



# Opinions, Knowledge and Attitudes Concerning “Spirituality, Religiosity and Health” Among Health Graduates in a Spanish University

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## Abstract

This study aims to investigate the opinions, knowledge and attitudes concerning spirituality, religiosity and health among 75 health MSc graduates from a Spanish university. The questionnaire “Religion and Spirituality in Medicine, Perspectives of Physicians” was used. Most students had low levels of religious activities, agreeing that S/R could have a high influence on the health professional–patient relationship (62.6%). Nevertheless, they felt little prepared to address these issues (90.6%) and believed that universities were not providing enough information on this topic (91.9%). The most common barriers for addressing R/S were insufficient time (34.7%) and fear of offending the patients (31.9%). Nurse students tended to believe more on the influence of R/S on patients’ health and on the appropriateness of addressing R/S issues. However, religious beliefs were not associated with students’ R/S opinions. The incorporation of such topic could potentially promote the spiritual sensitivity of health professionals, improving the holistic care.

**Keywords** Spirituality · Religion · Education · Transcultural · Health sciences

## Introduction

Religiosity and spirituality (R/S) are cultural factors that could influence the identity, traditions and the way of life of societies, impacting quality of life and the health of individuals (Rodríguez-Yunta 2016; Watkins et al. 2016; Navas and Villegas 2006; Reutter and Bigatti 2014). Several studies have shown the positive effects (feelings of comfort and tranquility) that the R/S produces in people with serious diseases such

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as cancer (Park et al. 2015; Tsai et al. 2016) and mental health problems (Agorastos et al. 2014). Likewise, various organizations such as the World Health Organization and North American Nursing Association (NANDA) have included this topic in their statements and guidelines (Moreira-Almeida et al. 2014). Despite this wide array of evidence, there are still few health professionals who address this issue and include it in their clinical practice.

In fact, more studies are needed to investigate the opinions and training of students in R/S (García and Koenig 2013; Jacob et al. 2017, Rassoulilian et al. 2016). Lucchetti et al. (2013) carried out a Brazilian multicenter study with 3,630 medical students, showing that 81.0% of students have never received any training during medical school on spirituality and health and that the medical school never or almost never had treated this topic (78.3%). Nevertheless, most students believed that they should be prepared to approach spirituality with their patients (61.6%) and that medical schools were not training adequately in this area (83.4%). The most common barriers pointed by this and by previous studies are the lack of preparation in this field, the lack of time, the lack of training and the fear of imposing one's own beliefs (Balboni et al. 2014; Vincensi and Solberg 2017; Best et al. 2016; Lucchetti et al. 2013).

Within this context, numerous studies have now shown the positive results of training programs of spiritual care directed to health professionals (van de Geer et al. 2018). R/S educational programs have proven to be effective and increased the students' awareness of the need to include spirituality as part of daily clinical practice. Burkhart and Schmidt (2012) carried out an intervention with nursing students, and the results pointed out that participants were able to understand spiritual care as a dimension of clinical practice, pointing out the need to be trained in this respect and the importance of the incorporation of R/S into the nursing courses.

However, despite previous studies that have investigated this issue in healthcare students (Babamohamadi et al. 2018; Cruz et al. 2017; Cordero et al. 2018), there is a lack of studies evaluating graduate students (Masters and PhDs). The investigation of the attitudes and opinions of this group of students is important since these students are in training to become teachers and researchers and thus will be responsible for the training of future professionals. Likewise, to date, little is known about the opinions on health and spirituality and religiosity among health professionals in Spain.

## Aim

To investigate the opinions, knowledge and attitudes concerning spirituality, religiosity and health among health graduates in a Spanish university.

## Methods

This is a cross-sectional study carried out in the School of Nursing, Physiotherapy and Podiatry of the University of Seville, Spain. The Ethics Research Committee of Andalusia, Spain, approved the study, and all students signed a consent form.

## Participants/Sample

According to university's official data, a total of 100 graduate students (nurses, podiatrists and physiotherapists) were taking the master's degree course in *New Career Trends in Health Sciences* at the University of Seville, Spain. The main objective of this postgraduate training is to complement the competences acquired during healthcare undergraduation, allowing the development of knowledge related to the research in health sciences.

Participants were included if they were health professionals, enrolled in the courses of the master's (MSc) degree and voluntarily participated in the study, signing an informed consent.

