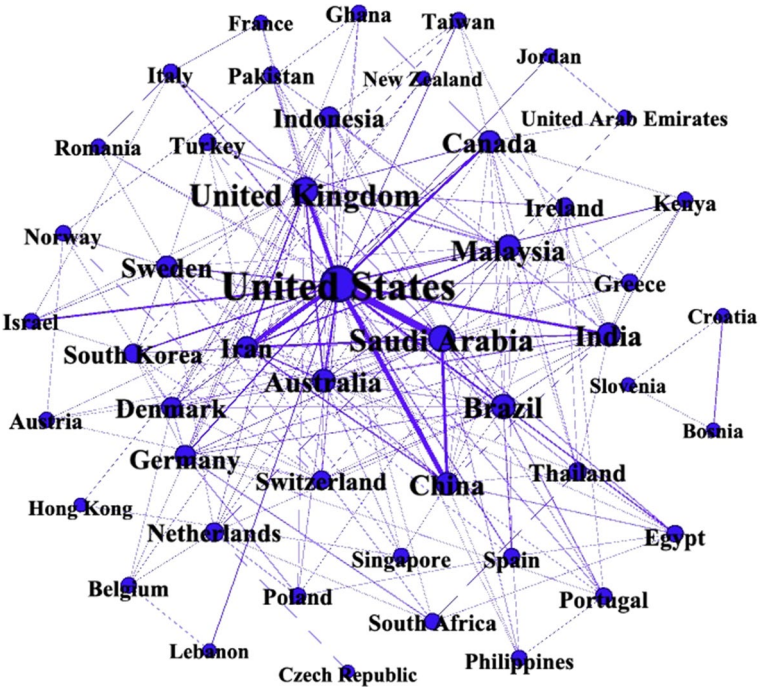

Fig. 3 The Country Network of *JORH* affiliated Authors. *Note*: Country collaboration network with a minimum threshold of five publications. The thickness of the edges represents the link strength between countries

prominent. Asian countries such as Malaysia, Indonesia, and India have also made a substantial contribution. Turkey's tiny node size in the network is particularly noteworthy because it has the third most affiliated authors publishing articles, as shown in Table 2—indeed *JORH* authors from Turkey have substantially increased over the latter years, as publication of their research related to Islam in Western journals became a priority for academic promotion. However, also notable is an increasingly strong link which appears between American authors and those from other countries, such as the United Kingdom, Saudi Arabia, Iran, and China, as American authors became less national centric and increasingly international in research collaboration.

Intellectual Thematic Structure of JORH

Our next inquiry will focus on the intellectual thematic structure of *JORH* (RQ4). For this purpose, we use Kessler's (1963) bibliographic coupling approach to analyse the overarching ideas. We cluster *JORH* themes by subject using VOSviewer (Van Eck & Waltman, 2010) and Gephi (Bastan et al., 2009). Nodes in a network may be grouped into thematic clusters, with the links between these carrying more weight/breadth than those in other clusters (Leydesdorff et al., 2017). Articles in a

cluster are related to one another by a central subject, making these stand out from articles in other clusters. Due to the highly interconnected nature of the components that make up each cluster, these may all be reduced to a single, defining statistic (Franceschet, 2009). We independently analysed the papers in each cluster and settled on a thematic category that we felt adequately reflected the unique characteristics of the themes represented.

In order to do a thematic analysis of the network, clustering is used (Xu et al., 2018). Of the 3227 *JORH* articles published between 1961 and 2021, a total of 2592 articles are connected within a node network ($n = 2592/3227$: 80.3%). Based on the 2592 papers, Table 4 shows the 12 most prevalent themes (clusters) and the most cited articles with regard to these themes.

Cluster 1: Influences of Islam on the Health of Muslims

Looking beyond the substantial number of articles from the USA (see Table 2), most of which make general reference (either directly or indirectly) to Christianity, the most prominent single cluster relates to religious and health issues concerning adherents of Islam. This cluster contains 873 articles with 4485 citations, making it a substantial theme. The articles in this cluster mainly focus on the influences of the Islamic religion on the health of American Muslims.

