

Can Organizational Spirituality Contribute to Knowledge Management?

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Abstract: Society demands more sustainable business. Increasing organizational spirituality can be one manner of accomplishing this humanized strategy, and knowledge management is an efficient method to diffuse high-level values through the company. Spirituality has a vital role in organizational theory and practice. Nevertheless, this also places a heavy burden on practitioners. To address this association, we conducted a systematic literature review, systematizing and categorizing the results to answer the research question, "can organizational spirituality contribute to knowledge management?", and propose a future investigation research agenda. We utilized the Web of Science and Scopus database. We submitted the articles to VOSviewer software version 1.6.16 for building, displaying, and exploring a bibliometric map supported by network data. The beginning was about wisdom, followed by a major focus on knowledge fields after increasing attention to spirituality. VOSviewer provided a network with two clusters, namely, spirituality dynamics and knowledge dynamics. Spirituality and knowledge labels have connections in both clusters. Wisdom and organizational wisdom are isolated from the other terms. Based on the articles analyzed, organizational spirituality can indeed assist knowledge management. One should ponder, however, that there are still few empirical studies with non-generalizable results. Considering the mysticism and excess of non-scientific articles (and scarcity of scientific ones), we recommend a change in approaching it. Traditional and positivist methodologies are not the most suitable; consequently, innovative and mixed methods ought to be used, providing the research's scientific nature. It is crucial to look at the insertion of spirituality in management with a scientific and critical eye.

Keywords: organizational spirituality; knowledge dynamics; knowledge management; spiritual knowledge; workplace spirituality; secular spirituality; VOSviewer.

Introduction

Knowledge management is essential than ever. It is all effort a company makes to handle members' knowledge (Hislop, Bosua, & Helms, 2013). In the knowledge society, leaders value the outcomes provided by knowledge dynamics in organizations. Organizations should ensure control over the knowledge creation, storage, sharing, conversion, using, and losing to convert it into assets, sustain their competitive advantages, and establishing their long-term survival (Argote & Ingram, 2000; Nonaka & Takeuchi, 2019; Wang & Noe, 2010).

Society demands more than just the efficient use of rational knowledge; it is not enough. Spiritually-informed management might be able to address these demands (Steingard, 2005). Spiritual and emotional knowledge must be part of the equation to suitable decision-making (Bratianu, 2015; Bratianu & Bejinaru, 2019). Organizational spirituality is an organizational identity resulting from its values, discourse, and practices, composed of members' individual and collective spirituality (Rocha & Pinheiro, 2020). Companies' actions and outcomes are embedded in values that convey their spirituality (Rocha & Pinheiro, 2020).

Spirituality influences the creation of contexts full of truth, understanding, mutual trust,

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altruism, empath, and love (Gotsis & Kortezi, 2008; Karakas, 2010; Kolodinsky, Giacalone, & Jurkiewicz, 2008). Due to these attributes, we may ponder that organizational spirituality holds a positive impact on Knowledge Management (Tecchio, Cunha & Brand, 2018). However, few scientific studies have focused on this area (Tejeda, 2015; Tecchio, Cunha & Brand, 2018), and they are scattered.

To address this new research issue, we conducted a systematic literature review (Snyder, 2019; Tranfield, Denyer, & Smart, 2003), systematizing and categorizing the results to answer "can organizational spirituality contribute to knowledge management?" and propose a future investigation research agenda. It is useful to understand the direction researchers are pursuing and provide enlightenment to other paths not yet covered.

We organized the article as follows. The next section presents the antecedents to knowledge management and organizational spirituality. After a brief contextualization, we explain in detail the steps of the methodology applied, the systematic literature review. Subsequent by analyzing the results with the systematization and categorization of the articles selected in clusters by the VOSviewer software version 1.6.16. Succeeding the discussion by category combined with suggestions for future studies. We close by offering our final considerations, the research contributions, and limitations.

Theoretical background

Knowledge management

Knowledge's presence is not sufficient to ensure appropriate decisions and actions to deliver the competitive advantages expected. There are several approaches regarding knowledge management; we briefly explain some of them. Once knowledge management's scope is to manage organizational knowledge dynamics, identifying knowledge is crucial. Polanyi defends that knowledge is a continuum between a tacit and an explicit dimension (Grant, 2007; Polanyi, 1966). The tacit dimension concerns intuition, know-how, thoughts that one cannot express verbally. The explicit dimension, in turn, is what one can express in words, what is codifiable (Grant, 2007; Polanyi, 1966).