## Procedure/Recruitment

Students were personally approached by one of the researchers who invited them to voluntarily participate in the study. They were provided with information about the nature and the objectives of the study, and their questions were clarified by the researchers.

After requesting informed consent, the questionnaire was distributed among the students who agreed to participate. They were given between 10 and 15 min to complete the questionnaire.

## Instruments

A pencil-and-paper self-administered questionnaire was used and included:

- Sociodemographic data: gender, age, ethnicity, religion and year of undergraduate nursing training),
- Student religious/spiritual beliefs: through the Duke University Religion Index (DUREL) (Lucchetti et al. 2012), a five-item measure of religious involvement, which yields three subscales: organizational religious behavior (1 item), nonorganizational religious behavior (1 item) and intrinsic religious motivation (3 items), and through the Curlin's instrument (Curlin et al. 2007), "Religion and Spirituality in Medicine, Perspectives of Physician RSMPP," an instrument already used and validated by several international studies (Tomasso et al. 2011; Hvidt et al. 2016), as well as, used in a recent study comparing nursing students from Brazil and Portugal (Cordero et al. 2018). This instrument assesses two types of students' opinions. The first part deals with the opinions of the role of R/S in clinical practice, and the second part evaluates students' opinions about academic training and teaching. Since this questionnaire has a translated version in Portuguese, in order to adapt it to the Spanish language, content validation and transcultural adaptation were carried

out by a group of experts in health sciences and R/S ( $n=4$ ). They belong to the universities of Seville (Spain) and Algarve (Portugal).

## Data Analysis

First, a descriptive analysis was performed using frequency, percentage, mean and standard deviation. Then, a logistic regression was performed in order to see which factors (gender, age, year, ethnicity, country and religiosity) could be associated with the following opinions: influence of R/S on patients' health, appropriateness to address R/S issues, influence of R/S on the nurse–patient relationship and if the student should be prepared to address R/S issues. Some items were dichotomized in order to reduce the number of empty cells and to make analyses clearer. For example, the question “Should the student be prepared to address R/S issues?” was dichotomized into “Very much/Much” and “Some/A little/Very little or none.”

All analyses were performed using SPSS version 22 (SPSS Inc.). A  $p < 0.05$  was considered as significant, and we adopted a confidence interval of 95%.

## Results

From a total of 100 students officially registered in the MSc course, 75 were included (response rate = 75%) in the final analysis, being 72% nurses, 12% physical therapists and 16.0% podiatrists.

Table 1 presents the sociodemographics and the religious characteristics of participants. Students were mostly females (64%), from a white ethnicity (97.2%) and with a mean age of 28.04 years ( $SD=6.91$ ). Concerning the religious aspects, most students had no religious affiliation (49.3%) and had low levels of religious activities and religious beliefs.

Table 2 presents students' opinions and attitudes in relation to R/S in clinical practice (Table 2). Students tend to consider spirituality as a search for meaning in human life (58.7%). Although they believe spirituality has some or little influence on patient's health (54.7%), they consider this influence positive (65.3%). They agree that S/R can have a high influence on the health professional–patient relationship (62.6%) and that they feel little prepared to address these issues (90.6%). Most students have never inquired about patients' R/S issues (65.8%), and the most common barriers were concerns of insufficient time (34.7%), offending the patients (31.9%), insufficient knowledge (22.7%) and insufficient training (22.7%). The most cited spiritual treatments were prayer (41.5%) and laying on of hands (23.1%).

The interface between spirituality and nursing education is shown in Table 3. Students tend to believe that universities are not providing enough information on how to address R/S issues (91.9%). However, most students did not believe they should be prepared much on this issue (62.1%) and have never taken part of an activity related to this subject (90.6%). Despite these opinions, most students believe “Spirituality and Health” should be included in the curriculum (62.2%). When questioned in which way these students search for information in R/S and health, most students

