

Spirituality and Well-Being of Children, Adolescent, and Adult Students: A Scientific Mapping of the Literature

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Spirituality and Well-Being of Children, Adolescent, and Adult Students: A Scientific Mapping of the Literature

Abstract

This study aims to map the selected literature on students' spirituality and well-being to reveal the current and historical research trends in the relevant literature. Bibliographic coupling of the journals, countries, authors, and organizations, and co-occurrences of author keywords were illustrated through VOSviewer. Moreover, citation analysis was done, and h-classics publications were reviewed. The researchers did the initial search on 5 January, 2020 and updated all the records on 14 August, 2021. Most of the studies showed that students' spirituality was positively associated with their well-being. Most of the researchers preferred to work on samples of adult and adolescent students rather than children. The current and historical trends in the relevant literature are discussed in the paper.

Keywords: Spirituality, well-being, students, religiosity, bibliometric analysis

Introduction

During the last decade, there has been a growing interest in the effect of spirituality on health and well-being (VanderWeele, Balboni, & Koh 2017). Spirituality is an individual's personal quest to answer questions about life, the meaning of life, and their connections with transcendence and sacredness (Koenig, McCullough, & Larson 2001). Spirituality is closely related to religion and the supernatural, but it may not always be connected to religious beliefs (Koenig, King, & Carson 2012). Being an intimately related concept to spirituality, well-being is a multi-faceted and complex construct that is difficult to define and measure (Dodge, Daly, Huyton, & Sanders 2012). Shin and Johnson (1978) described well-being as an individual's quality of life concerning the relative importance of the chosen criteria. Diener and Suh (1997) asserted that well-being comprises unpleasant affect, pleasant affect, and life satisfaction. Synthesizing all the relevant approaches, Dodge et al. (2012) redefined well-being as the equilibrium attained when a person has the required physical, social, and psychological resources to meet the physical, social, and/or psychological challenges in life.

Recent studies found that students' spirituality is a protective factor for their emotional/mental well-being (Purnell et al. 2019; Mathad, Rajesh, & Pradhan 2019). Students' spiritual experiences help them increase their quality of school life by relieving their stress and anxiety (Yadav, Khanna, & Singh 2017). Students with higher spirituality perceive their lives as more meaningful, which leads them to feel higher levels of subjective happiness and life satisfaction (Deb, Thomas, Bose, & Aswathi 2020). Students with higher spirituality have higher levels of self-efficacy beliefs, enabling them to better cope with adverse circumstances in their lives in a more proactive manner, leading them to feel higher life satisfaction (Maier & Surzykiewicz

2019). By increasing their efficacy beliefs, students' spirituality protects against burnout and cynicism (Estupiñan & Kibble 2018).

Abdel-Khalek and Lester (2018) found that the positive association between students' spiritual experiences and well-being is robust across different cultural and religious contexts. However, the strength of the link between well-being and spirituality differs across countries and religions (Scales et al. 2014). This topic has taken the interest of researchers worldwide, and a growing body of research has accumulated in this field concerning various religions, countries, and cultures (Abdel-Khalek & Lester 2012, 2018; Deb et al. 2020; Holder, Coleman, Krupa, & Krupa 2016; Purnell et al. 2019). Most of the literature reviews on spirituality and well-being did not specifically focus on the studies using the student population (Abdel-Khalek 2019; Litalien, Atari, & Obasi 2021; Tay, Li, Myers, & Diener 2014). Furthermore, although there are bibliometric analyses on well-being of students (Hernández-Torrano et al. 2020; Sweileh 2021), to the best of the authors' knowledge there is no scientific mapping study on students' spirituality and well-being. To fill this gap, this study aims to reveal the research trend of the growing world literature on students' spirituality and well-being. The focus of this study was not limited to a specific level of education to provide a scoping mapping of the literature, including children, adolescent, and adult students on this topic. The relevant literature was mapped quantitatively using the bibliometric analysis approach. The h-classics publications were also extracted and analyzed to further identify the top trends and influential concepts in this field. The Web of Science's (WoS) Core Collection was searched in this study to explore the relevant literature. Among the WoS databases, the Social Sciences Citation Index (SSCI), Science Citation Index (SCI) Expanded, Emerging Sources Citation Index (ESCI), and Arts and Humanities Citation Index (AHCI) were used to extract the relevant information. These

databases made it possible to conduct large-scale bibliographic analyses (Wouters, 2006). Being the first in the scientific community, the WoS databases are strong tools to collect scientific information. However, other databases are used to gather bibliographic information, such as Google Scholar and Scopus (Archambault et al. 2006).

