What do we know about the teaching of religiosity/spirituality in medical undergraduate curricula? An integrative review

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Abstract

Background: There is general agreement between physicians and medical school faculty that health professionals should be aware and know how to deal with patient’s spirituality. The spiritual dimension is being included in some University curricula, and a more humanistic health care approach is being advocated.

Methods: An integrative review was conducted to gather information about spirituality research in medical undergraduate curricula. The major question to be answered is what we already know about the teaching of religiosity/spirituality (R/S) in medical curricula.

Results: The final sample was composed of 21 articles, among which 16 were empirical studies and five were theoretical essays. Most of the publications were from the United States, followed by Brazil, United Kingdom, New Zealand and Australia. Most of the students and teachers believe they must be prepared to address the issue spirituality with patients, despite a lack of consensus about contents, teaching methods and the best moment of teaching during the medical course.

Conclusions: Teaching R/S is a developing process which is not yet a global phenomenon, as shown by the fact that publications of only a few countries are available. The subject is relevant and important as a curricular element in medical education, but needs further developments.

Keywords: curriculum; Spirituality; religiosity; medical education
Introduction

The relationship between medicine and religion can be traced from the beginnings of the art of medicine to the present days (Calman 2008). However, the arrival of the technological era and scientific medicine have resulted in the ancient ties between medicine, healing and spirituality being almost forgotten (Neely & Minford 2008).

In the last decades, however, there has been a growing scientific interest in the influence of religious and spiritual (R/S) factors on health outcomes. Several investigations have demonstrated negative and positive aspects of faith, showing associations between mental health, quality of life, survival, ethical issues, and changes in biological markers with spirituality (Lucchetti et al. 2013a; Vitorino et al. 2016). Evidence also shows that neglecting spiritual needs results in less favorable outcomes for patients, such as reduced quality of life, dissatisfaction with care and increased costs at the end of life (Balboni et al. 2010).

There is general agreement between physicians and medical school faculty that R/S is important for patients and that health professionals should be aware and know how to deal with this aspect of whole person care (Lucchetti et al. 2012a). The spiritual dimension is being included in some University curricula, and a more humanistic and compassionate health care approach is being advocated (Lucchetti et al. 2011).

Considering this increasing pressure on the medical curriculum, why should we teach spirituality? What will it add to patient care? How should it be taught? (Calman 2008). One of the biggest challenges in the spirituality, religiosity, and health fields is to understand how patients and physicians from different cultures deal with spiritual and religious issues in clinical practice. R/S curricula that train physicians how to address spirituality in clinical practice must take these differences into account (Lucchetti et al. 2016).

Within this context, there are much information available of different perspectives addressing R/S in the undergraduate medical curricula. Nevertheless, there is no systematic compilation of this body of research in the literature. We believe such a compilation would benefit faculty directors and medical teachers interested in reviewing the field in order to base curricular changes and/or the teaching of R/S in the clinical practice. The understanding of what we already know or do not know about this subject also would help researchers to focus on new approaches to fulfill the gaps observed.

Methods

Using integrative review strategies offers a comprehensive understanding of a phenomenon through summarising empirical and theoretical literature, thus this method was identified as the most appropriate to address R/S and educational issues and create new knowledge and perspectives (Guo & Jacelon 2014). An integrative review was conducted to gather information about spirituality/religiosity factors in medical undergraduate curricula. This paper uses the term integrative review to denote a 5-stage process for conducting integrative reviews, developed from an established method for conducting systematic reviews (Whittemore & Knafl 2005), and comprising the following five stages: problem identification, literature review, data evaluation, data analysis (including data reduction, data display, data comparison, conclusion drawing and verification), and presentation.

Problem identification

The focus of the integrative review was to analyze the information available on the scientific literature concerning
the teaching of spirituality and religiosity in medical undergraduate curricula. The major question to be answered in this review is what we already know about the teaching of R/S in medical curricula. Within this context, we are interested in whether this issue is included or not in medical education, which methods are applied, the results of such a learning in terms of clinical practice, the student’s and teacher’s opinions about the process, theoretical references and content of the disciplines.

**Literature review strategies**

An electronic search was conducted between October and November 2015. Databases included Pubmed, Web of Science, Scientific Electronic Library Online (SciELO), which is a database including Portuguese and Spanish language-speaking countries (http://www.scielo.br), ERIC – Educational Resources Information Center (http://eric.ed.gov) and SCOPUS.

The boolean equation was (Spirituality) AND medical curricula in PubMed, Web of Science and SCOPUS databases; (Spiritual*) AND medical education in ERIC and Scielo databases. In order to explore the current status of medical education, only articles published since 2005 were selected. Articles in Portuguese, Spanish and/or English dealing with R/S in medical undergraduate curricula, published up to November 2015, were selected.