**Table 1** Sociodemographic and religious characteristics

	Mean	SD
<i>Age</i>	28.04	SD: 6.91
	<i>n</i>	%
<i>Gender</i>		
Female	48	64.0
Male	27	36.0
<i>Profession</i>		
Nursing	54	72.0
Physical Therapy	9	12.0
Podology	12	16.0
<i>Ethnicity</i>		
White	70	97.2
Other	2	2.8
<i>Income</i>		
Up to 1500 Euros	20	27.8
1500 Euros or more	52	72.2
<i>Religion</i>		
Catholic	33	44.0
Other	5	6.7
None, but believe in God	22	29.3
None and do not believe in God	15	20.0
<i>To what extent do you consider a religious person?</i>		
Very religious/Moderately religious	24	32.4
Slightly religious/Not religious at all	50	67.6
<i>How often do you attend church or other religious meetings?</i>		
More than once a week/Once a week	9	12.0
Less than once a week	66	88.0
<i>How often do you spend time in private religious activities (i.e., prayer, meditation, Bible study)?</i>		
Daily/More than once a day	11	14.6
Less than daily	64	85.4
<i>In my life, I experience the presence of the Divine</i>		
Definitely true of me/Tends to be true	23	30.6
Definitely not true/Tends not to be true/Unsure	52	69.4
<i>My religious beliefs are what really lie behind my whole approach to life</i>		
Definitely true of me/Tends to be true	29	38.6
Definitely not true/Tends not to be true/Unsure	46	61.4
<i>I try hard to carry my religion over into all other dealings in life</i>		
Definitely true of me/Tends to be true	14	18.9
Definitely not true/Tends not to be true/Unsure	60	81.1

**Table 2** Students' opinions concerning spirituality in clinical practice

	<i>n</i>	%
<i>What do you consider to be spirituality? (check all that apply)</i>		
Ethical and humanistic posture	20	26.7
Search for meaning in human life	44	58.7
Belief and relation to God/Religiosity	14	18.7
Belief in the something other than matter	16	21.3
Belief in the existence of soul and life after death	10	13.3
<i>Overall, how much influence do you think religion/spirituality has on patients' health?</i>		
Very much/Much	34	45.3
Some/A little/Very little or none	41	54.7
<i>Is the influence of religion/spirituality on health generally positive or negative?</i>		
Generally positive	49	65.3
Generally negative	3	4.0
Equally positive and negative	19	25.3
It has no influence	4	5.3
<i>How much influence do you think religion/spirituality has on the health–disease understanding and on the health professional–patient relationship</i>		
High influence	13	17.3
Moderate/Low/No influence	62	82.7
<i>Do you want to address spiritual/religious issues with your patients?</i>		
Yes	36	49.3
No	38	50.7
<i>To what extent do you feel prepared to address S/R issues?</i>		
Very much/Much	7	9.4
Some/A little/Very little or none	68	90.6
<i>To what extent do you think it is appropriate to address S/R issues?</i>		
Very much/Much/Some	47	62.6
A little/Very little or none	28	37.3

Table 2 (continued)

	<i>n</i>	%
<i>Do you ever inquire about patients' religious/spiritual issues?</i>		
Yes	25	34.2
No	48	65.8
<i>How often do you inquire R/S issues?</i>		
Always/Often	3	12.0
Sometimes/Rarely	22	88.0
<i>Do any of the following discourage you from discussing religion/spirituality with patients? (check all that apply)</i>		
Insufficient knowledge	17	22.7
Insufficient training	17	22.7
Insufficient time	25	34.7
General discomfort with discussing religious matters	9	12.5
Concern of imposing my religious beliefs	9	12.5
Religion is not relevant for the treatment	6	8.3
It is not my job	14	19.4
Concern of offending the patients	23	31.9
Concern that my colleagues will disapprove	4	5.6
<i>Which tools or spiritual treatments do you believe should be recommended for your patients? (check all that apply)</i>		
Prayer	27	41.5
Religious books	8	12.3
Magnetized water/Holy water	1	1.5
Spirit release therapy/Exorcism	2	3.1
Laying on of hands/Reiki/Spiritist Passe/Johrei	15	23.1
Charity work in religious temples	7	10.8

**Table 3** Students opinions' concerning spirituality in nursing education

	<i>n</i>	<i>%</i>
<i>Does university provide to students enough information on how to address R/S issues?</i>		
Very much/Much/Some	6	8.1
A little/Very little or none	56	75.6
No opinion	12	16.3
<i>Should the student be prepared to address R/S issues?</i>		
Very much/Much	28	37.9
Some/A little/Very little or none	40	54.0
No opinion	6	8.1
<i>Have you ever taken part of an activity related to Spirituality and health?</i>		
Yes	7	9.4
No, but I would like to participate	44	59.4
No and I would like not to participate	23	31.2
<i>Should Spirituality and Health be included in the curriculum?</i>		
Yes	46	62.2
No	28	37.8
<i>In which way you like to get further information on health, medicine, spirituality and religiosity? (check all that apply)</i>		
I do not search for this content	43	58.9
I watch conferences or classes or congresses	7	9.6
I read books	7	9.6
I read scientific articles	14	19.2
I search this information with my teachers	3	4.1
I search this information inside my own religion	8	11.0

said they did not search for this information (58.9%) and 19.2% said they search in scientific articles.