Methodology

The researchers did the initial search for the publications on “spirituality and well-being of students” on 5 January, 2020. All the records were updated on 14 August, 2021. The search terms of “spiritu*”, “well-being”, and “student*” were searched in the titles, abstracts, keywords, and keywords plus of the publications to refine the results. Since many irrelevant publications appeared about “spiritual care” during the initial search, the term “spiritual care” was used to exclude these irrelevant items. Conference Proceedings Citation Indexes of WoS were excluded to specifically focus on the peer-reviewed publications indexed in the SCI, SSCI, and ESCI indexes in the WoS Core Collection. However, many proceedings that were published as articles in peer-reviewed journals remained in the results.

The initial search yielded 445 publications. After the refinement criteria were used and the irrelevant publications were excluded, 280 publications remained for analysis. Publication year was not used as an exclusion criterion, and the results appeared between 1987 and 2021. The following is the chronological order of the relevant publications with the publication counts in the parentheses: 1987 (1), 1994 (2), 1995 (1), 1996 (2), 1997 (1), 1998 (1), 1999 (2), 2000 (1), 2001 (3), 2002 (1), 2003 (3), 2004 (3), 2005 (2), 2007 (6), 2008 (3), 2009 (8), 2010 (5), 2011 (3), 2012 (12), 2013 (15), 2014 (15), 2015 (30), 2016 (31), 2017 (24), 2018 (34), 2019 (22), 2020 (35), 2021 (14). Since the search was updated in mid-2021, more publications might appear later

as part of the 2021 collection. The publication counts show that the number of relevant publications increased during the last nine years (starting from 2012).

The retrieved publications were categorized using the WoS classification as (the numbers in parentheses are publication counts): Religion (75), Psychology Multidisciplinary (73), Public Environmental Occupational Health (39), Education Educational Research (35), Psychiatry (27), Nursing (23), Social Sciences Interdisciplinary (18), Psychology Social (13), Psychology Applied (12), Psychology-Clinical (12), Social Work (8), Psychology-Developmental (6), Humanities-Multidisciplinary (6), and Sociology (6). Some publications appeared in more than one category, and there were more categories with small numbers of publications.

The relevant publications were analyzed through the “bibliometric analysis” approach, and the findings were presented through “bibliometric visualization methods”. Bibliometric methods are used to objectively and transparently assess the strengths and weaknesses in research performance and monitor interdisciplinary scientific developments in a research field (Van Raan, 2003). There are many techniques to construct maps of authors, journals, keywords, and citations. VOS (visualization of similarities) is a relatively new mapping technique serving as an alternative to multidimensional scaling, and VOSviewer is a bibliometric analysis and visualization tool which provides a more satisfactory representation of the bibliographic datasets than the maps constructed by multidimensional scaling approaches (Van Eck, Waltman, Dekker, & van den Berg, 2010). VOSviewer was used in this study to analyze and visualize the bibliographic coupling of the journals, countries, authors, and organizations, and the co-occurrences of the keywords.

After the bibliographic data was quantitatively analyzed and visualized in this study, citation analysis was done to extract the most influential publication, the h-index of the relevant literature

was calculated, and the h-classics publications were identified and reviewed. The h-index is the number of publications that received h times or more citations, and those publications are called h-classics (Hirsch, 2005). The researchers classified the most influential publications in this research field according to their countries of origin, methodologies, samples, and key findings, and reviewed their findings to give additional information about the research trends in this specific field.

Results

Bibliographic coupling of the journals, countries, authors, and organizations, and co-occurrences of author keywords were analyzed and visualized through VOSviewer. Moreover, h-classics publications were extracted and reviewed.

Bibliographic coupling of the journals

Bibliographic coupling of the journals, weighted by their average number of publications, is illustrated in Figure 1 with overlay visualization. As for the selection criteria, the minimum number of documents was five, and the minimum number of citations was 50. Eight journals met the threshold, of 155 journals in total. Each journal's total strength of the bibliographic coupling links was calculated, and those with the greatest total link strength were selected.

The *Journal of Religion and Health* has the highest number of documents (26) and total link strength (375), whereas *Personality and Individual Differences* has the highest number of citations (514), with the third-highest number of publications (7) and total link strength (219). The most prominent journals in this field have been ordered regarding their total link strengths with the numbers in parentheses indicating the number of documents, citations, and total link

strengths, respectively: *Journal of Religion and Health* (26; 183; 375), *International Journal of Children's Spirituality* (9; 61; 234), *Personality and Individual Differences* (7; 514; 219), *Journal of Psychology and Theology* (6; 166; 216), *Journal of Psychology in Africa* (9; 73; 203), *Religions* (5; 106; 198), *Journal of Happiness Studies* (6; 75; 156), and *Journal of American College Health* (6; 236; 135). Colours in Figure 1 show the years of the relevant publications. This figure shows that the *Journal of Religion and Health* has the most established publication record in this field, while the *Journal of Happiness Studies* has the most recent publications.