Haque (2004) addresses the problems modern Muslims have adapting to Western psychological notions and the contributions of early Muslim philosophers. He offers advice for Muslim countries who aim to indigenize psychology and find an Islamic perspective on human behaviour. Kul et al. (2014) is another well-cited piece of research. They compared body weight, blood lipid, and fasting blood glucose levels pre- and post-Ramadan. Fasting during Ramadan may affect body weight and other metabolic markers in healthy people, especially males, compared to pre-Ramadan. Gullatte et al. (2010) investigated the impact of religion, spirituality, and cancer fatalism on diagnostic delay and the stage of breast cancer in African American women with self-detected breast symptoms. The findings demonstrate that the participants were religious and spiritual, but not fatalistic. The majority of women waited more than three months before seeing a doctor, however there was no correlation between the three predictor factors and how long it took for them to see a doctor.

Overall, it should be noted that the prolific number of articles relating to Islam and the health of Muslims, led to the development of a special issue of *JORH* noting both the influence of Islam and Christianity during COVID-19; namely "COVID-19, Islam and Christianity" (*JORH* 60:2; Carey et al, 2021b) What was clearly evident, based on the research presented in *JORH* 60:2, is that adherents of Islam, are no more likely, or less likely, to be affected by multiple and challenging health-care issues than anybody else from any other religion.

Cluster 2: Impact of Spirituality and Meditation on Bio-Psycho-Social Health

This cluster contains 419 articles with 838 citations, making it the second most influential theme. The articles in this cluster mainly focus on the impact of spirituality,

Table 4 *JORH*'s Intellectual Thematic Structure between 1961 and 2021

Cluster	Focus	TP	TC	Most cited articles		TC
				Author	Title	
1	*Influences of Islam on the health of Muslims*	873	4485	Haque (2004)	Psychology from Islamic perspective: Contributions of early Muslim scholars and challenges to contemporary Muslim psychologists	126
				Kul et al. (2014)	Does Ramadan Fasting Alter Body Weight and Blood Lipids and Fasting Blood Glucose in a Healthy Population? A Meta-analysis	120
				Gullatte et al. (2010)	Religiosity, spirituality, and cancer fatalism beliefs on delay in breast cancer diagnosis in African American women	99
				Padela and Curlin (2013)	Religion and Disparities: Considering the Influences of Islam on the Health of American Muslims	81
				Krause (2011)	Religion and Health: Making Sense of a Disheveled Literature	71
2	*Impact of spirituality and meditation on bio-psycho-social health*	419	838	Acklin et al. (1983)	The role of religious values in coping with cancer	80
				Brisbon and Lowery (2011)	Mindfulness and Levels of Stress: A Comparison of Beginner and Advanced Hatha Yoga Practitioners	61
				Mars (2005)	Religion and bio-psycho- Social health: A review and conceptual model	58
				Lapierre (1994)	A model for describing spirituality	52
				Shonin et al. (2014)	Meditation Awareness Training (MAT) for Improved Psychological Well-being: A Qualitative Examination of Participant Experiences	46
3	*Religious faith and its association with health*	311	933	O'Brien (1982)	Religious faith and adjustment to long-term haemodialysis	85
				Francis and Liverpool (2009)	A review of faith-based HIV prevention programs	79

Table 4 (continued)

Cluster	Focus	TP	TC	Most cited articles		TC
				Author	Title	
				Padela et al. (2011)	The Role of Imams in American Muslim Health: Perspectives of Muslim Community Leaders in Southeast Michigan	65
				Koenig (2020)	Maintaining Health and Well-Being by Putting Faith into Action During the COVID-19 Pandemic	65
				Cotton et al. (2010)	Measurement of Religiosity/Spirituality in Adolescent Health Outcomes Research: Trends and Recommendations	57
4	*Religious groups and health related beliefs*	310	1240	Proeschold-Bell et al. (2011)	A Theoretical Model of the Holistic Health of United Methodist Clergy	47
				Barton and Miller (2015)	Spirituality and Positive Psychology Go Hand in Hand: An Investigation of Multiple Empirically Derived Profiles and Related Protective Benefits	43
				Ngamaba and Soni (2018)	Are Happiness and Life Satisfaction Different Across Religious Groups? Exploring Determinants of Happiness and Life Satisfaction	42
				Schafer et al. (2011)	Training and Education in Religion/Spirituality Within APA-Accredited Clinical Psychology Programs: 8 Years Later	39
				Dooittle (2010)	The impact of behaviors upon burnout among parish-based clergy	37
5	*Multidimensional measurement of religiousness/spirituality*	137	685	Lucchetti et al. (2012)	Validation of the Duke Religion Index: DUREL (Portuguese Version)	117
				Weaver et al. (2006)	Trends in the scientific study of religion, spirituality, and health: 1965–2000	79