Finally, nurse students tend to believe more on the influence of R/S on patients' health ( $OR=5.85$ ,  $p=0.011$ ) and on the appropriateness of addressing R/S issues ( $OR=4.41$ ,  $p=0.011$ ) as compared to non-nurse students. High-income students also tend to believe more on the influence of R/S on patients' health ( $OR=7.55$ ,  $p=0.005$ ). Other variables, including religious beliefs, were not associated with students' practices and opinions (Table 4).

## Discussion

Our results indicate that, although health graduate students from a Spanish university have low levels of religiosity and spirituality, they acknowledge the influence of this subject on the patient–physician relationship, feel little prepared to address these issues and agree that the university is not providing enough information on how to address R/S issues. These results are a first step to understand the relationship of

**Table 4** Factors associated with students' opinions concerning spirituality and health

	OR	95% CI		<i>p</i>
<i>Overall, how much influence do you think R/S has on patients' health?<sup>a</sup></i>				
Very much/Much = 1 versus Some/A little/Very little or none = 0				
Gender—Male	1.623	0.501	5.259	0.420
Age	0.935	0.860	1.016	0.115
Profession—Nursing	5.853	1.510	22.689	<b>0.011</b>
Income—High	7.555	1.842	30.986	<b>0.005</b>
Religious affiliation—yes	0.497	0.107	2.320	0.374
Slightly religious/Not religious at all	2.805	0.750	10.490	0.125
<i>To what extent do you think it is appropriate to address S/R issues?<sup>b</sup></i>				
1 = Very much/Much 0 = Some/A little/Very little or none				
Gender—Female	0.918	0.307	2.748	0.879
Age	0.969	0.894	1.050	0.439
Profession—Nursing	4.415	1.405	13.874	<b>0.011</b>
Income—High	1.954	0.580	6.581	0.280
Religious affiliation—yes	1.604	0.392	6.566	0.511
Slightly religious/Not religious at all	0.930	0.267	3.233	0.909
<i>How much influence do you think R/S has on the nurse–client relationship<sup>c</sup></i>				
1 = High influence 0 = Moderate/Low/No influence				
Gender—Female	3.191	0.694	14.674	0.136
Age	0.956	0.867	1.055	0.374
Profession—Nursing	2.461	0.439	13.790	0.306
Income—High	2.955	0.525	16.626	0.219
Religious affiliation—yes	0.545	0.094	3.148	0.498
Slightly religious/Not religious at all	3.884	0.803	18.779	0.091
<i>Should the student be prepared to address R/S issues?<sup>d</sup></i>				
1 = Very much/Much 0 = Some/A little/Very little or none				
Gender—Female	1.967	0.602	6.428	0.263
Age	0.969	0.892	1.053	0.462
Profession—Nursing	2.773	0.730	10.541	0.134
Income—High	1.420	0.413	4.888	0.578
Religious affiliation—yes	1.528	0.352	6.646	0.572
Slightly religious/Not religious at all	2.871	0.765	10.773	0.118

Statistically significant values are given in bold

<sup>a</sup>Hosmer–Lemeshow—Chi-square = 8.992, *p* = 0.343, Nagelkerke R Square = 0.328

<sup>b</sup>Hosmer–Lemeshow—Chi-square = 6.576, *p* = 0.583, Nagelkerke R Square = 0.154

<sup>c</sup>Hosmer–Lemeshow—Chi-square = 7.544, *p* = 0.273, Nagelkerke R Square = 0.164

<sup>d</sup>Hosmer–Lemeshow—Chi-square = 8.441, *p* = 0.295, Nagelkerke R Square = 0.143

“Spirituality and Health” in Spain and also add to the current literature analyzing MSc students.

