



Health and Ancient Beliefs: A Scientometric Analysis of Health Literature Related to Shamanism, Paganism and Spirituality

Engin Şenel^{1,2,3} 

Published online: 30 April 2019

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Abstract

Scientometrics is a popular statistical application providing data revealing publication trends and patterns in a certain academic field. A quite limited number of studies investigating scientometric features of health and religion literature have been reported in academic literature. The present study aims to present a holistic analysis of health literature related to Shamanism, Paganism and Spirituality. To the best of our knowledge, this is the first study in this field. All data of this analysis were yielded from Web of Science databases. All documents produced between 1975 and 2017 were included. In Shamanism and health field, a total of 157 documents were found, and the USA covering 35.67% of all the literature was the leading country. University of California System (USA) was the most contributor institution. Our search on Paganism and health literature retrieved 51 published documents, and the most productive institution was National Dong Hwa University from Taiwan. A total of 7862 documents were detected in Spirituality and health literature, and the most prolific author in this field was Koenig HG with 82 papers. Journal of Religion and Health was noted to be the predominant academic source in health literature related to ancient beliefs. The number of the publications produced in Spirituality and health literature was greater than total number of all documents published in health literature related to Abrahamic religions, Dharmic religions, Shamanism and Paganism.

Keywords Health · Shamanism · Paganism · Spirituality · Scientometrics · Bibliometrics

✉ Engin Şenel
enginsenel@enginsenel.com

¹ Department of Dermatology and Venereology, Hitit University Faculty of Medicine, 19030 Çorum, Turkey

² Traditional and Complementary Research and Application Center, Hitit University, Çorum, Turkey

³ Beekeeping and Bee Products Research and Application Center, Hitit University, Çorum, Turkey

Introduction

Shamanism is an ancient spiritual healing practice in pre-community societies around the world. Although Shamanism is not considered a religion, it is a cross-cultural form of religious sensibility and practices. Shamanism reflects certain basic aspects of human nature. The shamans had similar cross-cultural characteristics even if they lived in different parts of the world. The similarities include certain rituals such as singing, chanting and drumming and beliefs about consciousness, life, death, illness or healing such as soul loss and recovery, soul flight, transformation into animals, rebirth and supernatural powers (Winkelman 2015).

The term of *Pagan* derives the Latin word of *paganus* referring to “villager” or “country dweller” as opposed to “city dweller.” The term of *Paganism* was created in the fourth century by Christians for the beliefs of old nature, which they hoped to replace with their own religion. Paganism often is not defined a conventional religion since it has no official doctrine (Harvey 2005).

Spirituality is defined as “*the aspect of humanity that refers to the way individuals seek and express meaning and purpose and the way they experience their connectedness to the moment, to self, to others, to nature, and to the significant or sacred*” (Puchalski et al. 2009). Spirituality plays an important role in the lives of most palliative patients, whether or not officially connected to a particular religion and faith (Steinhorn et al. 2017).

Bibliometrics and scientometrics are popular statistical disciplines that provide in-depth analysis of academic literature in a particular area. Scientometric studies present important academic data such as productivity of countries, authors and institutions, distribution of publications and publication trends and patterns (Şenel et al. 2017). The academic literature lacks a scientometric study in the field of health and ancient beliefs such as Shamanism, Paganism and Spirituality although there has been an increasing popularity of the researches in religion and health area (Damiano et al. 2016). This study aims to present a holistic analysis of health literature related to Shamanism, Paganism and Spirituality between 1975 and 2017. To the best of our knowledge, this is the first study in this field.

Methods

All data of this research were obtained from Web of Science (WoS; Thomson Reuters, New York, NY, USA) databases. Four databases of WOS titled Core Collection, SciELO Citation Index, Korean Journal Database and Russian Science Citation Index were accessed during a period of December 3–11, 2018. All articles published in our subjects between 1975 and 2017 were included in the analysis. All items produced in 2018 were excluded from the analysis data. GunnMap Web site was used for creating info-maps showing global productivity (GunnMap n.d.). Scientometric network analyses were performed by running VOSviewer freeware (Vosviewer 2017).