The articles were evaluated taking into consideration its relevance, based on title and initial abstract review. Two researchers (PRDCA and MRC) independently screened the list of references to exclude reports not assessing the issue in hand. If the authors were in doubt, full text was screened for the final decision.

**Inclusion and exclusion criteria**

Studies that were selected fit the following criteria: publication between 2005 and 2015; original articles in Spanish, English or Portuguese, on the theme of spirituality/religiosity in medical training. Exclusion criteria: not addressing the issue of research; publications classified as editorial, letter, comments, books or literature review; having as main concern the evaluation of complementary/alternative medicine practices; or studies in which the subject R/S could not be distinguished clearly from strictly theological or philosophical issues. All articles not fulfilling the inclusion criteria or meeting the exclusion criteria were omitted from the final analysis.

Details of search strategy and selection process are shown in Figure 1.
Data evaluation

The final sample for this integrative review included empirical and theoretical reports, and data was evaluated according to Whittemore & Knafl (2005). Empirical reports included a wide variety of methods: cross-sectional, grounded theory, thematic analysis, surveys, multicentric surveys and quasi-experiments. Due to this diverse representation of primary sources, reports were coded on a 2-point scale (high or low) according to two criteria relevant to this review: methodological or theoretical rigour and data relevance. Articles with experimental or observational methodology and with larger samples were considered as more relevant, and theoretical essays or with small samples as less relevant. No report was excluded based on this data evaluation rating system; however, the score was included as a variable in the data analysis stage. In general, reports of low rigor and relevance contributed less to the analytic process.

Data analysis

Data were extracted from primary sources as well as any reference to the issues in hand. Data display matrices were developed to display all of the coded data from each report by category and were iteratively compared. The information obtained from the articles were analysed, interpreted, presented and discussed, enabling a description of the relevant characteristics of the question.
Results

Table 1 presents a summary of searches carried out in the different databases with Boolean equations used as methodological description. The final sample was composed of 21 articles (Table 2), among which 16 were empirical studies and five were theoretical essays. All articles were written in English, except for one which was in Portuguese. Most of the publications were from the United States (12 publications), followed by Brazil (4 publications), United Kingdom (3 publications), and New Zealand and Australia (1 publication each). Nine of the publications had high methodological quality, and the remaining 12 articles were considered of low quality.

Are medical schools teaching spirituality to their undergraduate students?

Three studies answered to this question, showing that the subject spirituality is taught in 90% of universities in the United States (Koenig et al. 2010), 59% in the United Kingdom (Neely & Minford 2008), and 40.5% in Brazil (Lucchetti et al. 2012b). However, in the vast majority of training schools the issue is approached without using a specific course on the subject. In the US, for example, only 7% of the universities offer a course on spirituality & health (Koenig et al. 2010). In Brazil, this happens in 10.4% of the schools (Lucchetti et al. 2012b).

In Brazil, most students believe that patients do not feel uncomfortable when asked about issues related to R/S (80.6%), and that Brazilian medical schools are not offering proper education in this area (83.4%) (Lucchetti et al. 2013b; Banin et al. 2013).

No reports describing this question in other countries were found.

What is the opinion of students and faculty on teaching spirituality in medical degree? Why should it be taught?

In general, there is a growing recognition by students and teachers about the importance of teaching spirituality in medical education. In a survey in New Zealand, in which the subjects were asked "is spirituality an important aspect of health?", 38(52%) answered "yes", 13 (18%) considered it "important in some situations", 16(22%) considered that "it is important for some patients", 17 (24%) answered that "it is important for some patients in some situations", and two (3%) answered "no" (Lambie et al. 2015). In a survey among Brazilian heads of medical schools, 53.9% considered the subject very important in the training of future physicians, 35.6% considered it important, 10.5% of little importance and 0% of no importance (Lucchetti et al. 2012b). Among Brazilian students, most
(71.2%) declared to believe that spirituality has an impact on the health of patients, 68.2% that this impact is positive and 75.3% that to assess the patient's spirituality is relevant. Most students (58.0%) showed interest in evaluating the level of spirituality among patients, but almost half of them (48.7%) considered that their training was not enough for that (Lucchetti et al. 2013b).

Another study showed that most of the students and teachers of a Brazilian medical school believe they must be prepared to address the issue spirituality with patients, and that there is no ethical conflict in this approach (Banin et al. 2013). An investigation on the Midwestern US Catholic Medical University School showed that 82.5% of students believe that spirituality should be a curricular component of medicinal education, while 17.5% believe that this subject should not be included (Guck & Kavan 2006).