Nonaka (1994) and Nonaka and Takeuchi (2019) advocate that the organizational knowledge dynamic occurs in a spiral, the SECI model of knowledge conversion: (i) socialization; (ii) externalization; (iii) combination; and (iv) internalization. The spiral evolves from the dynamics ongoing between tacit and explicit knowledge. These interactions occur in the shared context (mental, physical, virtual, or blends) named *ba* (Nonaka & Konno, 1998; Nonaka & Takeuchi, 2019). Members should have shared purposes, feelings, and thinking as a single entity to reaching a level of collective improvisation; the group creates a collective mind and body (Erden, von Krogh, & Nonaka, 2008).

Bratianu and Bejinaru (2019, 2020) innovate in bringing a thermodynamic approach to knowledge dynamics, beyond the Newtonian logic. They introduce *knowledge as an energy* metaphor. Their recent knowledge field theory defends three fields of knowledge: rational, emotional, and spiritual. An interactive and iterative dynamic is generated by transforming each form of knowledge into another form (Bratianu & Bejinaru, 2019, 2020). Spiritual knowledge is a product of the interaction between culture and spirituality. Hence, it is one values and beliefs. Spiritual knowledge drives the use of emotional and rational knowledge (Bratianu, 2015).

Recognizing members as a limited holder of knowledge, the organization should have experts and coordinate their knowledge to accomplish its goals. Therefore, the organization is an institute to integrate knowledge. Wiig (1993) indicates three knowledge forms (public, shared, and personal) and four steps of knowledge management creation and search for the source, compilation and transformation, dissemination, and

application and value realization. Grayson and O'Dell (1998) suggest seven tasks identification, collection, adaptation, organization, application, sharing, and creation. Jordan and Jones (1997) propose five categories, acquisition of knowledge, property, problem solving, dissemination, and memory.

Organizational spirituality

Clarifying, spirituality is not a synonym of religion (Elkins *et al.*, 1988; Quatro, 2004). There is proximity because most religions are spiritual, but there is no religion on spirituality (Brophy, 2015). Secular spirituality is a manner of being and feeling that comes about through an awareness of a transcendent dimension. It is characterized by particular identifiable values in concern to nature, life, self, others, and whatever one believes to be the Ultimate (Elkins *et al.*, 1988, p. 10). Religion is a solidarity system of faiths and procedures concerning sacred things (Durkheim, 1960, p. 65).

Spirituality is the "essence of management" (Mitroff, 1998). However, it is a theme relatively unexplored in management (Pawar, 2017; Poole, 2009; Rocha & Pinheiro, 2020; Steingard, 2005). It is a fluid, interdisciplinary, multidimensional construct (Pawar, 2017; Poole, 2009; Rocha & Pinheiro, 2020). Once only applied to the individual, now leaders apply it to the companies (Benefiel, 2003), in collective levels, workplace, and organization (Rocha & Pinheiro, 2020).

Workplace spirituality is the collective spirituality inside the company. It is the spiritual experience of members in the workplace (Pawar, 2017). It is related to employee well-being, sense of meaning and purpose, interconnectedness, and community sense (Ashmos & Duchon, 2000; Karakas, 2010). Organizational spirituality comprises individual (leaders and members) and workplace spirituality (Rocha & Pinheiro, 2020). So, it is the individual and collective spirituality inside the company and its relationship with the outside. The leader is the guide (Fry, 2003; Rocha & Pinheiro, 2020). The environment, organizational culture, and knowledge management influence this organizational identity. Its outcomes are economic value and social good that is detectable in the organization's vision, mission, image, and values (Rocha & Pinheiro, 2020).

We should be cautious concerning spirituality in management because some academics and practitioners use it rhetorically to control employees, to enhance their productivity and the company profitability with a discourse of purpose and meaningful work (Ahangaran, Khooshebast, & Vahedi, 2016; Ayoubi, Mosalanejad, & Jahromi, 2015; Kkalan, 2019; Pourmola *et al.*, 2019). Spirituality is transcendental and metaphysical; it cannot be reduced to a managerial tool (Driver, 2007). It has an end in itself; spirituality is the path and the end. Its economic outcome in an organization is secondary. It cannot be driven by the capitalist system (Ul-Haq, 2020).

Methodology

We conducted a systematic review of the literature (Snyder, 2019; Tranfield, Denyer, & Smart, 2003). This section provides the means to replicate a pre-established protocol used to collect and analyze the most relevant articles (Denyer & Tranfield, 2009). We follow the principles of equality in articles' treatment, transparency, accessibility, and focus (Thorpe, Holt, & MacPherson, 2005).