Results

Shamanism and Health Literature

A total of 157 documents were retrieved as we used a search query, including keywords of “health” AND (“shaman” OR “shamanist” OR “shamanism”) in the WoS databases. Most documents were original articles (93.63%) followed by reviews and meeting reports (15.29 and 6.37%, respectively, Table 1). Anthropology, psychology and behavioral sciences were major research areas of the literature related to Shamanism and health (54.78, 45.86 and 44.59%, respectively, Table 2). English was the predominant language of the literature with 118 items (75.16%) followed by Korean, Portuguese and Spanish (14.01, 4.46 and 4.46%, respectively). University of California System (USA), University of North Carolina (USA) and University of Oxford (UK) were the most productive institutions in this field (6.37, 1.91 and 1.91%, respectively, Table 3). The most contributor source titles were *Journal of Ethnopharmacology*, *Medical Anthropology Quarterly* and *Explore: The Journal of Science and Healing* in Shamanism and health literature (7.64, 6.37 and 3.82%, respectively, Table 4). King SR was the most prolific author in this area (1.91%).

The USA covering 35.67% of all the literature was the leading country with 56 articles followed by the UK, Brazil and Canada (5.73, 5.1 and 5.1%, respectively, Fig. 1). Global production of the literature in Shamanism and health was detected to be limited to continents of America, Western Europe, Russia, China, Turkey, India, South Africa and Australia (Fig. 2).

Table 1 Document types in health literature related to Shamanism, Paganism and Spirituality published between 1975 and 2017

Religions ^a	Shamanism		Paganism		Spirituality		Total ^b	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Original article	147	93.63	49	96.08	7279	92.58	7475	93.1
Review	24	15.29	5	9.8	938	11.93	967	12.04
Editorial	5	3.18			177	2.25	182	2.27
Meeting	9	5.73	6	11.76	510	6.49	525	6.54
Letter	3	1.91	1	1.96	48	0.61	52	0.65
Case report	10	6.37			112	1.42	122	1.52
Abstract	6	3.82	1	1.96	244	3.1	251	3.13
News					9	0.11	9	0.11
Clinical trial	2	1.27	1	1.96	189	2.4	192	2.39
Biography	2	1.27	1	1.96	28	0.36	31	0.39
Book					12	0.15	12	0.15
Unspecified/others	35	22.29	6	11.76	2369	30.13	2410	30.02
Total ^b	116	100	51	100	7862	100	8029	100

^aSorted by total number of publications

^bTotal percentages may exceed 100% because certain items were included in more than one category

Table 2 Research areas in health literature related to Shamanism, Paganism and Spirituality published between 1975 and 2017

Shamanism			Paganism			Spirituality		
Research areas	N*	%**	Research areas	N*	%**	Research areas	N*	%**
Anthropology	86	54.78	Health care sciences	16	31.37	Psychology	4834	61.49
Psychology	72	45.86	Business/economics	15	29.41	Behavioral sciences	4460	56.73
Behavioral sciences	70	44.59	Psychology	13	25.49	Healthcare sciences	3913	49.77
Healthcare sciences	59	37.58	Public health	12	23.53	Religion	2208	28.08
Complementary medicine	52	33.12	Religion	12	23.53	Geriatrics	1699	21.61
Public health	37	23.57	Anthropology	7	13.72	Public health	1658	21.09
Cultural studies	36	22.93	Behavioral sciences	7	13.72	Sociology	1594	20.27
Pharmacology/pharmacy	32	20.38	Mathematics	7	13.72	Nursing	1318	16.76
Religion	30	19.11	Demography	6	11.76	Psychiatry	1265	16.09
Sociology	26	16.56	Psychiatry	6	11.76	Internal medicine	1070	13.61

*Sorted by total number of publications

**Total percentages may exceed 100% because certain items were included in more than one category

H-index of Shamanism and health literature was measured as 20, and average citation per item was 8.91 between 1975 and 2017. The total number of citations was 1289 (1271 without self-citations). The peak year for citations was 2016 with 166 documents. An original article titled “*Ethnopharmacology of Ska Maria Pastora (Salvia divinorum, Epling and Jativa-M)*” published in the *Journal of Ethnopharmacology* in 1983 was noted to be the most cited document with 105 citations (Table 5).

The most used keywords in the Shamanism and health literature were “Shamanism”, “Spirituality”, “ritual”, “tradition” and “alternative medicine” (Table 6). Bibliometric network of keywords revealed a “flower pattern” in which the keyword of “*Shamanism*” centered and the other keywords such as “*evolution*”, “*Spirituality*”, “*healing*”, “*ayahuasca*” and “*alternative medicine*” sorted around (Fig. 3).