Table 4 (continued)

Cluster	Focus	TP	TC	Most cited articles		TC
				Author	Title	
				Harris et al. (2008)	Reliability and validity of the brief multidimensional measure of religiousness/spirituality among adolescents	75
				Campbell et al. (2010)	Determining relationships between physical health and spiritual experience, religious practices, and congregational support in a heterogeneous medical sample	64
				Hwang et al. (2011)	Extending Religion-Health Research to Secular Minorities: Issues and Concerns	60
6	*Spirituality and psychological well-being*	136	816	Ivtzan et al. (2013)	Linking Religion and Spirituality with Psychological Well-being: Examining Self-actualisation, Meaning in Life, and Personal Growth Initiative	103
				Peres et al. (2007)	Spirituality and resilience in trauma victims	102
				Krok (2015)	The Role of Meaning in Life Within the Relations of Religious Coping and Psychological Well-Being	70
				Ahmad et al. (2011)	Religion and Spirituality in Coping with Advanced Breast Cancer: Perspectives from Malaysian Muslim Women	67
				Bay et al. (2008)	The effect of pastoral care services on anxiety, depression, hope, religious coping, and religious problem solving styles: A randomized controlled study	61
7	*Spiritual well-being*	102	1918	de Jager Meezenbroek et al. (2012)	Measuring Spirituality as a Universal Human Experience: A Review of Spirituality Questionnaires	169

Table 4 (continued)

Cluster	Focus	TP	TC	Most cited articles		TC
				Author	Title	
				Soleimani et al. (2017)	Psychometric Properties of the Persian Version of Spiritual Well-Being Scale in Patients with Acute Myocardial Infarction	45
				Shiah et al. (2015)	Religion and Health: Anxiety, Religiosity, Meaning of Life and Mental Health	44
				Abu-Ras & Laird (2011)	How Muslim and Non-Muslim Chaplains Serve Muslim Patients? Does the Interfaith Chaplaincy Model have Room for Muslims' Experiences?	42
				Rowold (2011)	Effects of Spiritual Well-Being on Subsequent Happiness, Psychological Well-Being, and Stress	39
8	*Mental disorders and religion*	84	1252	Bonelli and Koenig (2013)	Mental Disorders, Religion and Spirituality 1990 to 2010: A Systematic Evidence-Based Review	285
				Gearing and Lizardi (2009)	Religion and suicide	142
				Pirutinsky et al. (2020)	COVID-19, Mental Health, and Religious Coping Among American Orthodox Jews	111
				Gearng & Alonzo (2018)	Religion and Suicide: New Findings	63
				Olagoke et al. (2021)	Intention to Vaccinate Against the Novel 2019 Coronavirus Disease: The Role of Health Locus of Control and Religiosity	57
9	*Traumatic stress and religion*	77	1310	Unterrainer et al. (2014)	Religious/Spiritual Well-Being, Personality and Mental Health: A Review of Results and Conceptual Issues	93
				Johnstone et al. (2009)	Re-conceptualizing the factor structure of the brief multidimensional measure of religiousness/spirituality	69

Table 4 (continued)