To ensure the significance and pertinence of the articles identified, we set the succeeding criteria for their inclusion and exclusion before beginning the search:

- a) Including only articles within the field of Knowledge Management; excluding other fields (Bengtsson & Raza-Ullah, 2016);
- b) Including only articles concerning secular spirituality; excluding articles that approach religious spirituality;

- c) Including only articles with scientific methodology published in scientific journals with double-blind review; excluding editorials, book chapters, books, conference proceedings, articles of opinion, and other non-scientific methods (Jones, Coviello, & Tang, 2011; Podsakoff et al., 2005);
- d) Including only articles published in English; excluding articles published in other languages (Ankrah & AL-Tabbaa, 2015);
- e) Inclusion of articles regardless of impact factor because of the field development stage (Jones, Coviello, & Tang, 2011; Tranfield, Denyer, & Smart, 2003).

We utilized the Web of Science and Scopus database on February 22, 2021, with the following search terms: "organizational spirituality" OR "organizational spirituality" OR "workplace spirituality" OR "secular spirituality" OR "spirit*" AND "Knowledge management" OR "Knowledge shar*" OR "Knowledge transf*" OR "Knowledge creat*" OR "Knowledge acquisition" OR "Knowledge appl*" OR "Knowledge us*" OR "Knowledge dissemin*" OR "Knowledge util*" OR "tacit knowledge" OR "explicit knowledge" OR "spiritual knowledge" OR "rational knowledge" OR "emotional knowledge" OR "Knowledge dynamic*" for the full period until the data search.

The search of the Web of Science resulted in 223 articles. The search of the Scopus resulted in 580 articles. We applied the criteria above to select the articles. Ten articles were duplicated. We analyzed the titles and abstracts to ascertain the stipulated subjective criteria ('a' and 'b'). We excluded 17 articles from Scopus (10 repeated) and 16 articles from Web of Science. Remained 18 articles to the analysis and discussion of the results.

Results analysis

We submitted the articles to VOSviewer software version 1.6.16 for building, displaying, and exploring a bibliometric map supported by network data (Van Eck & Waltman, 2010; Zupic & Čater, 2015). We used a co-word analysis of title, keywords, and abstracts. The unity of analysis is the frequent term (Zupic & Čater, 2015). We removed the word "paper". We selected the full counting mode (Van Eck & Waltman, 2010), which resulted in 79 occurrences. Due to the few articles, we chance the terms select to 100% most relevant terms instead of the 60% default (Van Eck & Waltman, 2010).

Table 1. Cluster 1 by VOSviewer

Spirituality dynamics			
Term	Occurrences	Link	Link Strength
Attitude	4	5	68
Organizational spirituality	3	5	54
Organizational trust	3	5	54
Psychological flourishing	3	5	54
Spirituality	4	7	64

VOSviewer provided a network with eight items, 2 clusters, 20 links, and a total link strength of 225. The first cluster combined terms related to spirituality at the organizational level. The second cluster united terms related to wisdom at the organizational level. Hence, we identified the clusters (Tables 1 and 2) based on their components: Spirituality dynamics (cluster 1) and Knowledge dynamics (cluster 2).

Table 2. Cluster 2 by VOSviewer

Knowledge dynamics			
Term	Occurrences	Link	Link Strength
Knowledge	9	7	108
Organizational wisdom	3	3	24
Wisdom	3	3	24

Both "knowledge" and "spirituality" have seven links; they connect with all other terms in the network, even those outside their cluster. Figure 1 displays the network and its clusters, cluster 1 in red and cluster 1 in green. The term's size and distance correspond to their link strength (Van Eck & Waltman, 2010). "Knowledge" in the center of the network along with "spirituality" correspond with our search concerning spirituality and knowledge management terms. Their connection is the second stronger (19), the first is (20) between "knowledge" and "attitude", the third comprises the links between "knowledge" and "wisdom", and "organizational" with the same strength (12). "Wisdom" and "organizational" are distant, almost isolated from the rest, and only have a slight connection with "knowledge" and "spirituality" in the articles analyzed.