The study of the reasons why the subject should be taught in medical schools revealed various arguments supporting the relevance and usefulness of the topic to medical training. When asked why spirituality is an important factor in medical training, some of the participants stated that health care deal with "whole persons", so the patient is "more than just physical bodies", and "...we need to treat the whole person, not just the medical problem and spirituality is a part of that." (Lambie et al. 2015).

R/S was identified by medical student as a protective factor against the emotional stress that emerges in challenging situations when interacting with some patients, as in cases serious illnesses, terminal disease and domestic violence (Balboni et al. 2015), as well as a resource for coping with stress related to the formative period (Schonfeld et al. 2014). Exposure to difficult situations along the graduation period tended to decrease the compassion level of the non religious/spiritual students in a higher degree than among religious/spiritual students; the same was observed in the ability to maintain the balance between personal and professional activities and the use of healthier coping strategies (Balboni et al. 2015). Finally, since many spiritual and existential aspects of life become enlarged with the proximity of death, spiritual care becomes particularly relevant and important at the end of life (Feldstein et al. 2008). There are also evidences that patients want their doctors to address their spiritual needs (Pelletier & McCall 2005; Sandor et al. 2006; LoboPrabhu & Lomax 2010; Dal Farra & Geremia 2010; Schonfeld et al. 2014).

In what moment during the course is spirituality taught? Is it mandatory or elective?

The theme S/R has been taught in various forms in medical schools. In the US, in 92% of the schools that teach S/H (Spirituality and Health) it is taught in the preclinical stage (first two years), however 61% of them also (or only) offer S/H in the clinical stage (Koenig et al. 2010). Most American medical schools include the S/R subject during the first and second years (Sandor et al. 2006, Perechocky et al. 2014; Barnett & Fortin 2006; Lennon-Dearing et al. 2012), some during the clerkship years (Pelletier & McCall 2005; Feldstein et al. 2008) and a few in the fourth year as an elective course. Some schools consider spirituality and religion as elements of multiculturalism, and others as integrative medical practices, including palliative care and/or part of the wellness curriculum (McEvoy et al. 2013). Some still offer the subject during the last year of training (Schonfeld et al. 2014).

The characteristics of the subject spirituality allow it to be included in other existing courses in the medical curriculum, such as learning the collection of spiritual history, during the teaching of anamnesis. Schonfeld et al. (2014) recommend the insertion of the course as an elective activity and, depending on the feedback and the demand by the students, its mandatory inclusion in the curriculum.

A Brazilian study showed that 47.8% of medical students believe that a R/S course should be elective, 23.3% suggest that it should be combined to other disciplines of the curriculum, and 23.5% suggest that it should be taught in events, courses or internships. Only 5.4% of the students wished R/S to be included in the curriculum as a mandatory independent discipline (Lucchetti et al. 2013b). In Brazil, R/S mandatory were shown to be more
frequent in private, Catholic or evangelical universities. On the other hand, elective courses and/or disciplines are more common in public institutions, and are focused on the relationship between spirituality and health in a more ecumenical approach (Lucchetti et al. 2012b).

A national survey showed that 73% of American medical schools reported to teach education in spirituality & health as part of compulsory disciplines of other topics, such as introduction to clinical medicine, palliative care, medical ethics and cultural competence. 34% of them reported offering elective courses dedicated specifically to spirituality & health, and 45% informed that the subject is taught as part of elective courses on other topics. In only 10% of schools there is no teaching of R/S in any way (Koenig et al. 2010).

Among 10 UK schools offering education in spirituality, 20% have compulsory courses in spirituality in medicine, 50% have optional courses and 30% have both (Neely & Minford 2008).

An advantage of the elective course, as reported by the medical schools, is the possibility of forming small groups with higher level of interest in the theme, allowing the creation of a "safe space" for discussion, both about the spirituality of patients as the spiritual growth of the students themselves (Bridge & Bennett 2014; Schonfeld et al. 2014).

Which teaching methods are used?

Medical schools and academic programs in the US have different teaching methodologies on the theme of religion and spirituality in medical care (LoboPrabhu & Lomax 2010). In a qualitative analysis, many respondents indicated that spirituality should not be taught in a "generic" way, with one subject stating that "the teaching of spirituality should not become another box to tick" (Lambie et al. 2015). There was no agreement on how R/S should be taught, but many of the participants suggested that it should be revisited at various points throughout the course (Lambie et al. 2015).