Cluster	Focus	TP	TC	Most cited articles		TC
				Author	Title	
				Hyman and Handal (2006)	Definitions and evaluation of religion and spirituality items by religious professionals: A pilot study	66
				Che & Koenig (2006)	Traumatic stress and religion: Is there a relationship? A review of empirical findings	51
				Błażek and Besta (2012)	Self-Concept Clarity and Religious Orientations: Prediction of Purpose in Life and Self-Esteem	50
10	*Spirituality and serious health care*	64	866	Muldoon and King (1995)	Spirituality, health care, and bioethics	89
				Casar Harris et al. (1995)	The role of religion in heart-transplant recipients' long-term health and well-being	80
				Kaye & Raghavan (2002)	Spirituality in disability and illness	56
				Wnuk and Marcinkowski (2014)	Do Existential Variables Mediate Between Religious-Spiritual Facets of Functionality and Psychological Well-being	42
				Marks (2006)	Religion and family relational health: An overview and conceptual model	39
11	*Religious community responses to COVID-19*	51	681	Mróz (2021)	The Impact of COVID-19 on Pilgrimages and Religious Tourism in Europe During the First Six Months of the Pandemic	20
				Yoosefi Lebni et al. (2021)	The Role of Clerics in Confronting the COVID-19 Crisis in Iran	17
				Tanida (2000)	The view of religions toward euthanasia and extraordinary treatments in Japan	13
				Charlemagne-Badal and Lee (2016)	Intrinsic Religiosity and Hypertension Among Older North American Seventh-Day Adventists	12
				Oxholm et al. (2021)	New Zealand Religious Community Responses to COVID-19 While Under Level 4 Lockdown	10

Table 4 (continued)

Cluster	Focus	TP	TC	Most cited articles		TC
				Author	Title	
12	*Moral injury and spiritual interventions*	28	311	Koenig et al. (2018)	The Moral Injury Symptom Scale-Military Version	78
				Carey et al (2016)	Moral Injury, Spiritual Care and the Role of Chaplains: An Exploratory Scoping Review of Literature and Resources	67
				Hodgson and Carey (2017)	Moral Injury and Definitional Clarity: Betrayal, Spirituality and the Role of Chaplains	60
				Matri et al. (2020)	Identifying Moral Injury in Healthcare Professionals: The Moral Injury Symptom Scale-HP	38
				Drescher et al. (2018)	A Qualitative Examination of VA Chaplains' Understandings and Interventions Related to Moral Injury in Military Veterans	16
				Smothers and Koenig (2018)	Spiritual Interventions in Veterans with PTSD: A Systematic Review	15

This table classifies *JORH* articles into 12 major thematic clusters and lists the most cited articles in each cluster. *TP* Total publications; *TC* Total citations

meditation, and religious values on biological, psychological, social and spiritual health.

Acklin et al. (1983) are the most cited authors in this cluster. They investigated the impact of intrinsic religious beliefs and life meaning for increasing coping and well-being throughout the course of a life-threatening disease. Higher levels of ascribed life meaning in the cancer group were positively connected with intrinsic religious orientation and associated with lower levels of despair, anger-hostility, and social isolation.

Brisbon and Lowery's (2011) work is also often quoted. It investigated the degrees of mindfulness and stress in Hatha Yoga beginners and expert practitioners. According to the findings, advanced individuals scored much better in mindfulness and significantly lower in stress when compared to novice participants. Marks (2005) introduces a research-based conceptual model that connects three components of religious experience (religious practises, spiritual beliefs, and faith community) to three measures of health (biological, psychological, and social).

Cluster 3: Religious Faith and Its Association with Health

This cluster contains 311 articles with 933 citations. The articles in this cluster focus on the impact of religious faith on the prevention and treatment of serious health illnesses.

Green and Elliott (2010), who compared the effects of religion on health and well-being while adjusting for employment and family, are the most cited authors in this cluster. The findings show that religious persons had greater health and happiness, which was independent of religious membership, religious activity, job and family, social support, or financial condition.

Francis and Liverpool (2009) is the second most cited paper in this cluster. The empirical research on faith-based HIV prevention interventions among African American communities is reviewed in this study. Another paper by Padela et al. (2011), conducted semi-structured interviews with 12 community leaders to investigate their perspectives of their Imams' contributions in community health. The findings showed that Imams have a significant impact on how people think about health and sickness, as well as how people conduct their lives outside of the hospital system. They also advocate for Muslim patients' interests and assist patients making healthcare choices within the hospital context. It is commonly known however that most Imams do not adhere to contemporary clinical pastoral care models of practice as do other faiths (e.g., Judaism, Christianity, Buddhism) which predominantly emphasize person-centred care.

Cluster 4: Religious Communities and Health Related Beliefs

This cluster contains 310 articles with 1240 citations. The articles in this cluster focus on the holistic health and experiences of clergy/chaplains, relationship between spirituality and positive psychology and the differences in religious groups based on happiness and life satisfaction.