Paganism and Health Literature

Our search in Paganism and health literature retrieved 51 published documents between 1975 and 2017 from WoS databases. We used a keywords string of “health” AND (“pagan” OR “paganist” OR “paganism” OR “druid” OR “druidry”) and found that the most common document type in the literature was original article (96.08%) (Table 1). The most researched areas were *health care sciences*, *economics* and *physiology* (31.37, 29.41 and 25.49%, respectively, Table 2). English was the major language of the literature with 41 items (80.39%) followed by Spanish, French and Russian (17.65, 3.92 and 3.92%, respectively). The most contributed institution was *National Dong Hwa University* from Taiwan (Table 3). Four journals

Table 3 Most productive ten institutions in health literature related to Shamanism, Paganism and Spirituality published between 1975 and 2017

Shamanism Institutions	Paganism		Spirituality	
	<i>n</i> / <i>%</i>	Institutions	<i>n</i> / <i>%</i>	Institutions
University of California System (USA)	10/6.37	National Dong Hwa University (Taiwan)	2/3.92	University of California System (USA)
University of North Carolina (USA)	3/1.91	AGH University of Science and Technology (Poland)	1/1.96	Duke University (USA)
University of Oxford (UK)	3/1.91	Alexandru Ioan Cuza University (Romania)	1/1.96	Harvard University (USA)
Ben Gurion University (Israel)	2/1.27	Ball State University (USA)	1/1.96	University of North Carolina (USA)
Case Western Reserve University (USA)	2/1.27	Bethel University (USA)	1/1.96	University of Texas System (USA)
Centre National De La Recherche Scientifique (France)	2/1.27	University of California System (USA)	1/1.96	University of London (USA)
Cornell University (USA)	2/1.27	Cape Breton University (Canada)	1/1.96	University of Michigan System (USA)
Kumamoto University (Japan)	2/1.27	Concordia University (Canada)	1/1.96	State University System of Florida (USA)
McGill University (Canada)	2/1.27	Democritus University of Thrace (Greece)	1/1.96	VA Boston Healthcare System (USA)
Nanyang Technological University (Singapore)	2/1.27	Georgetown University (USA)	1/1.96	Johns Hopkins University (USA)

Table 4 Most productive ten sources in health literature related to Shamanism, Paganism and Spirituality between 1975 and 2017

Shamanism	Paganism		Spirituality		n/%
	Journal	n/%	Journal	n/%	
Journal of Ethnopharmacology	12/7.64	Journal of Religion and Health	2/3.92	Journal of Religion and Health	333/4.24
Medical Anthropology Quarterly	10/6.37	Gaceta Sanitaria	2/3.92	Journal of Pain and Symptom Management	88/1.12
Explore: The Journal of Science and Healing	6/3.82	Salud Pública de México	2/3.92	Psycho-Oncology	88/1.12
Alternative Therapies in Health and Medicine	5/3.18	American Journal of Nephrology	2/3.92	Journal of Advanced Nursing	84/1.07
Culture Medicine and Psychiatry	5/3.18	Agricultura, Sociedad y Desarrollo	1/1.96	Journal of Clinical Nursing	75/0.95
Social Science and Medicine	4/2.55	Archives of Hellenic Medicine	1/1.96	Supportive Care in Cancer	73/0.93
Journal of Alternative and Complementary Medicine	3/1.91	Open Theology	1/1.96	Journal of Palliative Medicine	69/0.88
Journal of Ethnobiology and Ethnomedicine	3/1.91	International Journal of Social Economics	1/1.96	Social Science Medicine	67/0.85
Journal of Psychoactive Drugs	3/1.91	Norwegian Archaeological Review	1/1.96	Religions	63/0.8
Journal of Religion and Health	3/1.91	European Journal of Public Health	1/1.96	Journal of Psychology and Theology	52/0.66

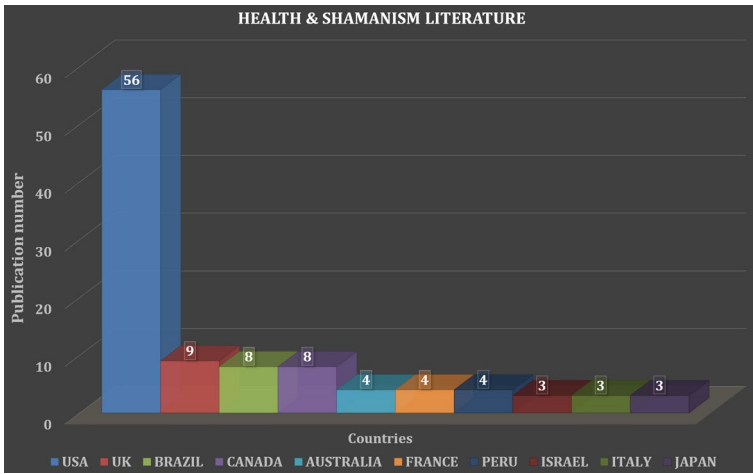


Fig. 1 Top ten countries producing articles in Shamanism and health field by total record count



Fig. 2 Global productivity in Shamanism and health literature

titled *Journal of Religion and Health*, *Gaceta Sanitaria*, *Salud Pública de México* and *American Journal of Nephrology* were the most productive sources with two articles in this area.