Concerning students’ religious affiliation, most of them had no religious affiliation and low levels of religious activities and religious beliefs. These findings differ from the latest survey carried out in the Spanish population collected in the barometer of the Center for Sociological Research (2012), where 68.8% of Spanish citizens defined themselves as Catholics. Concerning nursing students, 32.4% of the Spanish students considered to be very or moderately religious, which is lower than those found in Portugal (43.2%) and in Brazil (77.7%) (Cordero et al. 2018; Tomasso et al. 2011).

Despite the fact that almost half of the participants consider themselves non-religious, this seems to not influence the desire to address R/S in clinical practice. Although previous studies have found that more religious nurses usually dedicate more time including spirituality in health care (Chan 2010; Vincensi and Solberg 2017), personal religiosity has not been statistically correlated with the frequency of performing spiritual care for patients in our sample.

There is also a clear difference in the concept of “Spirituality” between Spanish students as compared to other countries. If, on the one hand, Brazilian nursing students tend to agree that spirituality is “the belief and its relation to God/Religiosity” (Tomasso et al. 2011) and Portuguese students believe it is “the belief in the something other than matter” (Cordero et al. 2018), on the other hand, Spanish students in this study consider spirituality as “the search for meaning in human life.” These findings reflect that cultural backgrounds and the importance of religion in each society could potentially influence the view of these students concerning this topic and should be considered while providing an educational intervention for these students.

In relation to the clinical practice, most Spanish students believe that spirituality has a small but positive impact on the health of the patients, which is in line with the results obtained by Cohen and Koenig (2003). Likewise, students understand the importance of approaching spirituality in the care of patients and about half of them want to address it, although they feel little prepared to address these issues. Analyzing the most common barriers that prevent study participants from addressing spirituality, most students underscored the lack of time, followed by the fear of offending patients and lack of training. These Spanish results are different from those found in Brazilian and Portuguese nursing students (i.e., concern of imposing my religious beliefs). The explanation for these findings is that our sample was composed by MSc graduate students who are working in clinical setting as compared to undergraduate students who usually have more time and support to see patients in simulated and safety environments.

As regards the opinion of the participants in this sample about the university education, most of them agree that it should be part of the curriculum (62.2%). In fact, training is an important tool to decrease the barriers to this approach and to increase the confidence and comfort of health professionals and students (Osório et al. 2017). A Spanish study in the nursing field found that most students who received a R/S training demonstrated a positive R/S attitude and knowledge, valuing spirituality as a specific professional competence in nursing (Roig-Vila et al. 2016). Likewise,

Cooper et al. (2013) found that training could improve nurse students' perception on the subject, knowledge and attitudes about spiritual care, the ability to respond verbally and empathetically to expressions of spiritual pain, and the ability to explain one's spiritual experience (Cooper et al. 2013).

In the case of physiotherapy students, R/S interventions showed an increase in the perception that spirituality has a positive impact on health (Sargeant and Newsham 2012), in the perception that spiritual and religious attention should be part of the practice of physiotherapists (Highfield and Osterhues (2003) and in the opinion that spiritual well-being is an important component of health (Morris 2013).

These results point to the fact that R/S training is still needed for these students, since most barriers are minimized by the appropriate intervention. This would increase spiritual awareness and make them feel more prepared, thus decreasing the fear of addressing these issues. As supported by previous studies, the incorporation of R/S issues in university curricula may be a valid strategy to develop nursing competences in the labor field. However, this incorporation seems to be insufficient in the Spanish context, since most students agreed that they were not exposed to this topic. A broad discussion concerning the implementation of R/S courses could be a first step to change this scenario.

This study had several limitations. First, this is a cross-sectional study, not allowing to establish a "cause–effect" association; longitudinal studies would be appropriate to complement this study and to verify how R/S opinions change over the years. Second, our sample was composed by MSc students from a single university in Spain. More studies in graduate students and in healthcare professionals are welcome.

## Conclusions

Spanish graduate students believe that they should be prepared to address R/S in clinical practice and that this topic should be included in their graduate education. The incorporation of such topic could potentially promote the spiritual sensitivity of health professionals, improving the holistic care.