LoboPrabhu & Lomax (2010) emphasized the importance of some aspects in teaching spirituality: a) considering the setting - inexperienced students need more didactic teaching, while students in clinical care training need to learn in the caring service setting itself; b) considering the teacher - he/she can be a lecturer, a clinician, a chaplain; students tend to value models/examples of how to proceed, such as consultation-liaison psychiatrists, oncologists, geriatrics, or physicians who treat drug addicts, as examples of caregivers sensitive to the patients' spirituality; and c) considering the multidisciplinary and interdisciplinary learning, with particular emphasis on the role of the chaplain (LoboPrabhu & Lomax 2010).

Effective teaching in that subject differs from the conventional methods of accumulation of information. The primary objectives are related to the development of attitudes, awareness and skills that contribute to an effective communication with the patient (Feldstein et al. 2008)

Many students need encouragement and time to develop curiosity and awareness about the importance of spirituality in good quality medical care (Feldstein et al. 2008; and Lambie et al. 2015). To discuss the concept of spirituality, the Stanford University uses a method called "discovery model", in which the students report personal values and experiences and are invited to reflect about their lives, in search of spirituality or elements that have deep meaning for them. Sharing their thoughts and stories, the students discover that the concept of spirituality is a multidimensional human phenomenon (Feldstein et al. 2008)

Transversality represents a teaching organization practice in which a theme is present in all areas where appropriate, so that this perspective is used to approach the regular courses in the curriculum, allowing therefore the association
of the subject spirituality to all other contents and avoiding parallel, non-integrated approaches (Dal-Farra & Geremia 2010). However, the use of the transversal practice has as a possible drawback the fact, since the theme is not precisely defined as unique learning subject in teaching plans, it are omitted from the classes, which that does not happen when the subject is formally included in the curriculum (Dal-Farra & Geremia 2010).

The following specific strategies and methodologies in teaching spirituality have been mentioned: "seminar in small groups", "opportunistic education" (for example: relevant issues emerging in the care of specific patients), "teaching by example", "counselling/mentoring" and "role modeling" (Lambie et al. 2015). The monitoring of chaplains was considered useful by the students, both for their professional practice, especially in the development of communicative skills in times of crisis, as for their personal growth (McEvoy et al. 2013; Perechocky et al. 2014).

Various teaching methodologies are used in Brazilian schools, such as: lectures, group discussions, reading texts, use of films on the subject, online activities, problem-based learning, visits to patients, meditation, music therapy, group meetings to share personal experiences, discussion with visiting professors and reading of scientific articles (Lucchetti et al. 2012b).

**Which themes are included in spirituality classes?**

A teaching experience in spirituality considered that, more than just having theoretical discussions on issues related to spirituality and religion, the clinical skills of students should be increased in addressing the spiritual needs of patients (Schonfeld et al. 2014). The authors suggested the following elements for a course in spirituality for fourth year medical students: a) the diversity of religious/spiritual practices and its impact on medical practice; b) critical analysis of research in spirituality; c) recording of the spiritual history and its importance to the doctor-patient relationship; and d) spirituality in terminal disease and in other clinical situations (Schonfeld et al. 2014).

A US national survey on this subject showed the following contents: spirituality in health beliefs and practices, prayer with patients, professional boundaries, recording of spiritual history and the role of chaplains. According to Koenig and colleagues, the teaching in S/H is short and there is no consistent content (Koenig et al. 2010). In another study, Feldstein et al. (2008) have considered the concept of spirituality as a multidimensional variable, practical skillfor defining when and how to collect the spiritual history. This study used the tools HOPE and FICA, self-awareness and self-care of the students themselves, as a way to integrate spirituality into the care of patients, observing their own values and sources of meaning (Feldstein et al. 2008).

In another American experience, the course content aimed to increase the students’ understanding of spirituality and religiosity of patients in the context of actual experiences of health and illness, to develop communication skills in addressing the R/S beliefs of patients and to stimulate the students’ reflection on their own spirituality (McEvoy et al. 2013). This experience used a strategy of developing the course program according to the objectives of the students in learning the subject. For that, two months before starting the elective discipline the students were requested to describe their personal and professional learning goals (McEvoy et al. 2013).

In Brazil, two medical schools include practical education in R/S in the curriculum, and only three teach how to collect the spiritual history of the patients (Lucchetti et al. 2012b). Most courses have a load of 30h without opportunities for the students to have practical experiences of spiritual care. Only two Brazilian schools offer practical training and in only three the students learn how to collect the spiritual history of the patients (Lucchetti et al. 2012b). In medical schools that focus on the theme of spirituality (not just religion/theology), the contents included in the courses were: concepts of spirituality and religiosity, why to study spirituality in patient care, thoughts about the existence of God, pain and suffering in a transcendent vision, spirituality in health and disease, the mysteries of faith, why, when and how to include spirituality in health care, spiritual training of the health
professional, spirituality as an instrument of humanized care, research on spirituality and health, reflections on the myth of Plato's Cave, studies on near-death experiences, watching the documentary "Life after Life" of Raymond Moody, the quantum physics paradigm, ethical issues and spirituality, thanatology from the perspective of transpersonal psychology, spirituality and coping, epidemiology of spirituality and health, spirituality in educational practices, spirituality on health education, implications of spirituality in medical training, Kirlian photography, Ayurvedic medicine, prayer and meditation on health, chakras and centers of power, homeopathy, hypnosis, conscientiology and thanatology (Lucchetti et al. 2012b).