Proeschold-Bell et al. (2011), the most referenced article in this cluster, offer 42 health moderators for each of the 'Socioecological Framework' five levels: Intrapersonal, Interpersonal, Congregational, United Methodist Institutional, and Civic Community. They demonstrate that stress, as well as self-care and coping techniques, influence clergy health.

Barton and Miller's piece is the second most cited in this cluster (2015). They look at the association between personal spirituality and positive psychological qualities as these may appear in numerous profiles rather than as a whole. They discovered that, whereas depression was shown to be negatively related to positive psychological characteristics and personal spirituality, personal spirituality was uniquely protective against the degree of drug use across both age cohorts.

Ngamaba and Soni (2018) investigate if various faiths have varying degrees of happiness and life satisfaction, and whether this is influenced by the country's economic and cultural context. They discover that health status, financial contentment in households, and freedom of choice are ways for religious organizations and governments throughout the world to enhance the SWB of their inhabitants.

Cluster 5: Multidimensional Measurement of Religiousness/Spirituality

This cluster contains 137 articles with 685 citations. The articles in this cluster focus on the investigating the reliability and validity of various religion index and reviewing the literature on religion and spirituality.

Lucchetti et al. (2012), who investigate the psychometric features of the Portuguese version of the Duke Religion Index (PDUREL) in a community environment, is the most cited article in this cluster. They discover that PDUREL is a dependable and valid scale. Weaver et al. is the second most cited paper in this cluster (2006). They looked at how interest in religion, spirituality, and health has evolved over the last several decades in psychology and the behavioural sciences. The rate of articles dealing with spirituality shows a considerable rising trend over time. Harris et al. (2008) investigated the reliability and validity of the Brief Multidimensional Measure of Religiousness/Spirituality (BMMRS) among teenagers.

This particular theme of multidimensional measurement of religiousness/spirituality, has been, and is likely to remain, a dominant thematic cluster within *JORH*. Two special sections in *JORH* during 2021, note the increasing number of articles relating to the development and validation of religious/spiritual psychometric scales (*JORH 60:1*; Carey, 2021; *JORH* 60:5, Carey et al., 2021c) as well as the systematic method by which these should be standardized (Koenig and Al Zaben, 2021a).

Cluster 6: Spirituality and Psychological Well-Being

This cluster contains 136 articles with 816 citations. The articles in this cluster primarily focus on the relationship between spirituality and psychological well-being.

Ivtzan et al. (2013), who explore the influence of spirituality on psychological well-being, are the most cited article in this cluster, and the findings indicate the relevance of spirituality on psychological well-being, independent of whether it is experienced via religious engagement. Peres et al. (2007) is the second most

referenced paper in this cluster. They investigate the role of spirituality in trauma survivors' recovery and contribute to our knowledge of human response to trauma. Finally, Krok (2015) investigates whether meaning in life, as defined by presence, quest, and personal meaning, acts as a mediator in the links between religious coping and psychological well-being. According to the findings, meaning in life is a critical component of religious coping and psychological well-being that individuals employ as part of their meaning system to deal with life's obstacles and challenges.

Cluster 7: Spiritual Well-Being

This cluster contains 102 articles with 1918 citations. The articles in this cluster focus on investigating psychometric properties of the scales of spiritual well-being and the effects of spiritual well-being on psychology and happiness.

De Jager Meezenbroek et al. (2012), the highest referenced paper in this cluster, analysed eleven surveys that addressed spirituality as a universal human experience and find that the multidimensional Spiritual Well-Being Questionnaire is promising. Soleimani et al., is the second most referenced paper in this cluster (2017). They studied the psychometric features of the Persian version of the Spiritual Well-Being Scale (SWBS) in people who have had a heart attack. The study's results show that the SWBS is a valid and reliable instrument with potential value for future research and therapeutic practise contexts. Shiah et al. (2015), who investigate the relationship between anxiety, religion, purpose of life, and mental health in a nonclinical sample from a Chinese population, is another highly cited paper in this cluster. The findings imply that the impacts of underlying anxiety may account for some of the advantages of purpose of life for mental health.