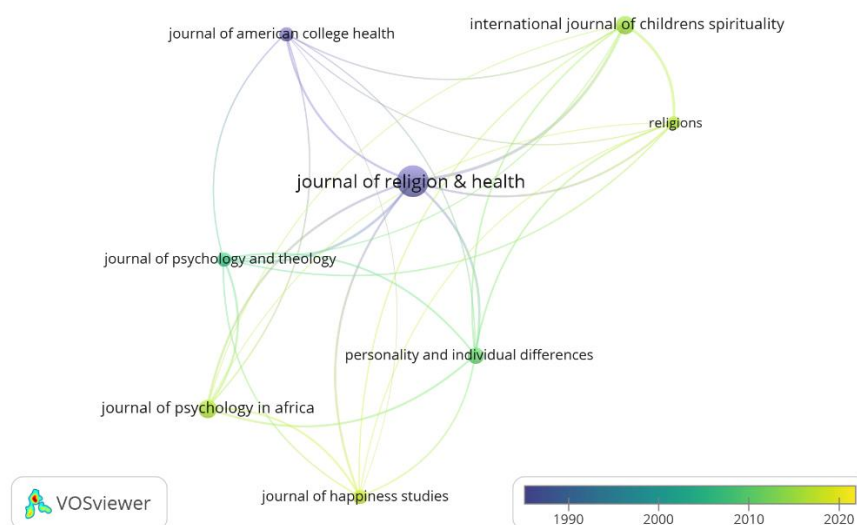


Figure 1 Bibliographic coupling of the journals (overlay visualization)

Co-occurrences of author keywords

The co-occurrences of all keywords are illustrated in Figure 2 with network visualization weighted by the number of occurrences. As a selection criterion, a keyword's minimum number of occurrences was ten. Thirty-five keywords met the threshold, of the 1135 keywords in total. The most frequently occurring keywords are listed, with the numbers in parentheses showing the number of occurrences and total link strength, respectively: spirituality (146; 609), health (66;

282), mental health (44; 224), religiosity (40; 213), religion (50; 194), happiness (31; 191), depression (30; 175), satisfaction (29; 163), and well-being (30; 142). Colours in Figure 2 show the different clusters in which the keywords co-occurred and linked with each other more frequently. *The first cluster (in red)* shows that students' life satisfaction, mental health, optimism, resilience, self-esteem, and well-being were studied with their religious beliefs, spirituality, personality, and social support. *The second cluster (green)* shows that students' religiousness was researched with their stress, anxiety, depression, life, happiness, mindfulness, and psychological well-being in the context of positive psychology. *The third cluster (blue)* implies that students' religiosity and beliefs were examined with variables related to their health, mental health, self-efficacy, and spiritual well-being. Although the most prevalent thematic framework relates to positive psychology and negative emotions in the second cluster, the dimensions of psychological capital such as optimism, resilience, and self-efficacy also appeared in the other two clusters. In addition, students' life outcomes such as life satisfaction, quality of life, and happiness appeared in all clusters. Students' mental health (or related concepts such as anxiety and depression) and well-being also appeared in all clusters.

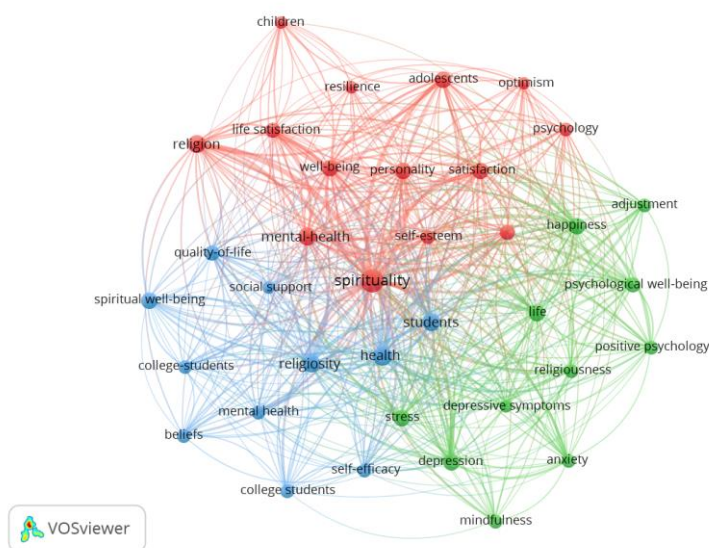


Figure 2 Co-occurrences of keywords (network visualization)

Bibliographic coupling of the countries

Figure 3 shows the bibliographic coupling of the countries with overlay visualization weighted by the total link strengths and average citations. Only the countries with a minimum document number of five and a citation count of 50 were included in the analysis. Ten countries met the threshold among the 55 countries. The USA had the highest number of publications (91), citations (1866), and total link strength (3052), followed by Australia, Austria, the People's Republic of China, South Africa, and England. The number of publications, citations, and total link strengths are shown in the parentheses, respectively, for each country in order of their total link strength: USA (91; 1866; 3052), Australia (28; 509; 2048), Austria (12; 128; 1372), People's Republic of China (21; 180; 1241), South Africa (18; 109; 962), England (10; 134; 916), Jordan (5; 66; 506), Canada (10; 64; 470), Spain (8; 97; 457), and Brazil (9; 109; 336). The colours in Figure 3 show the differences in average citations weighted by the total link strength.