## Compliance with Ethical Standards

**Conflict of interest** The authors declare that they have no conflict of interest.

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Declaration of Helsinki and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

## References

- Agorastos, A., Demiralay, C., & Huber, C. G. (2014). Influence of religious aspects and personal beliefs on psychological behavior: Focus on anxiety disorders. *Psychology Research and Behavior Management*, 7, 93–101. <https://doi.org/10.2147/PRBM.S43666>.
- Balboni, M. J., Sullivan, A., Enzinger, A. C., Epstein-Peterson, Z. D., Tseng, Y. D., Mitchell, C., et al. (2014). Nurse and physician barriers to spiritual care provision at the end of life. *Journal of Pain and Symptom Management*, 48(3), 400–410. <https://doi.org/10.1016/j.jpainsymman.2013.09.020>. Nurse.
- Babamohamadi, H., Ahmadpanah, M.S., Ghorbani, R. (2018). Attitudes toward spirituality and spiritual care among Iranian nurses and nursing students: A cross-sectional study. *Journal of Religion and Health*, 57(4), 1304–1314. <https://doi.org/10.1007/s10943-017-0485-y>.
- Best, M., Butow, P., Oliver, I. (2016). Doctors discussing religion and spirituality: A systematic literature review. *Palliative Medicine*, 30(4), 327–337. <https://doi.org/10.1177/0269216315600912>.
- Burkhart, L., & Schmidt, W. (2012). Measuring effectiveness of a spiritual care pedagogy in nursing education. *Journal of Professional Nursing*, 28(5), 315–321. <https://doi.org/10.1016/j.profnurs.2012.03.003>.
- Centro de investigaciones sociológicas. (2012). *Barómetro de Marzo 2012*. [Internet] [Acceso en 25 de Mayo de 2017]. Disponible en: [http://datos.cis.es/pdf/Es2935mar\\_A.pdf](http://datos.cis.es/pdf/Es2935mar_A.pdf).
- Chan, M. F. (2010). Factors affecting nursing staff in practising spiritual care. *Journal of Clinical Nursing*, 19(15–16), 2128–2136. <https://doi.org/10.1111/j.1365-2702.2008.02690.x/full>.
- Cohen, A. B., & Koenig, H. G. (2003). Religion, religiosity and spirituality in the biopsychosocial model of health and ageing. *Ageing International*, 28, 215. <https://doi.org/10.1007/s12126-002-1005-1>.
- Cooper, K. L., Chang, E., Sheehan, A., & Johnson, A. (2013). The impact of spiritual care education upon preparing undergraduate nursing students to provide spiritual care. *Nurse Education Today*, 33(9), 1057–1061. <https://doi.org/10.1016/j.nedt.2012.04.005>.
- Cordero, R. D., Romero, B. B., de Matos, F. A., et al. (2018). Opinions and attitudes on the relationship between spirituality, religiosity and health: A comparison between nursing students from Brazil and Portugal. *Journal of Clinical Nursing*, 27, 2804–2813. <https://doi.org/10.1111/jocn.14340>.
- Cruz, J.P., Alshammari, F., Alotaibi, K.A., Colet, P.C. (2017). Spirituality and spiritual care perspectives among baccalaureate nursing students in Saudi Arabia: A cross-sectional study. *Nurse Education Today*, 49, 156–162. <https://doi.org/10.1016/j.nedt.2016.11.027>.
- Curlin, F.A., Sellergren, S.A., Lantos, J.D., Chin, M.H. (2007). Physicians' observations and interpretations of the influence of religion and spirituality on health. *Archives of Internal Medicine*, 167(7), 649–654.
- García, K., & Koenig, H. G. (2013). Re-examining definitions of spirituality in nursing research. *Journal of Advanced Nursing*, 69(12), 2622–2634.
- Highfield, M. E., & Osterhues, D. (2003). Spiritual care rights and quality of care: Perspectives of physical therapy students. *Journal for Healthcare Quality*, 25, 12–16.
- Hvidt, N. C., Kappel Kørup, A., Curlin, F. A., Baumann, K., Frick, E., Søndergaard, J., et al. (2016). The NERSH International Collaboration on values, spirituality and religion in medicine: Development of questionnaire, description of data pool, and overview of pool publications. *Religions*, 7(8), 107. <https://doi.org/10.1111/j.1945-1474.2003.tb01026.x>.
- Jacob, B., Blanco, A., & Shogbon, A. (2017). First-year student pharmacists' spirituality and perceptions regarding the role of spirituality in pharmacy education. *American Journal of Pharmaceutical Education*, 81(6), 108. <https://doi.org/10.5688/ajpe816108>.
- Lucchetti, G., de Oliveira, L. R., Koenig, H. G., Leite, J. R., & Lucchetti, A. L. G. (2013). Medical students, spirituality and religiosity—results from the multicenter study SBRAIME. *BMC Medical Education*, 13, 162.
- Lucchetti, G., Granero Lucchetti, A. L., Peres, M. F., et al. (2012). Validation of the duke religion index: DUREL (Portuguese version). *Journal of Religion and Health*, 51(2), 579–586. <https://doi.org/10.1007/s10943-010-9429-5>.
- Moreira-Almeida, A., Koenig, H. G., & Lucchetti, G. (2014). Clinical implications of spirituality to mental health: review of evidence and practical guidelines. *Revista brasileira de psiquiatria*, 36(2), 176–182.
- Morris, D. (2013). Perceptions of spirituality and spiritual care in occupational therapy practice. *Occupational Therapy in Mental Health*, 29(1), 60–77. <https://doi.org/10.1080/0164212x.2013.761109>.