The USA was the predominant country in producing academic documents in Paganism and health literature with 16 items (31.37%) followed by Mexico, the UK and Canada (9.8, 7.84 and 5.88%, respectively, Fig. 4). Only limited number of countries produced publications in Paganism and health literature, most of which located in the continents of America and Asia (Fig. 5).

H-index of this field was 10, and the average citation per item was 8.51. The total number of citations of the literature was 434 (433 without self-citations). The peak year was 2017 according to citations per year with 88 records. The most cited document was an original article titled “*Chinese Time Trade-Off Values for EQ-5D*

Table 5 Most cited ten articles of the health literature related to Shamanism, Paganism and Spirituality

Article	Author	Year	Total citations	Average citation per year
<i>Shamanism and health</i>				
Ethnopharmacology of ska María Pastora (<i>Salvia divinorum</i> , Epling and Játiva-M.)	Valdes, LJ; Diaz, JL; Paul, AG	1983	105*	2.92
The cultural diversity of healing: meaning, metaphor and mechanism	Kirmayer, LJ	2004	88	5.87**
Plants Used in Traditional Medicine in Eastern Tanzania .6. Angiosperms (Sapotaceae To Zingiberaceae)	Chhabra, SC; Mahunnah, RLA; Mshiu, EN	1993	54	2.08
Use of alternative therapy among pediatric oncology patients in Taiwan	Yeh, CH; Tsai, JL; Li, WJ; et al.	2000	49	2.58
Healers and strangers—immigrant attitudes toward the physician in America—a relationship in historical perspective	Kraut, AM	1990	49	1.69
The wounded healer	Jackson, SW	2001	37	2.06
Tribal and shamanic-based social work practice: a Lakota perspective	Voss, RW; Douville, V; Soldier, AL; et al.	1999	35	1.75
Explanations of mental health symptoms by the Bedouin-Arabs of the Negev	Al-Krenawi, A	1999	35	1.75
Ritual and medicinal plants of the Ese'ejas of the Amazonian rainforest (Madre de Dios, Peru)	Desmarchelier, C; Gurni, A; Ciccía, G; et al.	1996	34	1.48
Traditional Medicinal Plant Use in Loja Province, Southern Ecuador	Bussmann, Rainer W.; Sharon, Douglas	2006	31	2.38
<i>Paganism and health</i>				
Chinese Time Trade-Off Values for EQ-5D Health States	Liu, Gordon G.; Wu, Hongyan; Li, Minghui; et al.	2014	73*	14.60**
Specificity of neurobehavioral outcomes associated with prenatal alcohol exposure	Jacobson, SW	1998	57	2.71
Mobility of elements in interaction between artificial sweat and peltoids used in Spanish spas	Isabel Carretero, Maria; Pozo, Manuel; Antonio Martin-Rubi, Juan; et al.	2010	41	4.56

Table 5 (continued)

Article	Author	Year	Total citations	Average citation per year
Life and Death in a Civitas Capital: Metabolic Disease and Trauma in the Children from Late Roman Dorchester, Dorset	Lewis, Mary E.	2010	36	4.00
Housing strain, mortgage foreclosure, and health	Cannuscio, Carolyn C.; Alley, Dawn E.; Pagan, Jose A.; et al.	2012	32	4.57
“Pillaging Jesus”: healing churches and the villagization of Kinshasa	Devisch, R	1996	31	1.35
The health system of Argentina	Belló, Mariana; Becerril-Montekio, Victor M	2011	25	3.13
Rubus pharmacology: antiquity to the present	Hummer, Kim E.	2010	22	2.44
Playing at the queer edges	Jones, Cris Calley	2010	13	1.44
Unusual but sound minds: Mental health indicators in spiritual individuals	Farias, Miguel; Underwood, Raphael; Claridge, Gordon	2013	12	2.00
<i>Spirituality and health</i>				
Unconventional medicine in the United States—prevalence, costs, and patterns of use	Eisenberg, DM; Kessler, RC; Foster, C; et al.	1993	2852*	109.69**
The posttraumatic growth inventory: measuring the positive legacy of trauma	Tedeschi, RG; Calhoun, LG	1996	2060	89.57
Posttraumatic growth: conceptual foundations and empirical evidence	Tedeschi, RG; Calhoun, LG	2004	1723	114.87
Patterns of positive and negative religious coping with major life stressors	Pargament, KI; Smith, BW; Koenig, HG; et al.	1998	914	43.52
The many methods of religious coping: developmental initial validation of the RCOPE	Pargament, KI; Koenig, HG; Perez, LM	2000	850	44.74
Personality and the prediction of consequential outcomes	Ozer, DJ; Benet-Martinez, V	2006	745	57.31
Measuring spiritual well-being in people with cancer: the functional assessment of chronic illness therapy-spiritual well-being scale (FACIT-Sp)	Peterman, AH; Fitchett, G; Brady, MJ; et al.	2002	709	41.71
Spirituality, religion and health—an emerging research field	Miller, WR; Thoresen, CE	2003	685	42.81