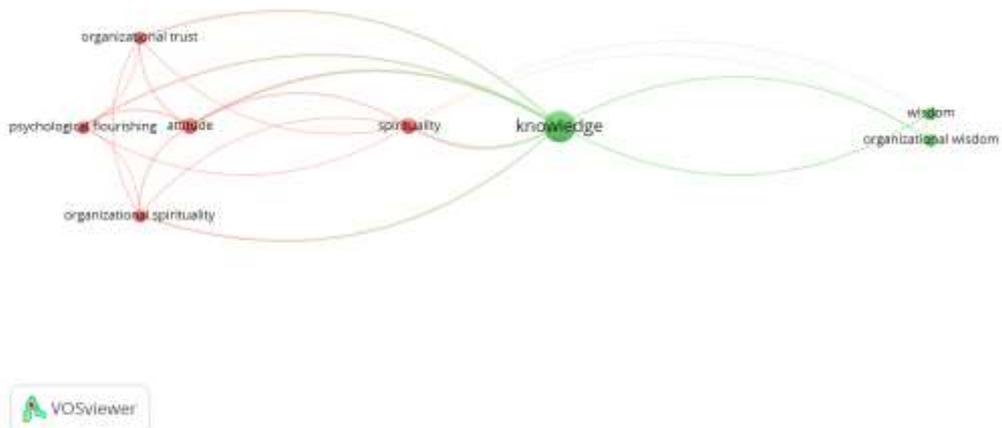


Figure 1. Network visualization by VOSviewer software version 1.6.16

Figure 2 displays the clusters' density view. It shows the "wisdom" and "organizational wisdom" research's isolation concerning the other subjects. "Spirituality" and "knowledge" are bonded, so they are topics in common in some articles. The other terms (cluster 1) have a relation almost as strong as the relation between "wisdom" and "organizational wisdom". They are closer and connected with the central terms.

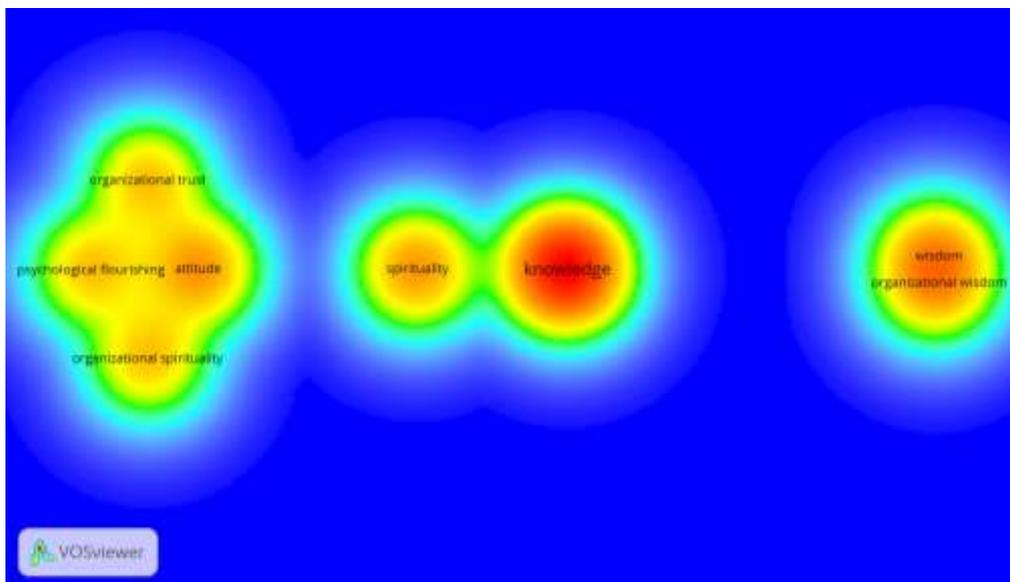


Figure 2. Density visualization by VOSviewer software version 1.6.16

VOSviewer also offers the items by year (Figure 3). The average publication year regarding "wisdom" and "organizational wisdom" is 2000, "knowledge" is 2010, "spirituality" is

2013, "organizational spirituality", and the others on orange is 2018. Hence, Figure 3 illustrates the investigation evolution. The beginning of the connection was with the inclusion of wisdom at the beginning of the century, followed by a major focus on knowledge fields and their dynamics; currently, it increases the researcher's attention to spirituality (Figure 3). We foresee an approach combined with those constructs in future research. In part because of the dual ties in the literature that already exists, knowledge and wisdom (see also Rowley, 2006), knowledge and spirituality (see also Bratianu, 2015), spirituality and wisdom (see also Zaidman & Goldstein-Gidoni, 2011).