- Navas, C., & Villegas, H. (2006). Espiritualidad y Salud. *Revista Ciencias de la Educación*, 1(27), 29–45.
- Osório, I. H. S., Gonçalves, L. M., Pozzobon, P. M., Júnior, J. J. G., Miranda, F. M., Lucchetti, A. L. G., et al. (2017). Effect of an educational intervention in “spirituality and health” on knowledge, attitudes, and skills of students in health-related areas: A controlled randomized trial. *Medical Teacher*, 39(10), 1057–1064. <https://doi.org/10.1080/0142159X.2017.1337878>.
- Park, C. L., Sherman, A. C., Jim, H. S. L., & Salsman, J. M. (2015). Religion/Spirituality and health in the context of cancer: Cross-domain integration, unresolved issues, and future directions. *Cancer*, 121(21), 3789–3794.
- Rassoulain, A., Seidman, C., Löffler-Stastka, H. (2016). Transcendence, religion and spirituality in medicine: Medical students’ point of view. *Medicine (Baltimore)*, 95(38), e4953. <https://doi.org/10.1097/MD.0000000000004953>.
- Reutter, K. K., & Bigatti, S. M. (2014). Religiosity and spirituality as resiliency resources: Moderation, mediation, or moderated mediation? *Journal for the Scientific Study of Religion*, 53, 56–72. <https://doi.org/10.1111/jssr.12081>.
- Rodríguez-Yunta, E. (2016). Determinantes Sociales De La Salud Mental. Rol De La Religiosidad. *Persona Y Bioética*, 20(2), 192–204. <https://doi.org/10.5294/pebi.2016.20.2.6>.
- Roig-Vila, R., Blasco, J., Lledó, A., & Pellín, N. (2016). *Investigación e Innovación Educativa en Docencia* (p. 15). Propuestas y Acciones: Retos.
- Sargeant, D., & Newsham, K. (2012). Physical therapist students’ perceptions of spirituality and religion in patient care. *Journal of Physical Therapy Education*, 26(2), 63–73.
- Tomasso, C. S., Beltrame, I. L., & Lucchetti, G. (2011). Knowledge and attitudes of nursing professors and students concerning the interface between spirituality, religiosity and health. *Revista Latino-Americana de Enfermagem*, 19(5), 1205–1213.
- Tsai, T. J., Chung, U. L., Chang, C. J., & Wang, H. H. (2016). Influence of religious beliefs on the health of cancer patients. *Asian Pacific Journal of Cancer Prevention*, 17(4), 2315–2320. <https://doi.org/10.7314/APJCP.2016.17.4.2315>.
- van de Geer, J., Veeger, N., Groot, M., Zock, H., Leget, C., Prins, J., et al. (2018). Multidisciplinary training on spiritual care for patients in palliative care trajectories improves the attitudes and competencies of hospital medical staff: Results of a quasi-experimental study. *American Journal of Hospice and Palliative Medicine*, 35(2), 218–228. <https://doi.org/10.1177/1049909117692959>.
- Vincenzi, B. B., & Solberg, M. (2017). Assessing the frequency nurse practitioners incorporate spiritual care into patient-centered care. *Journal for Nurse Practitioners*, 13(5), 368–375. <https://doi.org/10.1016/j.nurpra.2017.03.005>.
- Watkins, T. L., Simpson, C., Cofield, S. S., et al. (2016). The relationship of religiosity, spirituality, substance abuse, and depression among black men who have sex with men (MSM). *Journal of Religion and Health*, 55(1), 255–268. <https://doi.org/10.1007/s10943-015-0101-y>.

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