The topics covered in UK medical schools that teach the subject are: different religious cultures (in 70% of the schools), association between spirituality and health (in 80% of schools). However, spiritual history collection and spiritual counseling are taught in only 40% and 30% of them, respectively. Other topics include: philosophy of spirituality, ethics and faith, ethical aspects and dilemmas arising from certain religious beliefs. 40% of these schools create opportunities for accompanying the chaplain (Neely & Minford 2008).

Which are the obstacles or challenges in teaching spirituality?

Four studies showed results related to the obstacles and challenges of teaching of spirituality in medical schools. A study in New Zealand sowed that, according to the opinion of the school heads, the following items represent potential obstacles to teaching spirituality: lack of consensus about the nature of the subject (56 participants, 81%), lack of faculty experience (41 participants, 59%), the faculty does not consider the topic relevant enough (31 participants, 45%), the curriculum is already overloaded (30 participants, 44%), and conviction that the students would not consider the subject as relevant (22 participants, 32%). Lack of relevance was pointed out by 15% of the school heads. The concern with curricular overload was also reported in other studies (Dal-Farra & Geremia 2010; McEvoy et al. 2013; Schonfeld et al. 2014). In a qualitative analysis, many respondents stressed the delicate character of the theme for many patients, expressing concerns about the lack of experience of undergraduates in approaching highly personal and sensitive issues. That kind of concern has also been expressed about the teaching of spirituality to students with different cultural baggage, making the logistics challenging (Lambie et al. 2015).

There are conceptual difficulties in relation to spirituality and religion, and a historical avoidance of science to address spiritual issues of human experience. Extreme positions, deriving from fear of condemning again the science, consider science and spirituality hopelessly irreconcilable and adopt an irresponsible religious proselytism (Dal-Farra & Geremia 2010).

How are the students evaluated?

Two studies described forms of evaluation of students. In an American experience, the authors state that students should not start the approach to spiritual matters with patients without first having conducted a self-reflection about their own spirituality. Five different forms of assessment, which can be complementary to each other, were suggested: a) writing a personal spiritual profile of up to 500 words, at the beginning of the course; b) having a spiritual blog, in which the students keep an online journal, identifying and presenting various aspects of spiritual care; c) writing a reflective article based on the review of clinical cases, with up to 1000 words; d) reflective oral presentation about a book chosen by the student, addressing the relationship of spirituality with medicine; and f) writing a case report on a patient seen by the Chaplaincy Service accompanied by the students (Schonfeld et al. 2014).

Another report described a final evaluation in which students were invited to write a reflective essay, stimulated by the phrase: "write about your evolution, if you had it, during the last month of studies on the theme spirituality/religion and medicine". The students were invited to share their essays with the group, which provided a
safe discussion about helping other people and its motivations (McEvoy et al. 2013).

Table 2. Characteristics of the articles on spirituality/religiosity (S/R) in medical undergraduate curricula included in the present review.