Cluster 8: Mental Disorders and Religion

This cluster contains 84 articles with 1252 citations. The articles primarily focus on the issues like mental disorders, suicidal tendency, mental health during COVID-19 and their association with religion/spirituality.

Bonelli and Koenig's (2013) paper is the most referenced in this cluster. This article examines primary research on religion, religiosity, spirituality, and other related concepts. There is compelling evidence that religious engagement benefits mental health in terms of depression, substance misuse, and suicide. There is also some evidence that it helps mental health, particularly in the case of stress-related diseases and dementia. However, there is insufficient evidence that it improves mental health in bipolar disorder and schizophrenia, and no evidence that it improves mental health in many other mental diseases.

Gearing and Lizardi's (2009) piece is the second most cited. They explore the role of religion in suicidality and come to the conclusion that suicide rates, as well as risk and protective variables, differ between faiths. They emphasise the need of assessing religious commitment and activity in order to appropriately determine suicide risk. Pirutinsky et al. (2020) examine the pandemic's effect and investigate the links between exposure, religion, and distress in a sample of American Orthodox Jews. The findings show significant levels of exposure, worry, and adherence

to medical standards; yet, stress was typically minimal, and evidence of a beneficial influence was discovered.

Cluster 9: Traumatic Stress and Religion

This cluster has 77 articles with 1310 citations. The articles in this cluster focus on the mental health, traumatic stress and spiritual well-being. It also contains articles focussing on definitions and evaluation of measurement items for religion and spirituality.

Unterrainer et al. (2014) is the highest referenced paper in this cluster. This article discusses how the Multidimensional Inventory for Religious/Spiritual Well-being was developed and then summarises what was discovered when it was used in conjunction with other health and personality assessments. There is substantial evidence that religion and spirituality improve a variety of mental health indices, including subjective well-being and personality traits. Johnstone et al. (2009), the second most cited paper, seek to separate statistically the spiritual and religious elements of the Brief Multidimensional Measure of Religiousness/Spirituality (BMMRS). According to the findings, the BMMRS measures separate positive and negative components of religiousness and spirituality, which may be best understood in a psychoneuroimmunological perspective. Hyman and Handal's (2006) piece is the third most cited. They look at the definitions and evaluations of religion and spirituality items, and a factor analysis of item ratings reveals a single component called religion/spirituality.

Cluster 10: Spirituality and Serious Health Care

This cluster contains 64 articles with 866 citations. The articles in this cluster focus on spirituality and health care, the role of religion in long-term health and well-being, and the role of spirituality in recovering from illness and disability.

Muldoon and King (1995) is the most quoted article in this cluster, and they investigate the link of spirituality to health care and bioethics in terms of people's need and attempts to make meaning of their life in the face of disease, injury, or approaching death. The holistic paradigm of health care also asserts that rather than merely treating a body in pain, one should address the suffering of the complete person throughout his or her life.

Casar Harris et al. (1995) is the second most referenced paper. They investigate coping strategies in the face of substantial health challenges and their importance in the long-term responses and adjustment of organ transplant patients. Participants with strong religious beliefs who participated in religious activities had greater medical compliance, better physical and mental health and less health issues.

Kaye and Raghavan (2002), who investigate the link between spirituality and disability and sickness, are another widely referenced paper in this cluster. A detailed review of the data supports spirituality as a coping mechanism for people suffering from hypertension, lung illness, diabetes, chronic renal failure, surgery, rheumatoid arthritis, multiple sclerosis, HIV/AIDS, polio, and addiction disorders. Furthermore,

both patients and family members use religion as a coping mechanism while dealing with critical illness, terminal disease, and end-of-life issues.

Cluster 11: Religious Community Responses to COVID-19

This cluster contains 51 articles with 681 citations. The articles in this cluster focus on the impact of COVID-19 on pilgrimages and religious tourism, and role of clerics during COVID-19 crisis.