The USA had the greatest average value (20.51), followed by Australia (18.18), England (13.40), and Jordan (13.20).

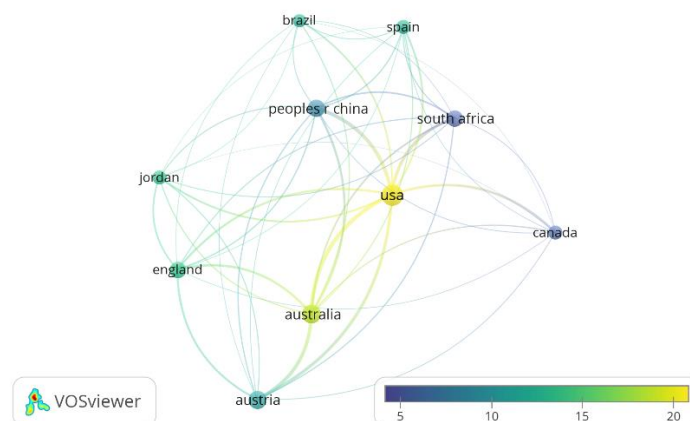


Figure 3 Bibliographic coupling of the countries (overlay visualization)

Bibliographic coupling of the authors

Figure 4 shows the bibliographic coupling of the authors with network visualization, weighted by their total link strengths. Only the authors with a minimum of two publications and 40 citations were included in the analysis. Twelve authors met the threshold among the 751 authors in total. The most prominent authors in this field are ordered based on their total link strengths, with the numbers in parentheses showing their publication and citation counts and the total link strengths, respectively: Unterrainer, Human-Friedrich (Medical University of Graz, Austria, 6; 61; 421), Lester, David (Stockton University, USA, 4; 58; 404), Fink, Andreas (Karl-Franzens University of Graz, Austria, 6; 79; 38), Abdel-Khalek, Ahmed M. (Alexandria University, Egypt, 5; 61; 357), Casas, Ferran (University of Girona, Spain, 2; 47; 204), Figuer, Christina (University of Girona, Spain, 2; 47; 204), Gonzalez, Monica (University of Girona, Spain, 2; 47; 204), Fisher, John (Federation University, Australia, 4; 92; 119), Musa, Ahmad S. (Al al-Bayt University,

Jordan, 3; 43; 106), Wissing, Marie P. (North West University, South Africa, 5; 55; 104), Beauvais, Audrey M. (Sacred Heart University, USA, 2; 84; 88), DeNisco, Susan (Sacred Heart University, USA, 2; 84; 88). Unterrainer, H. and Fink, A. from Austria are members of the most prolific research group, who published the highest number of articles and had the greatest total link strength. Among the most prolific authors, Fisher, J. from Australia had the highest citation count. Among the most prominent authors in this field, there are three authors from the USA and Spain, two from Austria, and one from Australia, Egypt, and Jordan.

Colours representing different clusters in Figure 1 provide information about the co-authorship links. The members of the same research teams came together within the same clusters, except for three authors: Fisher, J., Wissing, M.P., and Musa, A.S. The members of the most prolific research team are seen in the first cluster (in red): Unterrainer, H. and Fink, A. from Austria. The members of the second most prolific research team are seen in the second cluster (yellow): Lester, D. (USA) and Abdel-Khalek, A.M. (Egypt). The third most prolific team is seen in the third cluster (green): Casas, F., Figuer, C., and Gonzalez, M. The fourth cluster (blue) shows the research group with the highest citation count among the most prolific authors: Beauvais, A.M. and DeNisco, S. from the USA (the name of DeNisco, S. was overlapped with Beauvais, A.M. because of the strong association and therefore, cannot be seen in Figure 4).