Table 5 (continued)

Article	Author	Year	Total citations	Average citation per year
Clinical practice guidelines for support of the family in the patient-centered intensive care unit: American College of critical care medicine task force 2004–2005	Davidson, Judy E.; Powers, Karen; Hedayat, Kamyar M.; et al.	2007	596	49.67
Effects of mindfulness-based stress reduction on medical and premedical students	Shapiro, SL; Schwartz, GE; Bonner, G	1998	586	27.90

*Most cited publications

***Documents with the highest citation average by year

Table 6 Most used ten keywords in the health literature related to Shamanism, Paganism and Spirituality

Keywords (total link strength)		
Shamanism and health	Paganism and health	Spirituality and health
Shamanism (117)	Healing (13)	Spirituality (2834)
Spirituality (18)	Pagan (13)	Religion (1334)
Ritual (16)	Babalawo (10)	Quality of life (719)
Tradition (16)	Diviner(s) (10)	Depression (496)
Alternative medicine (13)	Grottoes (10)	Cancer (448)
Complementary medicine (12)	Herbal (10)	Palliative care (442)
Evolution (12)	Holy spirit (10)	Mental health (422)
Peru (12)	Prophet (10)	Coping (364)
Ayahuasca (11)	Spiritual church(es) (10)	Health (354)
Religion (10)	Witchcraft (8)	Nursing (335)

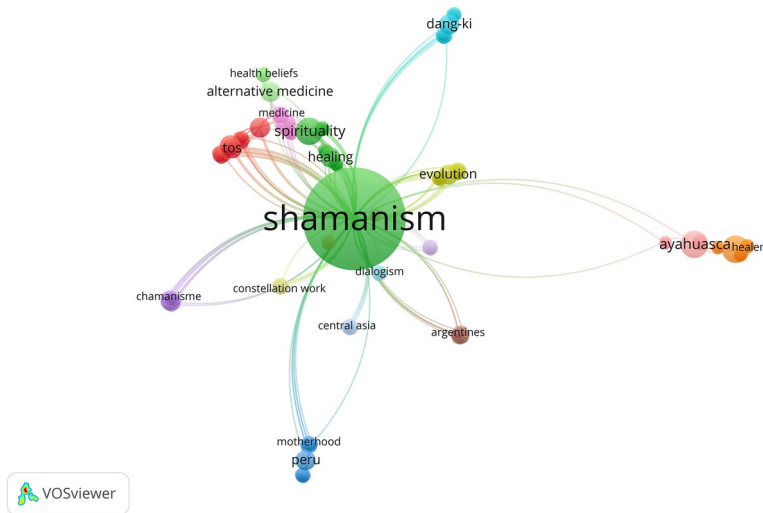


Fig. 3 Scientometric network of the most used keywords in Shamanism and health literature

Health States” published in the journal of *Value and Health* in 2014 with 73 citations (Table 5). The most used keywords in this area were detected to be “healing”, “Pagan”, “Babalawo” and “diviner” (Table 6). The keyword of “healing” was the central term in the scientometric network of the literature (Fig. 6).