<table>
<thead>
<tr>
<th>First Author</th>
<th>Country</th>
<th>Design</th>
<th>Relevance Scale</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harbinson &amp; Bell 2015</td>
<td>UK</td>
<td>Survey</td>
<td>High</td>
<td>Students and faculty generally recognize a spiritual dimension to health and support provision of spiritual care to appropriate patients. There is lack of consensus whether this should be delivered by doctors or left to others. Spiritual issues impacting patient management should be included in the curriculum; agreement is lacking about how to deliver and assess.</td>
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<tr>
<td>Balboni et al. 2015</td>
<td>USA</td>
<td>Grounded theory</td>
<td>High</td>
<td>Religion/spirituality may present unique challenges and benefits in relation to the hidden curriculum; respondents more often report to struggle with issues of personal identity, increased self-doubt, and perceived medical knowledge inadequacy. S/R trainees describe using prayer, faith, and compassion as means for coping whereas nonreligious/nonspiritual trainees discuss compartmentalization and emotional repression. Third, levels of R/S appear to fluctuate in relation to medical training, with many trainees experiencing an increase in S/R during training.</td>
</tr>
<tr>
<td>Lambie et al. 2015</td>
<td>New Zealand</td>
<td>Survey and thematic analysis</td>
<td>High</td>
<td>The results indicate that spirituality is regarded by many people involved in medical education in New Zealand as an important part of healthcare, and that it may be taught in medical schools, but also that there is little consensus among this group as to what the topic is about.</td>
</tr>
<tr>
<td>Schonfeld et al. 2016</td>
<td>USA</td>
<td>Essay</td>
<td>Low</td>
<td>Several reasons to include spirituality in the training of health professional: 1) spiritual commitments help students cope with stress, 2) will prepare students to care for patients whose ultimate sources of meaning may differ markedly from their own, 3) evidence has demonstrated that patients want their care providers to inquire into their spiritual needs. The nature of training in spirituality is such that pieces of it can be incorporated into existing modules can be conducted as workshops or as stand-alone elective courses.</td>
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<tr>
<td>Study</td>
<td>Country</td>
<td>Methodology</td>
<td>Level</td>
<td>Summary</td>
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<tr>
<td>Perechocky et al. 2014</td>
<td>USA</td>
<td>Survey</td>
<td>Low</td>
<td>More than 90% of respondents agreed or strongly agreed that (1) the program provided them with a greater understanding of how to engage patients and families in difficult conversations; (2) they learned about the chaplain’s role in the hospital; and (3) the experience was useful for their medical education, careers, and personal development. About two-thirds (9/14) perceived that they learned how to discuss spirituality with patients and families. All recommended the experience be part of the medical school curriculum.</td>
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<tr>
<td>Bridge &amp; Bennett 2014</td>
<td>Australia</td>
<td>Experience report</td>
<td>Low</td>
<td>Describes a teaching experience of spirituality theme to Australian medical students, with two weeks of duration for students in fifth and sixth year of the course, with a wide range of topics.</td>
</tr>
<tr>
<td>Lucchetti et al. 2013</td>
<td>Brazil</td>
<td>Multicentric survey</td>
<td>High</td>
<td>3,630 medical students participated in the survey (61.0%). The sample was 53.8% women and the mean age was 22.5 years. The majority of them believed that spirituality has an impact on patients’ health (71.2%) and that this impact is positive (68.2%). The majority also wanted to address R/S in their clinical practice (58.0%) and considered it relevant (75.3%), although nearly one-half (48.7%) felt unprepared to do so. Concerning their training, most students reported that they had never participated in a “spirituality and health” activity (81.0%) and that their medical instructors had never or rarely addressed this issue (78.3%). The majority also believed that they should be prepared to address spiritual issues related to the health of their patients (61.6%) and that this content should be included in the medical curriculum (62.6%).</td>
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<tr>
<td>McEvoy et al. 2013</td>
<td>USA</td>
<td>Descriptive, focus group</td>
<td>High</td>
<td>Describes a longitudinal senior elective course at the end of medical school training to delve into matters of religion/spirituality surrounding patient care.</td>
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<td>Banin et al. 2013</td>
<td>Brazil</td>
<td>Cross-sectional study</td>
<td>Low</td>
<td>Results showed that medical students did not address spirituality as frequently as medical teachers (p &lt; 0.001). Most participants did not feel prepared to address this issue, and believe that Brazilian medical schools are not giving all the required information in this field. Nevertheless, they believe students should be prepared to discuss these issues.</td>
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<tr>
<td>Lennon-Dearing et al. 2012</td>
<td>USA</td>
<td>Descriptive</td>
<td>Low</td>
<td>Workshop evaluations show that students can learn key concepts of spirituality and the basics of spiritual assessment while developing understanding and respect for the role of chaplains, social workers and physicians.</td>
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<tr>
<td>Study Authors</td>
<td>Location</td>
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<tr>