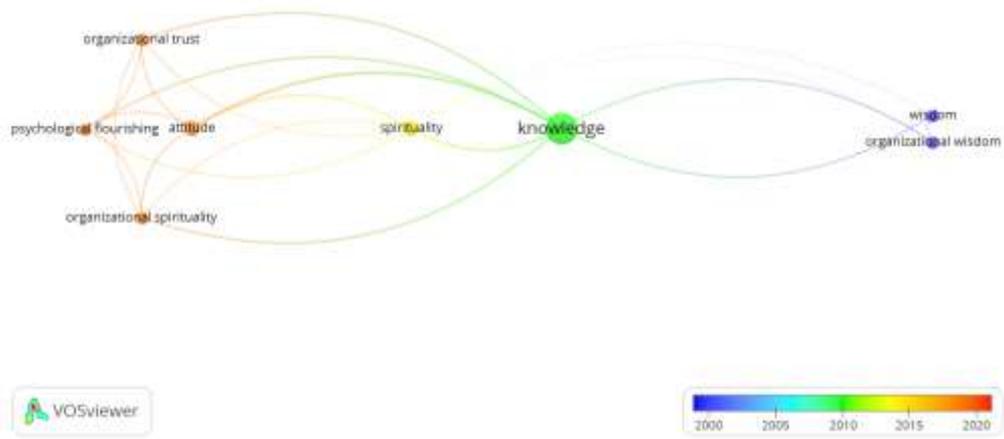


Figure 3. Overlay visualization by VOSviewer software version 1.6.16

In the sequence, we analyze the article's methodologies. Both subjects are recent in management literature. Organizational spirituality (cluster 1) is more recent than knowledge dynamics (cluster 2). The number of conceptual articles in the knowledge dynamics reflects the rising new theories and a paradigm shift in the research. Concerning organizational spirituality, the number of qualitative and conceptual studies indicates the topic's newness. The absence of qualitative methods in cluster 2 reveals a methodological gap in this topic.



Figure 4. Methodology by clusters

We highlight that quantitative methods are recommended only to mature research topics (Edmondson & Mcmanus, 2007). Hence it is alarming that almost half the articles use quantitative methodology. Knowledge and spirituality are topics that require in-depth research. A transcendental topic as spirituality requires qualitative methodology, sometimes metaphysical (Brown, 2003; Poole, 2009; Ul-Haq, 2020). Only qualitative approaches can convey profundity in scientific research (Corbin & Strauss, 2008; Edmondson & McManus, 2007; Macnaghten & Myers, 2007). After analyzing the results, in the next topic, we discuss each cluster content and suggest a future research agenda.

Discussion

Cluster 1 – Spirituality Dynamics

In this topic, we discuss the articles in cluster 1 (Table 3). Steingard (2005, p. 239) introduces the spiritually-informed management theory, a philosophical and metaphysical framework. It is an approach defending the ontological, epistemological, and teleological complementary interaction between traditional and spiritually-informed management theory. Correspondently the first one has reality as primarily material, Newtonian billiard-ball world of things (immaterial phenomenon are not "real"); there is a separateness of the knower from reality; rationalization, material progress, control, prediction, and ego development of self. The second one has reality as primarily spiritual; the realm of spirit is the basis of being material and spiritual; reality is holistically knowable; knower and reality are sacred interconnected; there is enlightenment, positive evolution, peace, sustainability, and ego transcendence to self (Steingard, 2005, p. 230). The framework has three dimensions (i) awareness, concerning consciousness and unconsciousness; (ii) translation and transformational change; (iii) temporal and perennial manifestation; and two categories (a) material and spiritual; and (b) personal and transpersonal (Steingard, 2005). The warning for applying this theory is the danger of collapse or reduction into the material realm, so one should maintain the focus on the right ontological level (Steingard, 2005, p. 237).

Minowa (2012) introduces the spiritual center of gravity in the framework of transcendental consumption rituals. In this model, collective symbols of the culture and its tacit facets are the spirits of the past. The tacit knowledge is dynamic because social practices and human relationships vary over time. Minowa (2012) summarize that "spirituality sensitizes consumers to social, ethical, and religious issues. Thus, models of consumption rituals that encompass the concepts pertinent to spirituality in a dynamic framework can have substantial marketplace implications".

Corner and Pavlovich (2016) address an individual-level mechanism of inner knowledge creation regarding how the creation of internal knowledge fosters creating shared value (CSV), thus, social benefits and profits. The authors propose that inner knowledge creations "helps to resolve tensions inherent in CSV and to deal constructively with the diversity of perspectives endemic to the social interaction required in any value creation process" (Corner & Pavlovich, 2016, p. 550). Their framework has implications beyond creating shared value, implications for sustainability, and organizational spirituality because it comprises business changing its main purpose from profitability to social benefit and human flourishing (Corner & Pavlovich, 2016, p. 553).