Spirituality and Health Literature

We detected a total of 7862 documents published between 1975 and 2017 in Spirituality and health literature, 88.7% of which was written in English. Our search string

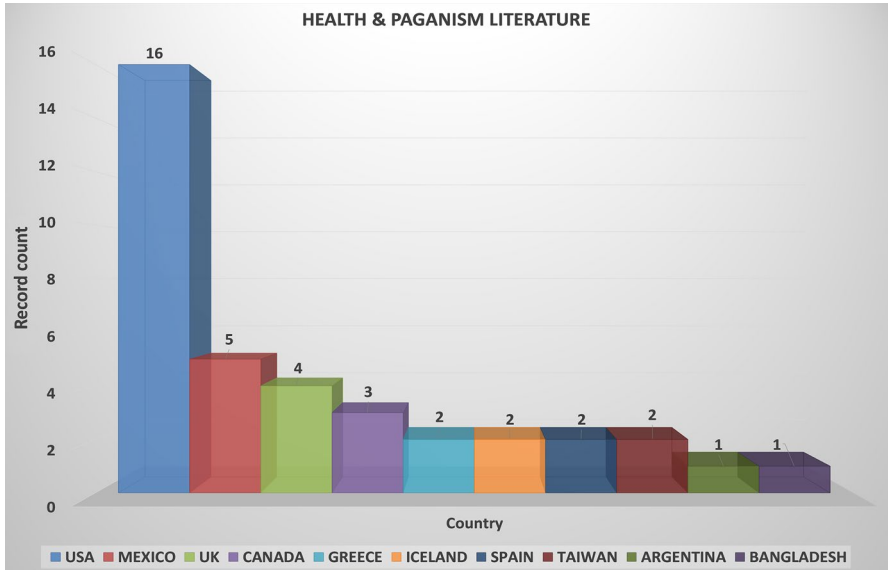


Fig. 4 Ten most productive countries publishing articles in Paganism and health area by total publication number

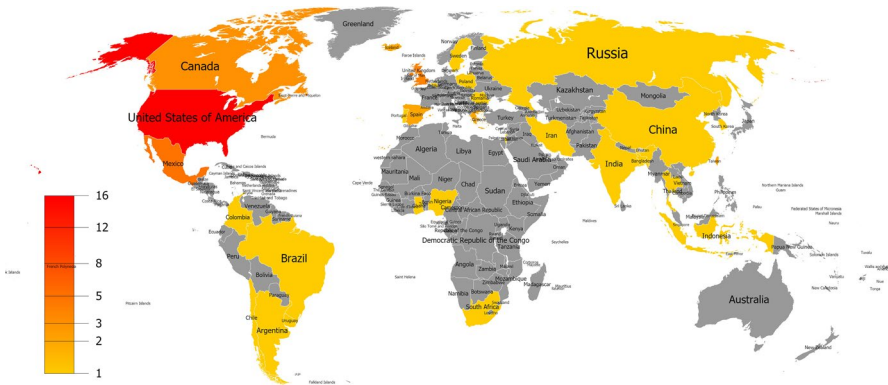


Fig. 5 World countries publishing in Paganism and health area

included keywords of “health” AND (“spiritual” OR “spiritualist” OR “spiritualism” OR “spirituality”). Original articles dominated the literature (93.1%) followed by reviews, meeting reports and abstracts (12.04, 6.54 and 3.13%, respectively, Table 1). The most studied areas were *psychology*, *behavioral sciences*, *health care sciences* and *religion* (61.49, 56.73, 49.77 and 28.08%, respectively, Table 2). *University of California System* (USA) was the most productive institution with 225 articles, and nine of ten most contributor institutions were noted to be from the USA (Table 3). The most prolific author in this field was Koenig HG with 82 papers

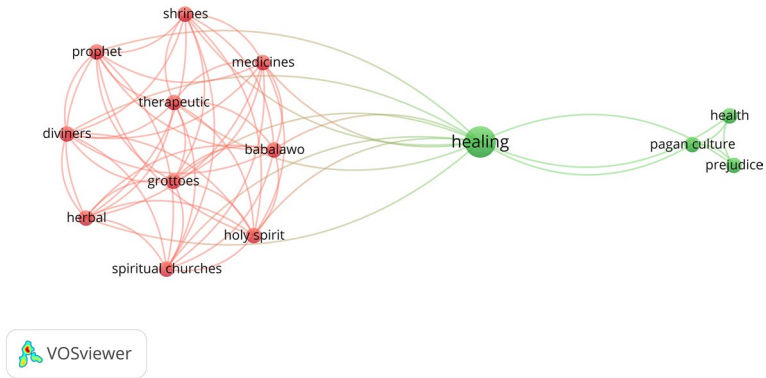


Fig. 6 Keyword network of Paganism and health field

followed by Pargament KI and Bussing A ($n=72$ and 34 items, respectively). *Journal of Religion and Health* was the most contributor source title in the literature of Spirituality and health with 333 articles (Table 4).