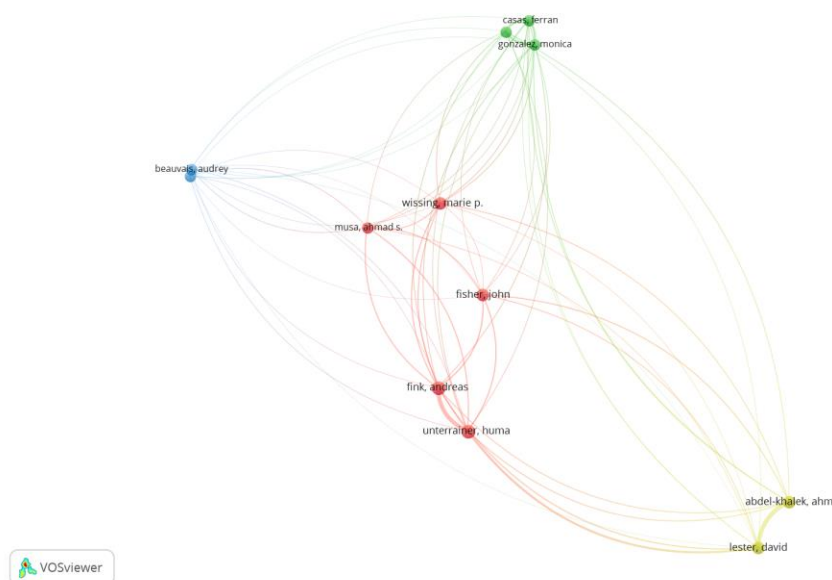


Figure 4 Bibliographic coupling of the authors (network visualization)

Bibliographic coupling of the organizations

Bibliographic coupling of the organizations to which the publishing authors are affiliated is illustrated in Figure 5 with overlay visualization, weighted by their total link strengths and average citations. Only the organizations that have a minimum of two publications and 50 citations were included in the analysis. Ten organizations met the threshold among the 392 organizations in total. The counts of publications and citations and their total link strengths are shown in parentheses, respectively. The organizations are ordered according to their total link strengths: Federation University (Univ Ballarat), Australia (7; 230; 711), Karl-Franzens University of Graz, Austria (7; 89; 694), University of Melbourne, Australia (3; 210; 405), University of Pennsylvania, USA (2; 157; 107), Arizona State University, USA (3; 89; 79), University of California, Los Angeles, USA (2; 101; 64), University of Wisconsin System, USA (2; 84; 35), Sacred Heart University, USA (2; 84; 32), University of Connecticut, USA (3; 428;

33), and University of Minnesota System, USA (2; 239; 1). Among the most prominent organizations, Federation University and Karl-Franzens University of Graz had the highest number of publications (7), and the greatest total link strengths (711; 694) and the University of Connecticut had the highest citation count (428). There were seven universities from the USA, two from Australia, and one from Austria, among the most prominent organizations in this field. Some of the most prominent authors in this field are affiliated with those universities: Federation University (Fisher, J.), Karl-Franzens University of Graz (Fink, A. and formerly Unterrainer, H.), and Sacred Heart University (Beauvais, A.M. and DeNisco, S.).

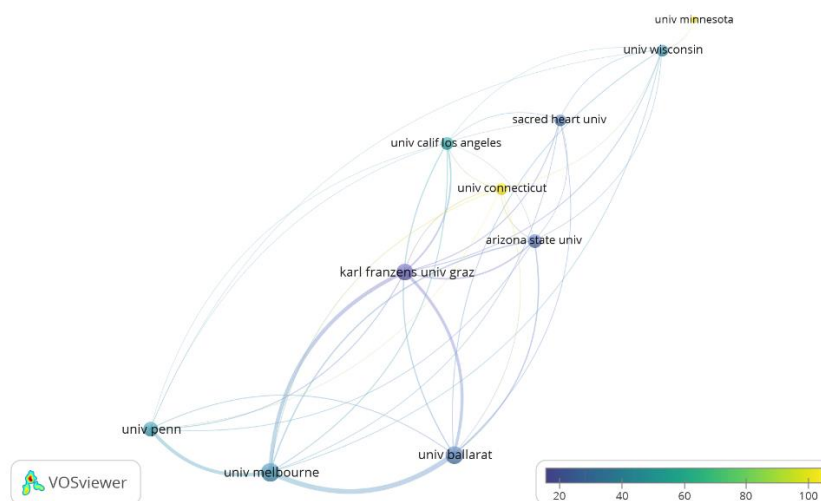


Figure 5 Bibliographic coupling of the organizations (overlay visualization)

An analysis and review of the h-classics

Citation analysis has been done for a total of 280 publications. The total citation count for these publications was 3595. The average citations per item was 12.84. The h-index was 26, meaning that 26 publications in the relevant literature have 26 or more citation counts. These 26 publications are the h-classics for the literature on spirituality and the well-being of students. The

researchers reviewed the h-classics of the relevant literature, as the pre-eminent publications of this corpus, to show the research trends of this field. The countries of origin, methodologies, samples and key findings of the h-classics are given in Table 1.

Table 1 Information on the h-classics publications

Author (s)	Citations	Country of origin	Method	Sample	Key findings
Park (2005)	404	USA	Quantitative, survey	169 HE* students	Religion contributes to the adjustment, mediated by meaning-making coping.
Resnick, Harris, & Blum (1993)	251	USA	Quantitative, survey	36000 secondary school students	A sense of spirituality functioned as a protective factor for well-being.
Van Dierendonck (2004)	235	Netherlands	Quantitative, survey	233 HE students	Two new scales referring to spiritual well-being were developed.
Gomez & Fisher (2003)	165	Australia	Quantitative, survey	Study 1: 248 secondary school students	A new Spiritual Well-Being Questionnaire (SWBQ) was developed.