Rahman, Osman-Gani, Momen, and Islam (2015) investigate the knowledge sharing effectiveness. They present a model that considering workplace spirituality as an antecedent of knowledge sharing effectiveness (Rahman, Osman-Gani, *et al.*, 2015). With a sample of non-academic staff in Malaysian public and private universities, their results indicate a positive relationship between workplace spirituality and knowledge sharing effectiveness (Rahman, Osman-Gani, *et al.*, 2015). The sense of community and respect of values make a unique context of knowledge sharing in the workplace (Rahman, Osman-Gani, *et al.*, 2015, p. 289). Rahman, Osmangani, Daud, Chowdhury, and Hassan (2015), in similar research, defends that "the results from this study support that achievement of knowledge sharing cannot be served without workplace spirituality, trust and minimizing the perceived risk among the individual staff" (Rahman, Osmangani, *et al.*, 2015, p. 330)

Khari and Sinha (2018) introduce organizational spirituality as "organizational culture marked by higher-order values, focusing on wellness and welfare of others" (Khari & Sinha, 2018, p. 337). They propose a model of multiple mediations for organizational spirituality on knowledge sharing attitude, and their findings supported the mediation of psychological flourishing and organizational trust (Khari & Sinha, 2018). The last one with a stronger indirect effect; organizational spirituality supported organizational trust, a

considerable predictor of knowledge sharing (Khari & Sinha, 2018). However, organizational spirituality's direct effect on knowledge-sharing attitude was not significant (Khari & Sinha, 2018). Organizational spirituality's role is providing a source of intrinsic motivation for a knowledge-sharing attitude (Khari & Sinha, 2018). Supriyanto, Sujianto, and Ekowat (2020) also conducted quantitative research, although with a sample of Indonesia's academic staff. Concerning spirituality, their results suggest that innovative work behavior is not directly influenced by spiritual leadership, and knowledge sharing mediates this relationship.

Table 3. Cluster 1 articles selected in the systematic literature review

Topic	Method	Author and data
Spiritually-informed management theory	Conceptual	Steingard (2005)
Commonsense knowledge and internalized beliefs		Minowa (2012)
Shared values, social benefits, and outputs		Corner and Pavlovich (2016)
Organizational spirituality conceptualization		Rocha and Pinheiro (2020)
Sustainable leadership	Qualitative	Sharma (2019)
Spirituality and meaningful work		Ul-Haq (2020)
Intention to share knowledge	Quantitative	Khari and Sinha (2018)
Trust and workplace spirituality on knowledge sharing behavior		Rahman, Osmangani, Daud, Chowdhury, and Hassan (2015)
Knowledge sharing effectiveness		Rahman, Osman-Gani, Momen, and Islam (2015)
Innovative work behavior and knowledge sharing		Supriyanto, Sujianto, and Ekowat (2020)

Ul-Haq (2020) conducted a systematic literature review concerning workplace spirituality. The author uses a critical theory approach based on Jurgen Habermas to support that workplace spirituality is a movement operating in a logic of rationality and performativity to re-orient the spiritual realm to serve capitalism (Ul-Haq, 2020). The author states that "the spiritual turn in capitalist-inspired organizations is simply a discursive variation to obscure the underlying meaninglessness of the soul-less work" and "workplace spirituality "is being misunderstood as a panacea and is being colonized by the system as a protective mechanism" (Ul-Haq, 2020, p. 15).

Rocha and Pinheiro (2020) conducted a systematic literature review concerning organizational spirituality concepts and approaches. The authors critique the pool of concepts lacking clarity and operationality (Rocha & Pinheiro, 2020). They proposed a holistic concept, embracing intra- and inter-organizational relationships and the epistemological connection between spirituality and knowledge management. We apply it in this research (see the theoretical background topic).

Cluster 2 – Knowledge dynamics

In this topic, we discuss how researchers have been introducing spirituality into studies on knowledge dynamics (Table 4). Bierly, Kessler, and Christensen (2000) are the first article in cluster two. The authors propose a framework concerning organizational wisdom. They present the process from data to wisdom and then to organizational wisdom, identifying experience, passion for learning, and spirituality as the pillars of organizational wisdom (Bierly *et al.*, 2000). To diffuse individual to organizational wisdom, the authors indicate transformational leadership, appropriate culture and structure, and knowledge transfer (Bierly *et al.*, 2000). Knowledge management will spread individual wisdom until the organization is collectively wise to the point that a wise individual's departure does not interfere with the company's wisdom (Bierly *et al.*, 2000).