<td>Lucchetti et al. 2012</td>
<td>Brazil</td>
<td>Survey</td>
<td>High</td>
<td>A total of 86 out of 180 (47.7%) medical schools responded. Results indicated that 10.4% of Brazilian medical schools have a dedicated S/H courses and 40.5% have courses or content on spirituality and health. Only two medical schools have S/H courses that involve hands-on training and three schools have S/H courses that teach how to conduct a spiritual history. The majority of medical directors (54%) believe that S/H is important to teach in their schools.</td>
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<tr>
<td>Koenig et al. 2010</td>
<td>USA</td>
<td>Survey</td>
<td>High</td>
<td>Ninety percent (range 84%-90%) of medical schools have courses or content on spirituality and health, 73% with content in required courses addressing other topics and 7% with a required course dedicated to S/H. Although over 90% indicate that patients emphasize spirituality in their coping and health care, only 39% say that including S/H is important. When asked if their institution needs more S/H curricular content, 43% indicated they did; however, even if funding and training support were available, only 25% would open additional curricular time. National policy statements, established competencies, or methods to evaluate student competencies in S/H were generally considered unimportant.</td>
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<tr>
<td>LoboPrabhu &amp; Lomax 2010</td>
<td>USA</td>
<td>Essay</td>
<td>Low</td>
<td>In order to promote receptive attitudes and to develop clinical skills, attention needs to be directed on how to influence individualized learning and the &quot;hidden curriculum.&quot; This can be done by experiential learning such as role play, empathy training, observation of role models and participation in chaplaincy rounds. Special clinical environments such as cancer care, geriatric psychiatry, geriatric care clinics or units, palliative care, pediatrics, and substance abuse clinics provide rich environments to learn about spiritual issues in patient care.</td>
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<tr>
<td>Dal-Farra &amp; Geremia 2010</td>
<td>Brazil</td>
<td>Essay</td>
<td>Low</td>
<td>The inclusion of specific disciplines that address the issues of spirituality in the curriculum allows addressing this theme in its totality, treating its interrelation with other themes. However, there is a need to avoid the overload of curricular activities in relation to the already numerous assignments of students with high workload.</td>
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<tr>
<td>Study</td>
<td>Country</td>
<td>Methodology</td>
<td>Design</td>
<td>Difficulty</td>
</tr>
<tr>
<td>-----------------------</td>
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<td>-------------</td>
<td>-------------</td>
<td>------------</td>
</tr>
<tr>
<td>Bell et al. 2010</td>
<td>UK</td>
<td>Descriptive analysis</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&quot;Wholeness of Healing&quot; was favorably received, performing similarly to other Student Selected Component offered across a range of measures, but better in terms of structure, organization, overall quality, and enjoyment. Participants found it particularly stimulating and of greater relevance to their future career. Students appreciated the practical aspects, such as accompanying hospital chaplains on ward rounds, attending a healing service, receiving instruction in taking a spiritual history, and acquiring therapeutic communication skills.</td>
</tr>
<tr>
<td>Neely &amp; Minford 2008</td>
<td>UK</td>
<td>Survey</td>
<td>Low</td>
<td>A response rate of 53% (n = 17) was achieved. A total of 59% (n = 10) of respondents stated that there is teaching on spirituality in medicine in their curricula. On extrapolation, at least 31% and a maximum of 78% of UK medical schools currently provide some form of teaching on spirituality. Of the respondents that teach spirituality, 50% (n = 5) stated that their schools include compulsory teaching on spirituality in medicine, 80% (n = 8) include optional components.</td>
</tr>
<tr>
<td>Feldstein et al. 2008</td>
<td>USA</td>
<td>Descriptive</td>
<td>High</td>
<td>The course was successful. Students recognized and understood the role of spirituality at the end of life.</td>
</tr>
<tr>
<td>Anandarajah &amp; Mitchell 2007</td>
<td>USA</td>
<td>Pretest-posttest design</td>
<td>Low</td>
<td>Students' knowledge improved on the evidence about spirituality, clinical resources, role of chaplains, approaches to patient care and recognizing spiritual distress.</td>
</tr>
<tr>
<td>Guck &amp; Kavan 2006</td>
<td>USA</td>
<td>Survey</td>
<td>High</td>
<td>Students believe spirituality is a more important factor for health than religion, spirituality is most helpful for acute and mental illnesses, spirituality is helpful for coping with illness but not for healing tissue, endorse a lecture or one- to two-week seminar on spirituality and health rather than a full course and prefer that spirituality and health issues be addressed.</td>
</tr>
<tr>
<td>Sandor et al. 2006</td>
<td>USA</td>
<td>Pretest-posttest design</td>
<td>Low</td>
<td>There was a significant increase in perceived importance of spirituality in practice. An interesting finding revealed that both male and female students evidenced reduced dogmatic perceptions over time.</td>
</tr>
<tr>
<td>Barnett &amp; Fortin 2006</td>
<td>USA</td>
<td>Pretest-posttest design</td>
<td>Low</td>
<td>Students recognized the appropriateness of inquiring about spiritual and religious beliefs in the medical encounter, perceived competence in taking a spiritual history and knowledge of available pastoral care resource.</td>
</tr>
</tbody>
</table>
Discussion