				Study 2: 537 secondary school students Study 3: 832 HE students Study 4: 456 HE students	
Kern, Waters, Adler, & White (2015)	141	Australia	Quantitative, survey	516 secondary school students	Spirituality was positively associated with relationships and depression.
Bryant & Astin (2008)	96	USA	Quantitative, survey	Study 1: 434 HE students Study 2: 3493 HE students	Spiritual struggle affected psychological well- being negatively but increased their acceptance of individuals

					of different faith traditions.
Adams, Bezner, Drabbs, Zambarano, & Steinhardt (2000)	90	USA	Quantitative, survey	112 HE students	Life purpose, optimism, and sense of coherence enhance a sense of spiritual and psychological well-being.
Beauvais, Stewart, DeNisco, & Beauvais (2014)	84	USA	Quantitative, survey	124 HE students	Spiritual well-being, empowerment, and resilience enhance academic success.
Davis, Kerr, & Kurpius (2003)	82	USA	Quantitative, survey	45 secondary school students	Spiritual well-being, existential well-being, religious well-being, and intrinsic religious orientation reduced anxiety levels.
Fisher (2010)	68	Australia	Quantitative, survey	Various numbers of HE and	A spiritual well-being questionnaire (SHALOM) was developed.

				secondary school students from different countries	
Burris, Brechting, Salsman, & Carlson (2009)	63	USA	Quantitative, survey	353 HE students	Psychological well-being and less distress were positively related to optimism, health values, and religiousness and were negatively associated with spirituality.
Fehring, Brennan, & Keller (1987)	63	USA	Quantitative, survey	Study 1: 95 HE students Study 2: 75 HE students	Spiritual well-being, existential well-being, and spiritual outlook enhance psychological mood states.
Leondari & Gialamas (2009)	61	Greece	Quantitative, survey	363 adults, 95% of	Religiosity is positively associated with life satisfaction.

				them are HE students or HE graduates	
Taliaferro, Rienzo, Pigg, Miller, & Dodd (2009)	55	USA	Quantitative, survey	547 HE students	The existential well-being dimension of spiritual well-being was associated with lower levels of suicidal ideation.
James & Wells (2003)	53	England	Literature review	-	Religiosity and spirituality affect mental health and well-being positively.
Stroope, Draper, & Whitehead (2013)	48	USA	Quantitative, survey	1648 adults, 3% of it is the student sample (level was	Loving images of God is positively associated with a sense of meaning and purpose. This relationship is stronger in the student sample than employed persons.

				not specified)	
Volcan, Sousa, Mari, & Horta (2003)	47	Brazil	Quantitative, survey	464 HE students	Students with low and moderate spiritual well-being are more likely to have minor psychiatric disorders.
Vella-Brodrick & Allen (1995)	42	Australia	Quantitative, survey	Study 1: 186 HE students Study 2: 100 HE students Study 3: 229 HE students	A holistic health and well-being scale was developed, including the spiritual well-being dimension.
Compton (2001)	40	USA	Quantitative, survey	242 HE students	Religiosity was an essential component of psychological well-being.

Shek & Liang (2018)	36	Hong Kong	Quantitative, longitudinal survey	3328 secondary schools students	Spirituality positively predicts life satisfaction.
Hawkins, Tan, & Turk (1999)	35	USA	Experimental	29 adults, HE students	The use of therapy that utilizes religious values increases spiritual well-being and decreases depression.
Kennedy, Kanthamani, & Palmer (1994)	34	USA	Quantitative, survey	105 HE students	Spiritual experiences contribute to the overall sense of meaning in life.
Abdel-Khalek & Lester (2012)	31	USA and Kuwait	Quantitative, survey	HE students from Kuwait (n=192) and the USA (n=158)	Religiosity enhances subjective well-being and decreases anxiety and depression.
Unterrainer, Nelson,	31	England	Quantitative, survey	400 HE students	The German version of the Multidimensional

Collicutt, & Fink (2012)					Inventory for Religious/Spiritual Well-Being was adapted to English.
Huber & MacDonald (2012)	31	USA	Quantitative, survey	186 HE students	Spirituality had a positive effect on both altruism and empathy.
Rizvi & Hossain (2017)	26	Oman	Systematic literature review	-	Religiousness positively predicts happiness.

* HE: Higher education

According to the country of origin in which the studies were conducted, more than half of the h-classics are from the USA. Fourteen of them were from the USA, and there was one more study conducted in both the USA and Kuwait at the same time (Abdel-Khalek & Lester 2012). There were four studies from Australia, two from England, and one each from the Netherlands, Brazil, Greece, Hong Kong, and Oman. In most h-classics publications, researchers preferred to use student samples from the higher education (HE) level. HE students were used in 18 studies, and secondary school students were used in four studies (Davis et al. 2003; Kern et al. 2015; Resnick et al. 1993; Shek & Liang 2018), and both HE and secondary students were used at the same time in two studies (Fisher 2010; Gomez & Fisher 2003). In one study, the level of the students was not specified (Stroope et al. 2013).