Mróz's (2021) research, which investigated the influence of the SARS-CoV-2 coronavirus pandemic on religious tourism and pilgrimages with regard to particular Catholic pilgrimage sites in Europe (during the first six months of the COVID-19 outbreak), was the most referenced article in this cluster. According to the findings of the study, tourist and pilgrimage travel to the studied shrines reduced by 90–95% during the first six months of the pandemic. Another most cited article in this cluster is Yoosefi Lebni et al. (2021). According to this research, clerics in Iran should encourage people to follow health standards in four ways: (1) health promotion and encouragement, (2) monetary and instrumental assistance, (3) spiritual support, and (4) mobilization of people to face illness. It emphasises clergy's negative roles, such as (1) resisting societal restraints and resisting the closure of hallowed sites, (2) rejecting scientific-hygienic notions related to COVID-19 prevention, and (3) opposing vaccination. Overall, it is noteworthy that, with respect to COVID-19, *JORH* has contributed to the distribution and dissemination of information and research within nearly every issue of *JORH* during the height of the pandemic.

Tanida (2000), the third most referenced article, analyses how Christians were less accepting of euthanasia than those of other religions. When medical treatment proved ineffective in the dying period, Shinto and Buddhist organizations promoted "being natural." The research found that religious perspectives may contribute to a more in-depth discussion of end-of-life concerns.

Cluster 12: Moral Injury and Spiritual Interventions

Finally, this last cluster contains 28 articles with 311 citations. This cluster contains novel themes in the research of religion and health. The articles in this cluster focus on the evaluation of the moral injury symptom scale, spirituality and the role of chaplains, and the identification of moral injury among healthcare professionals.

The most cited article in this cluster is Koenig et al. (2018). They developed a multidimensional measure of symptoms that result from the transgression of moral values which may be utilized as a main outcome measure for intervention studies that target moral injury (MI) in Veterans. They conclude that the Moral Injury Symptoms Scale–Military version (MISS-M) is a reliable and valid multidimensional symptom measure of moral damage that may be utilized in research focusing on MI in Veterans and Active Duty Military with PTSD symptoms, and that clinicians can use it to identify people at risk. Subsequent research in *JORH* also revealed that the MISS-M-Short Form was also found to be a reliable and valid measure of moral injury symptoms (Chestnut et al., 2021).

The second most cited articles in this cluster were by the authors Carey et al. (2016) and Hodgson and Carey (2017) which constituted the first international critical review of various definitions relating to moral injury. In light of the increased knowledge of moral damage caused by war and other related high impact trauma, the authors argue for the importance of adopting a bio-psychosocial-spiritual paradigm, and that betrayal, retribution and spirituality should be crucial components for recognising, articulating, and for the healing of moral injury—a role which chaplains seem well suited through the provision of appropriate pastoral/spiritual care interventions (Koenig and Al Zaben, 2021b; Hodgson et al., 2021).

Hodgson and Carey (2017) and Hodgson et al (2021, 2022) were also the first to propose the concept of long-term 'enduring moral injury' (EMI) and a comprehensive integrative definition of moral injury using a bio-psycho-social-spiritual paradigm—which was based upon the evidence of an extensive range of MI literature. Hodgsons and Carey's research within *JORH,* subsequently helped to form the basis for the most internationally accessed article on moral injury (Carey & Hodgson, 2018); with approximately 25,000 views across the US, Europe, Asia, Australia and New Zealand.

Thirdly, Matri et al. (2020) presented the psychometric properties of a measure of moral injury (MI) symptoms for diagnosing clinically severe MI in health professionals (HPs), a measure that may also be useful during the current COVID-19 outbreak and beyond. The findings indicate that the MISS-HP is a valid and accurate evaluation of moral damage symptoms in health professionals, and that it may be used to screen for MI, follow response to therapy, and help to evaluate treatments for MI in HPs.

Limitations

Though undertaking an extensive bibliometric analysis, our research has a number of limitations. We *only* utilized Scopus for our data analysis which limited the number of references to specific empirically based peer reviewed journals and articles; despite the reliability of SCOPUS, we checked for any errors by consulting original sources and cleaned the data if necessary.

Future studies could find more data sources useful beyond SCOPUS, particularly from 2021 onwards given the increasing international influence of *JORH*. Indeed, more inclusive sources for collating and counting citations (e.g., GoogleScholar, ResearchGate), could have been utilized and potentially would have indicated that *JORH* has published a very wide range of papers over the last six decades, even more impactful than this bibliometric analysis presents.

Secondly, our *JORH* retrospective bibliometric study is descriptive. We did not compare *JORH* to all available benchmarks, such as comparable journals, nor do we give explicit suggestions for development and improvement. Although such changes will widen the scope of the report and highlight *JORH*'s position relative to other outlets, these are beyond the scope of this initial analysis.