The results of this review summarise the current state of development of curricular approaches to spirituality in medical education during the graduation period. Medical training has been recognized as a constantly changing area over the last century, and many criticisms have been raised regarding its excessive emphasis on scientific aspects in detriment of values such as compassion and completeness (Cooke et al. 2006). However, there is a significant global trend of multiple propositions of curricula for health education seeking technical-ethical-scientific formative experiences which are rigorous, critical, propositional and committed to the social demands (Batista et al. 2015). It is worth mentioning that a curriculum is seen here as a political process, a social and historical artifact resulting from the context in which it is inserted, being a practice developed through multiple processes and elements. Pedagogical ideas, selection and structuring of content, as well as the pedagogic and methodological model used, in addition to the role for the teacher and the student, configure the practices developed and define the institutional curriculum (Goodson 1995; Sacristan 2000, 2007).

In this context, the study of human spirituality as an integral element of culture and the network of meanings attributed to diseases, health and medical treatments is highly relevant, demanding appropriate curricular and methodological approaches. However, despite the many studies of good methodological quality which address the impact of the R/S on health (Koenig et al. 2012), the teaching of this theme and its inclusion in the curriculum of medical schools has been reviewed by very few countries, as shown by Lucchetti et al. (2012b) (19). In those countries where an overview of teaching spirituality in medical schools is already available, the recognition of its need is predominant among students, teachers, directors or patients, despite a lack of consensus about contents and teaching methods.

The concept of an integrated curriculum in medical education is increasingly recognized around the world, and widely discussed as an alternative to break the barriers between the basic and clinical sciences, a model used in traditional curricular structures. The integrated curriculum aims at promoting the development of competences through the progressive construction and application of concepts (Brauer & Ferguson 2015). The present review suggests the need to include the theme spirituality in the curricula of medical education, leading to a meaningful and contextualized perspective correlated to other knowledges.

The characteristics intrinsic to the theme of spirituality in the medical perspective go far beyond conceptual or strictly theoretical contents. They include practical dimensions, such as the genuine appreciation of the patient's narrative, a respectful and friendly listening, an empathic capacity in relation to the patient's beliefs and values, even if distant from ontological professional references. They also concern include the ability to identify the right moment to address the patients' religious/spiritual issues, in an ethical way appropriate to the clinical context, and not just a protocol formality; they refer to knowing how to conduct a spiritual anamnesis and how to advise in terms of spiritual care, leading to realistic hope, facilitating positive coping, creating opportunities for the integration of health services with the patient religious support network. The results presented here indicate that several medical schools have understood the important of going beyond the theory, providing students with transformative experiences, as for example, by following the work of chaplains (Lennon-Dearing et al. 2012).

Teaching subjects of high complexity, that integrate theoretical and conceptual elements, communication skills and professional attitude, requires the use of appropriate teaching methodologies. The design of more effective methodologies, especially those that stimulate the students to consider their own spirituality (or absence thereof), the exchange of experience between students and teachers, and the expression of fears and beliefs by the students as any human being, should compose the teaching-learning strategy.
The diversity of teaching methods used in the different medical schools around the world stresses the need for the integration of various forms of education and, in addition, the absence of a single and standardized curriculum format. In this context, active methodologies have been adopted and exploited in medical training, as a way to give more importance to the students, allowing them to build their learnings in a significant and reflective way.

It is worth mentioning, however, the scarcity of online teaching resources used by the schools, and the virtually inexistent approach of the theme of spirituality in this mode. The use of (inter) active methodologies as the sum of systematically planned activities aiming at the development of meaningful learning in an analytical and critical way, through the use of technological tools, could be an interesting approach towards a curriculum with integrated and critical approaches in medical education.

Conclusions

Teaching R/S in medical schools is a developing process which is not yet a global phenomenon, as shown by the fact that publications of only a few countries are available. The results of the present review show that the subject is relevant, and important as a curricular element in medical education. The results show relevant data about how medical schools deal with the theme of spirituality during graduation. The analysis of the opinion of the students and faculty on teaching spirituality in medical degree shows that there is a tendency to approach the subject in curricula that seek to break away from traditional views of teaching.

Future developments of this field of research should focus on the need to evaluate in greater depth the methodological issues in spirituality/religiosity teaching. Comparative studies between different teaching methods and studies on the use of virtual OSCE or other forms of distance learning education, for example, have not yet been sufficiently explored.

Take Home Messages

· Despite the large number of reports of good methodological quality addressing the impact of spirituality on health, few countries have evaluated teaching of this theme and its inclusion in their medical schools curriculum.

· In general, there is growing recognition by students and teachers of the importance of teaching spirituality during medical graduation.

· Many medical schools have understood the importance of going beyond theory, providing students with practical, transformative experiences, as for example, by following the work of chaplains.

· The configuration of more effective methodologies, especially those that allow the students to consider their own spirituality (or absence thereof) and make possible the exchange of experience between colleagues and teachers, should compose the teaching-learning process.
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Acknowledgements

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Appendices

Declarations

The author has declared that there are no conflicts of interest.

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