Most of these studies used quantitative methodology in which they applied standard scales at a single study. Only five of those studies were cross-sectional. They used multiple samples to administer their scales and cross-validated their results (Abdel-Khalek & Lester 2012; Bryant & Astin 2008; Fehring et al. 1987; Gomez & Fisher 2003; Vella-Brodrick & Allen 1995). There is only one longitudinal study in the corpus (Shek & Liang 2018). Among these quantitative studies, authors developed original scales in four studies (Van Dierendonck 2004; Gomez & Fisher 2003; Fisher 2010; Vella-Brodrick & Allen 1995), and there was a scale adaptation in one study (Unterrainer et al. 2012).

Most of the studies in the h-classics found that students' sense of spirituality and religiosity were positively associated with their well-being. Resnick et al. (1993) found that a sense of spirituality functioned as a protective factor for well-being. Huber and MacDonald (2012) found that the students who had a sense of spirituality had higher levels of altruism and empathy. Regarding the instrumentality of altruistic and empathic behaviors in the well-being construct, Compton (2001) posited that religiosity that is characterized by other-centeredness should be included in all the well-being scales as a sub-dimension.

Some researchers found that religiosity and spirituality contribute to a sense of meaning and purpose in life (Kennedy et al. 1994; Park 2005; Stroope et al. 2013) and increase happiness (Yucel, 2010; Rizvi & Hossain 2017) and life satisfaction (Leondari & Gialamas 2009; Shek & Liang 2018; Yucel 2021). Similarly, having a purpose in life, optimism, and a sense of coherence enhances a sense of spiritual and psychological well-being (Adams et al. 2000). Stroope et al. (2013) found that spiritual images are more important for students than older adults in developing meaning and purpose in life. Park (2005) found that religious and spiritual beliefs helped students cope with stressful events by developing a meaning-making mechanism. Other

researchers also found that the students who have religious and/or spiritual beliefs or practices have more positive psychological mood states (Fehring et al. 1987) and lower levels of anxiety (Abdel-Khalek & Lester 2012; Davis et al. 2003), depression (Hawkins et al. 1999), and suicidal ideation (Taliaferro et al. 2009) through similar mechanisms. Moreover, spirituality positively affects mental health and well-being (James & Wells 2003) and acts as a protective factor against minor psychiatric disorders (Volcan et al. 2003). As a result, Beauvais et al. (2014) found that spiritual well-being enhances the academic success of students. However, some studies showed contradictory findings revealing that students' spirituality might harm their well-being in different contexts (Bryant & Astin 2008; Burris et al. 2009; Kern et al. 2015).

Discussion

In this study, all the peer-reviewed publications on students' spirituality and well-being in the WoS Core Collection were mapped and visualized bibliographically using VOSviewer software. Bibliographic coupling of the journals, countries, authors, and organizations, and the co-occurrences of author keywords, were presented. Also, citation analysis was used to extract the h-classics publications, and they were reviewed to give additional insight into the trends for this field.

Bibliographic coupling of the journals showed that the *Journal of Religion and Health* is the most prominent journal with the highest number of documents and total link strength and the most established publication record in this field. The journal, *Personality and Individual Differences*, published the most impactful papers with the highest number of citations, although it has the third-highest number of publications.

Co-occurrences of keywords identified the most frequently studied concepts regarding students' spirituality and well-being. Many researchers examined these concepts through the lens of positive psychology. They used the dimensions of psychological capital such as optimism, resilience, and self-efficacy in the interplay of spirituality and well-being. Students' mental health and its relationship with spirituality and well-being were the focus of many studies in the corpus. Most studies also researched students' life outcomes such as quality of life, life satisfaction, happiness, and health and their association with spirituality, religiousness, and well-being.

Bibliographic coupling of the countries showed that the literature on spirituality and well-being of students was dominated by the authors from the USA, followed by the ones from Australia, Austria, the People's Republic of China, South Africa, England, and Jordan. Among the most prolific authors in the relevant literature were three authors from both the USA and Spain, two from Austria, and one from Australia, Egypt, and Jordan. The Austrian authors, Unterrainer, H. and Fink, A., formed the most prolific research group – they published the most articles and had the greatest total link strength. The Australian author, Fisher, J. had the highest citation count, as a sole author, among the most prolific authors. Among the most productive research teams, Beauvais, A.M. and DeNisco, S. from the USA are the members of the research group that had the highest citation count.