In a not-so-optimistic viewpoint, Friedman, Lipshitz, and Popper (2005) also address spirituality in organizational learning. The mystification of organizational learning obstructs the capacity of academics and practitioners to learn about organizational

learning. Friedman, Lipshitz, and Popper (2005, p. 20) assign it to (i) growing conceptual diversity, (ii) anthropomorphizing organizational learning, (iii) a division in the field between visionaries and skeptics, (iv) the simplification of terminology, and (v) active concept mystification. Being a learning organization occurs in the context of routine tasks (Friedman *et al.*, 2005, p. 27). Hence, the authors offer strategies to organizational learning demystification: (i) conceptualizing without metaphors, in a straightforward manner that relates the two forms of learning (individual and organizational) to each other, (ii) integrate theoretical and empirical findings, (iii) use an intentional multidisciplinary approach (Friedman *et al.*, 2005).

Bratianu and Orzea (2013) propose the entropic intellectual capital model. The role of spirituality in the model concerns spiritual knowledge, transforming potential spiritual intellectual capital into operational spiritual intellectual capital through the integration process. It is performed by the integrators, namely, technology, processes, organizational culture, management, and leadership (Bratianu & Orzea, 2013). The authors address knowledge dynamic by the metaphor of thermodynamics, and the three fields of knowledge (cognitive, emotional, and spiritual) as energy, introducing the thought of knowledge transformation (Bratianu & Orzea, 2013). Bejinaru (2017) shares the idea of thermodynamic metaphor, knowledge fields, and the integrator's role in transforming potential intellectual capital into operational intellectual capital. The author innovates suggesting a matrix with four knowledge strategies (inside - knowledge creation and sharing; outside - knowledge acquisition and knowledge exchange in networks) to enhance the university potential and operational intellectual capital (Bejinaru, 2017).

Han, Lu, and Li's (2010) research have a small contribution to spirituality. In studying the contributions of organizational commitment to knowledge-sharing behavior, the unique appearance of spirituality occurs when they acknowledge that organizational empowerment generates a "spirit of altruism" through organizational commitment. De Angelis (2016) discusses the impact of knowledge management and national culture on governmental intelligence. Concerning spirituality, the investigation proposes that, among other intelligence, there is spiritual intelligence, "intelligence for more than selfish interests" (De Angelis, 2016, p. 13). It is a research with a small (=101) non-representative sample.

Table 4. Cluster 2 articles selected in the systematic literature review

Topic	Method	Author and data
Organizational learning, knowledge, and wisdom	Conceptual	Bierly, Kessler, and Christensen (2000)
Organizational learning		Friedman, Lipshitz, and Popper (2005)
Intellectual capital		Bratianu and Orzea (2013)
Knowledge strategies, intellectual capital, and universities		Bejinaru (2017)
Decision making, psychological ownership, and knowledge sharing	Quantitative	Han, Lu, and Li (2010)
Culture, knowledge management, and governmental intelligence		De Angelis (2016)
University, human capital, and sustainable bioeconomy		Bejinaru, Hapenciu, Condratov, and Stanciu (2018)
Knowledge fields, knowledge dynamics, and decision-making process		Bratianu, Vătămănescu, Anagnoste, and Dominici (2020)

Bejinaru, Hapenciu, Condratov, and Stanciu (2018) conducted quantitative research among students concerning the influence of universities on human capital triggering in the bioeconomy sector by knowledge transfer, comprising the three fields of knowledge (rational, emotional, and spiritual). Their results confirm five of six hypotheses. The hypotheses confirmed indicated that the three fields of knowledge influence the formation of human capital in the bioeconomy area; the students have a major interest in bioeconomy; there is no difference among the two genders; there are significant

differences from the three cycles of education in this analysis. The hypothesis not supported indicate "that there are no significant differences between the students from the social-humane faculties and those from the technical faculties regarding the evaluation of the transfer of rational, emotional and spiritual knowledge in the field of bioeconomy" (Bejinaru *et al.*, 2018, p. 594).

Bratianu, Vătămănescu, Anagnoste, and Dominicici (2020) partially confirm the influence of the three fields of knowledge and their dynamics on decision-making effectiveness. They conducted a quantitative study with middle managers from the business consulting area (Bratianu *et al.*, 2020). The results supported the hypotheses concerning the three fields of knowledge positively influencing the knowledge dynamics and the knowledge dynamics influencing decision-making. It also suggests that rational knowledge positively influences decision-making; however, spiritual and emotional knowledge has less influence because the sample was constituted mostly from managers working in financial consulting, a domain where rational knowledge is dominant concerning emotional and spiritual knowledge.