The USA covered 46.12% of all global productivity with 3626 documents followed by the UK, Canada and Australia (6.8, 6.24 and 4.51%, respectively, Fig. 7). Articles in Spirituality and health literature were produced from 143 countries all around the world (Fig. 8).

H-index of the literature of Spirituality and health was 129, and average citation per item was 17.92. The total number of citations was 140,865 (120,105 without self-citations). The peak year was 2017 with 15,548 citations. An original article titled “*Unconventional Medicine in the United States—Prevalence, Costs, And Patterns of Use*” published in *New England Journal of Medicine* in 1993 was the most cited document in this field with 2852 citations (Table 5). The most indexed keywords in the literature of Spirituality and health were found to be

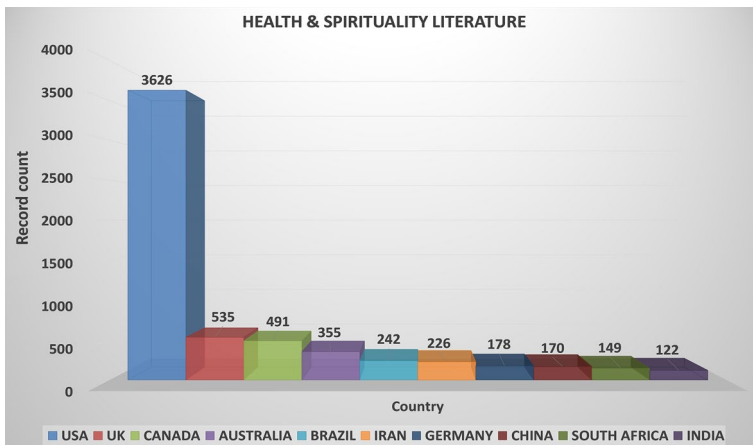


Fig. 7 Most contributor countries in the literature of Spirituality and health



Fig. 8 Countries publishing articles in Spirituality and health field

“Spirituality”, “religion”, “quality of life”, “depression” and “cancer” (Table 6). Scientometric network analysis showed a “starburst” pattern in which the keywords of “Spirituality” and “health” centered (Fig. 9).

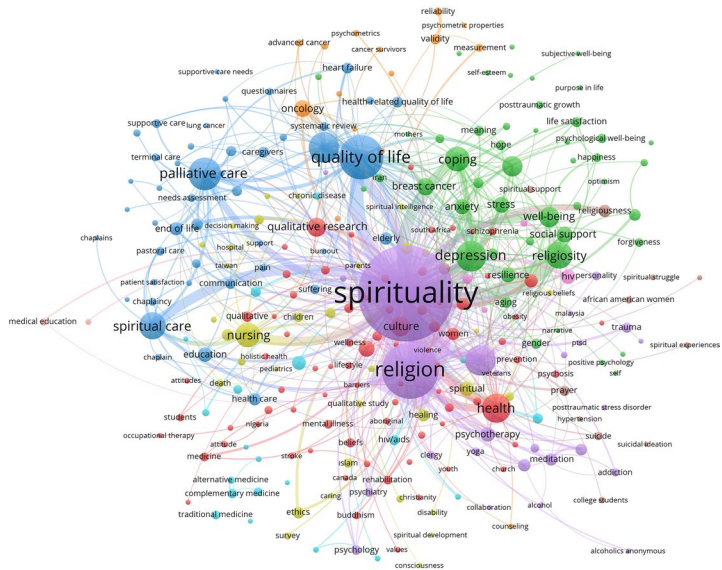


Fig. 9 Scientometric network of the most used keywords in Spirituality and health literature

Discussion

The number of scientometric articles bringing together spirituality, religion and health is quite limited although there has been an increasing popularity of bibliometric and scientometric studies in academic literature. The first scientometric study in health and religion was performed by Lucchetti and Lucchetti in 2014, and published documents between 1999 and 2013 were analyzed by searching PubMed database. The authors found that the USA was the leading country in this period, and the *Journal of Religion and Health* was the most productive journal (Lucchetti and Lucchetti 2014). In 2016, Damiano et al. carried out a bibliometric analysis including Brazilian articles in health and religion area and detected that the five main subjects were “alcohol and/or drug use”, “quality of life”, “sexuality”, “HIV” and “mental disorders” (9.3, 7.4, 3.8, 3.5 and 3.1%, respectively) (Damiano et al. 2016). In 2017, Şenel and Demir analyzed published articles in the *Journal of Religion and Health* during the period of 1975–2016, and it was noted that the USA was the most productive country by covering 62.45% of all publications followed by Australia and Canada. Cornell University from the USA was the leading institution, and the most used keywords were “religion”, “spirituality”, “religiosity”, “health” and “mental health” (Şenel and Demir 2018). In a recent study, a bibliometric analysis of health literature related to Abrahamic religions was carried out. The total number of documents retrieved from WoS databases between 1975 and 2017 was noted to be 1329 for Christianity, 1965 for Islam and 436 for Judaism. The USA was the most contributor country for all health literature related to three Abrahamic religions. *Journal of Religion and Health* was the most productive source in health literature related to Islam and Judaism as we noted in Paganism and Spirituality (Şenel 2018b). In a scientometric analysis of health literature related to Dharmic religions, including Hinduism, Buddhism, Jainism and Sikhism, it was detected that the total number of publications was 155 for Hinduism, 485 for Buddhism and only five for Jainism and Sikhism. The USA ranked first in the productivity of health literature for all Dharmic religions (Şenel 2018a). We found that the number of the publications produced in Spirituality and health area was greater than the total number of all documents published in health literature related to Abrahamic and Dharmic religions.