Among the most prominent organizations in this field were seven universities from the USA, two from Australia, and one from Austria. Among those universities, the highest number of publications and the total link strengths were from Federation University (Australia) and Karl-Franzens University of Graz (Austria), and the most cited publications were from the University of Connecticut (USA).

The h-classics publications of the relevant literature were extracted and reviewed by the researchers regarding the countries of origin, methodologies, samples, and key findings to show the most prominent publications and give an idea about research trends in this field. More than half of those studies were conducted in the USA, followed by Australia, England, Netherlands, Brazil, Greece, and Kuwait. Most of those studies used a quantitative methodology with self-report questionnaires applied at a single time. Few of them adopted a cross-sectional approach, and there was only one experimental study. It implies the need to conduct research with more sophisticated methodologies such as mixed-method, longitudinal, and experimental studies in which researchers can use triangulation to collect more reliable data from different sources and use various methods at the same time.

Among the h-classics publications, the most preferred sample was higher education students, followed by secondary school students. Students' spirituality and well-being were more frequently studied in the context of adult and adolescent psychology, rather than in child psychology. In addition to the review of the h-classics, the authors checked the samples of all the studies in the corpus (n=280) and found that the great majority (n=158) used adult student samples (studying at graduate, post-graduate, and further education levels). Adolescent students (studying at secondary school or an equivalent level) were the second most commonly selected sample in the corpus (n=91). Only a limited number of researchers (n=31) selected children (students at primary schools, kindergartens, or an equivalent level) as the sample of their studies. As Holder et al. (2016) found in their research, spirituality is a stronger predictor of well-being among adolescents than among children. The current study also showed that most researchers preferred to study this concept on adolescent and adult students.

Most of the h-classics publications showed that the higher the students' sense of religiosity and spirituality, the higher their levels of well-being. There were various findings on the mechanisms between spirituality and wellbeing, answering why the students who have higher levels of spirituality may have higher levels of well-being. Increased altruism and empathy (Huber & MacDonald 2012), sense of meaning and purpose in life (Kennedy et al. 1994; Park 2005; Stroope et al. 2013), happiness (Rizvi & Hossain 2017), life satisfaction (Leondari & Gialamas 2009; Shek & Liang 2018), optimism and sense of coherence (Adams et al. 2000), positive psychological mood states (Fehring et al. 1987), and coping abilities (Park 2005); as well as decreased levels of anxiety (Abdel-Khalek & Lester 2012; Davis et al. 2003), depression (Hawkins et al. 1999), suicidal ideation (Taliaferro et al. 2009), and minor psychiatric disorders (Volcan 2003) were among those mechanisms. Also, some studies showed that students' mental health (James & Wells 2003) and academic success (Beauvais et al. 2014) were also positively affected by their spirituality.

As opposed to the findings of most of those studies, a few studies found that spirituality may harm well-being in some respects. In certain circumstances, spiritual struggle (Bryant & Astin 2008) and spirituality (Kern et al. 2015; Burris et al. 2009) may adversely affect the well-being of students. Burris et al. (2009) commented that students' perceived difficulties or conflicts with their connections to the transcendent and the crises of faith might affect their experience of psychological distress and so, their psychological well-being. Bryant and Astin (2008) asserted that some students struggle with spiritual issues, feeling locked into maladaptive ways of understanding and answering the existential questions that would decrease the meaning of life, which is detrimental to their psychological well-being.

Conclusion and Limitations

This paper presents an overview of the current situation and the evolution of the research on students' spirituality and well-being. Spirituality and religiosity were proved to be important determinants of students' psychosocial health and well-being by most of the studies included in the corpus of this study. This promising research field gives cues to practitioners on how to develop intervention strategies for and cope with the psychosocial problems of students.

However, this paper has three methodological limitations. Firstly, the authors only used the WoS Core Collection to extract the relevant peer-reviewed, high-quality publications and did not include grey literature, theses, proceedings, or books. So, it would provide a more comprehensive overview of the relevant literature if other researchers use other databases and information sources. The second limitation is that the WoS mainly covers journals in English, and most of those are published in developed countries. Although we did not implement any restriction on language, most of the studies were published in English (n=260). Only a handful of papers were written in other languages such as Spanish (5), Russian (4), Portuguese (3), German (2), Korean (2), Afrikaans (1), Czech (1), Slovak (1), and Turkish (1) in the corpus. Therefore, other researchers can explore the relevant literature produced in other languages and other parts of the world. The third limitation is related to the citation counts that appear in this study. WoS only counts the citations included in their collection of journals. So, the actual citation counts of the publications may differ from one database to another, and this information becomes outdated as the relevant literature grows. Up-to-date information on papers published by the nominated authors, with their citation factors, can be viewed via other platforms, such as Scopus, Google Scholar, ResearchGate, and Semantic Scholar. Despite those limitations, this paper shows the

current and historical research trends of the relevant literature and informs researchers about the further progress of this field.

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