Conclusions and Discussion

JORH celebrated 60 years of publishing in 2021. We analysed *JORH*'s development as a forum for worldwide research on religion and health using bibliometric analysis.

Our research adds to the body of knowledge in several ways. First, our submission is more extensive than previous bibliometric reviews as the current review covers a full 60 years from the beginning of *JORH* to the current date. Secondly, our analysis of the publishing and citation patterns of *JORH* reveals an increase in the number of publications from 238 between 1961 and 1970 to 1,844 between 2011 and 2021. Harold G. Koenig and Giancarlo Lucchetti were the most prolific contributors for *JORH*. Between 1961 and 2021, *JORH* accomplished its mission of serving as a forum for global research in religion and health. It has also accomplished its objective of having publications from authors worldwide. Thirdly, based on total citations, our research revealed Bonelli and Koenig (2013), Levin and Schiller (1987), and Hall et al. (2008) as *JORH*'s three most cited contributing papers.

Fourthly, was our analysis of *JORH*'s co-authorship patterns. Consequently, the vast majority of *JORH* publications are now co-authored, showing that its writers are becoming more collaborative. This development parallels co-authorship tendencies in other journals (Kumar et al., 2022; Baker et al., 2021c). This culture of collaboration may reflect the rising difficulty of publishing in reputable journals, which necessitates co-author collaboration given increasingly complex methodologies and the need for international recognition of creative concepts (Acedo et al., 2006). More co-authors may result in increased quality, social ties, global recognition and increased citations (Baker et al., 2020). The USA and Iran have the largest networks of writers linked with *JORH*.

Fifthly, our examination of *JORH*'s intellectual thematic structure revealed 12 clusters: (1) influences of Islam on the health of Muslims, (2) impact of spirituality and meditation on bio-psycho-social health, (3) religious faith and its association with health, (4) religious communities and health related beliefs, (5) multidimensional measurement of religiousness/spirituality, (6) spirituality and psychological well-being, (7) spiritual well-being, (8) mental disorders and religion, (9) traumatic stress and religion, (10) spirituality and serious health care, (11) religious community responses to COVID-19, and (12) moral injury and spiritual interventions. Overall, these findings indicate that *JORH* is an inclusive journal and receptive to a wide array of themes and content.

Appendix

See Table 5.

Table 5 List of *Journal of Religion and Health* Principal Editors/Chief Editors (1961–2021)

Editor/Editor in Chief	Dates	Institutional affiliation
Rev. Dr. George C. Anderson	1961	St. Luke's Hospital, New York & Academy of Religion and Mental Health, New York, US
Dr. Harry C. Meserve	1962–1993	Academy of Religion and Mental Health, New York, US; Meadville Lombard Theological Seminary, Chicago, US
Prof. Barry Ulanov & Prof. Ann B. Ulanov	1994–2000	ABU: Union Theological Seminary, New York & C.G. Jung Institute, New York, US. BU: Barnard College, University of Columbia, New York, US
Prof. Ann B. Ulanov	2000–2001	Union Theological Seminary, New York & C.G. Jung Institute, New York, US
Prof. David Leeming	2001–2007	University of Connecticut, Storrs, US. Blanton Peale Graduate Institute, New York, US
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Declarations

Conflict of interest The first author, Associate Professor Lindsay Carey (La Trobe University, Melbourne and the University of Notre Dame, Sydney), is the Editor-in-Chief of the *Journal of Religion and Health* and author of several cited articles as part of this review. The first author however, has only been Editor-in-Chief since 2021 and therefore had no influence over the content and themes of *JORH* from 1961 to 2020. The first author was also independent of the actual statistical and thematic analysis which was undertaken by the remaining co-authors who declare no conflict of interest as they had no prior affiliation with *JORH* or its publisher Springer Science Media. The second author, Satish Kumar has co-authored a method-based paper regarding bibliometric analysis (Donthu et al., 2021) which was used to undertake the analysis in the current paper.

Ethical Approval This analysis did not require formal ethics approval as the research did not involve any human or animal subjects, nor therefore was it necessary to acquire subject/participant consent.

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