Publications in Shamanism and health literature were found to be focused on the topics of ethnobiology, ethnomedicine and complementary medicine. The “*Ayahuasca*” used in the Amazons for centuries as the “*healing holy plant*” was one of the most used keywords. Ayahuasca is an entheogenic and psychoactive plant mixture made from leaves of *Psychotria viridis* or *Diplopterys cabrerana* and the vine of *Banisteriopsis caapi*. It contains *N,N*-dimethyltryptamine (DMT) categorized as a powerful hallucinogenic substance inducing hallucinations. Ayahuasca also known as “*the vine of soul*” has been used in religious, spiritual and medicinal ceremonies for thousands of years by indigenous peoples of Amazon. (Stiffler 2018). Ska María Pastora (*Salvia divinorum*) is another entheogenic plant with a powerful vision-inducing effect, and the most cited document in the literature Shamanism and health focused the ethnopharmacology of this plant (Valdés et al. 1983).

Dave Smith also known as *Damh the Bard*, a famous musician from Order of Bards, Ovates and Druids which is one of the UK's largest organized Pagan groups described Paganism as “*a spiritual path to some, a religion to others, that helps people to reconnect with the natural world, their ancestors, and the Otherworlds of myth and folklore.*” He also added that “*Many people currently feel disconnected from the natural world and are seeking spiritual paths that help to bridge that disconnection.*” (Lutwyche 2012). Only 51 articles were yielded from WoS database in Paganism and health literature in our study although Modern Paganism, Contemporary Paganism or NeoPaganism are one of the popular new religious movements (Chase 2003). The most used keywords detected in our analysis included terms of Paganism and Ifá such as *Babalawo* and *grotto* (Table 6). “*Babalawo*” also known as *Babaaláwo*, *Babalao* or *Babalaô* means “*father of the mysteries*” literally.

In the early 1990s, the important role of spiritual care as a palliative care was begun to be recognized by professionals in the hospitals and other medical centers (Puchalski et al. 2009). We found that the most used keywords in the articles published in the literature of Spirituality and health focused on cancer, palliative care, terminal care, depression, complimentary and traditional medicine, coping strategies with chronic diseases. Reported surveys revealed that patients need spiritual care, and spirituality positively affects healthcare outcomes, including quality of life (Burgener 1999; Puchalski et al. 2009; Roberts et al. 1997; Tsevat et al. 1999). In 2009, a Consensus Conference was held in California to identify agreement points on the applications of spirituality to health care and to declare recommendations on quality spiritual care delivery in palliative care. In the conference, five literature-based spiritual care applications were identified: spiritual evaluation, care plan models, quality improvement, interprofessional team training and personal and professional development (Puchalski et al. 2009). According to the reported guideline after the conference, the interdisciplinary health care team should include professionals who are capable of evaluating and responding to spiritual and existential issues common to both pediatric and adult patients of life-threatening diseases and conditions and their families.

Conclusion

In our study, it was detected that USA was the leading country in the productivity of the literature of Paganism and health, Shamanism and health and Spirituality and health. University of California System from the USA ranked first in health literature related to Shamanism and Spirituality although National Dong Hwa University from Taiwan was the most contributor institution in Paganism and health. The health literature had a very limited number of articles in Paganism and Shamanism compared to Spirituality. *Journal of Religion and Health* was noted to be the predominant academic source in health literature related to ancient beliefs. The number of the publications produced in the field of Spirituality and health was greater than the total number of all documents published in health literature related to Abrahamic religions, Dharmic religions, Shamanism and Paganism.

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