Future research agenda

Based on the articles analyzed, organizational spirituality can indeed assist knowledge management. One should consider, however, that there are still few empirical studies with non-generalizable results. With some exceptions, the research topics are sparse and lack continuity. It is crucial to look at the insertion of spirituality in management with a scientific and critical eye. Even if the traditional and positivist methodologies are not the most suitable, innovative and mixed methods should always be used to be a scientific character in the research. Considering that due to mysticism with an excess of non-scientific articles (and the scarcity of scientific ones), there is still prejudice about this theme in academia. Ergo, as spirituality in knowledge management represents a fresh theme needing further and in-depth research, we set out the following research agenda for future studies.

Cooperation between universities and companies for teaching and developing leaders and members who value knowledge management attentive also to emotional and spiritual knowledge. Cooperation likewise for research and design of tools and practices for valuing and supporting such knowledge management. Moreover, regarding cooperation university-industry, it is necessary to develop projects between research centers and companies to design practices and tools to address members' spiritual expressions and its individual and collective results in the workplace and results regarding the company's relationship with society, as well as the products and services the company delivers to consumers.

Modification of business education curriculum to include spirituality and wisdom in management, especially knowledge management. Including investigating pedagogical techniques most suitable for teaching spirituality and practical wisdom in knowledge management. It would bring the necessity to create refreshment courses for teachers on these new dynamics for the industries and the education system. By altering it from the compulsory school years, its insertion in technical and higher education would be facilitated and naturalized in the future.

Research the interactions between different fields of knowledge in different industries to understand how dynamics happen and each industry's needs. The comparison between goods and service companies is also encouraging. In this line, investigate in depth the role of culture and other sociodemographic characteristics in knowledge dynamics and organizational spirituality. Similarly, study how organizational spirituality and knowledge dynamics successfully relationship create social value.

Concerning the leaders, as they are the ones who provide the values, investigate their perception of organizational spirituality and their level of awareness of practical

organizational wisdom. Including, Investigate the results of the rhetorical use of spirituality to control employees and approach consumers. Researching the influence of figures of speech leaders use, in particular metaphors, on knowledge sharing and members' absorption capacity. Further, to investigate the effect of storytelling on disseminating organizational practical wisdom and organizational spirituality.

To investigate the relationship between practical wisdom, organizational spirituality, and knowledge management concerning the existence of a moderating or mediating role of organizational spirituality. It is also necessary to research the relationship between organizational spirituality and organizational practical wisdom. Although there are many surveys for individual wisdom, there are still none for the organizational level, and it is necessary to establish criteria and scales to measure organizational practical wisdom. Finally, to empirically test, with experimentation, the conceptual articles resulting from this systematic literature review.

Conclusions

We conducted a systematic literature review with VOSviewer software's assistance about knowledge management and organizational spirituality to address how organizational spirituality contributes to knowledge management. Spirituality is gaining space in knowledge management. Nevertheless, a small number of articles report these topics even though they point to the relevance and influence of spirituality in knowledge management.

This research contributes by providing the systematization of the state-of-the-art and a direction to researchers in future investigation. The systematization reveals the directions used until now, such as spirituality fostering the intention to share, share behavior, and mutual trust (Khari & Sinha, 2018; Rahman, Osman-Gani, *et al.*, 2015; Rahman, Osmangani, *et al.*, 2015); and its role in the development of wisdom and organizational wisdom (Bierly *et al.*, 2000). One should be careful about being overly optimistic, as there are also negative effects in including spirituality in knowledge management. For example, the mysticism that spirituality can bring can hinder practical understanding and achievement of learning (Friedman *et al.*, 2005), and the rhetorical use of spirituality can support capitalism (Ul-Haq, 2020). None of these findings should be generalized, and they are just warning signs that academics and practitioners should consider. Practitioners can use this information to ponder the valuation or not of spirituality in the organization. Further, deciding where, how, and in what degree of depth.

We also present the limitations. The terms searched in the databases could include "learning" because it appeared several times during the analysis and discussion, indicating the possible importance. We suggest other systematic literature reviews incorporating other terms and databases. One should investigate the articles excluded because of religion and compare them with those with this research. More importantly, we suggest using qualitative methods and longitudinal approaches to understand and test members' and leaders' responses to spirituality influences on knowledge management (either positive or negative).

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