

Review Article

Evaluation of Spiritual Health and Its Related Factors in Iranian Nurses and Nursing Students: A Narrative Review



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ABSTRACT

Background and Objectives: Spiritual health is a crucial aspect of health. Spiritual health is an internal and satisfying feeling combined with constructive communication with oneself and others. It is a transcendental existence in the specific cultural framework of each society, which makes life and death meaningful. Paying attention to spiritual health can improve nursing care by nurses. Therefore, the present study was conducted to investigate spiritual health and its related factors in Iranian nurses and nursing students.

Methods: The present study was a systematic review (2022) that was conducted by searching for articles on the Web of Science, Science Direct, Scientific Information Database (SID), Scopus, Google Scholar, and PubMed databases without a time limit. The keywords were “spiritual wellbeing”, “spiritual health”, “spirituality”, “nurse”, “related factors”, and “Iran” in Persian and English sources. The articles on spiritual health and its components of quantitative study that were performed on Iranian nurses and nursing students were examined.

Results: In 48 studies, the level of spiritual health of nurses and nursing students was moderate (In the range of 20-120). Spiritual health in the religious dimension was more than the existential dimension. Several factors, such as demographic variables, job, education, job satisfaction, spiritual care, and so on improve the level of spiritual health, and reducing factors, such as stress, anxiety, and depression improves the level of spiritual health of nurses.

Conclusion: Paying attention to factors, such as age, gender, marriage, educational status, job conditions, level of satisfaction, personal characteristics and psychological conditions can lead to change in spiritual health.

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Introduction

According to the definition of the [World Health Organization \(WHO\)](#), spiritual health is one of the four dimensions of human health, next to the physical, mental, and social dimensions [1]. Spiritual health comprises dimensions of religious and existential health. Religious health reflects the relationship with God or infinite power, and existential health reflects our relationship with others, the environment, and ourselves, and it can be considered the ability to integrate different aspects of the individual's existence with different choices [2]. People with good spiritual health have a holistic approach to life and can act with an open and dynamic mind when facing problems [3]. When spiritual health is seriously compromised, a person may suffer from mental disorders, such as feeling lonely, depressed, and losing meaning in life [4].

One of the most challenging work environments is hospitals, where most of the people working in these centers are nurses [5]. Nurses, due to the nature of their profession, including direct and constant contact with patients' pain and suffering, shortage of personnel, inappropriate working conditions [6], multiple tasks, high volume of work, insufficient support [7], rotation of working shifts and sleep disorders, physical problems, the complexity of nursing services [8, 9], the conflict between work and family life and lifestyle disorder [9], are exposed to physical, psychological and social stressors more than other working people [10]; these factors make their health, especially their spiritual health, vulnerable [4].

Spiritual health can be useful as a source of comfort and hope for nurses who face many stressful factors every day and are responsible for caring for patients [11]. Also, it can have a vital role in adapting to stress, have a positive effect on the mental and physical health of people, and can be considered a common solution to deal with any problem and improves the quality of nursing services [3]. According to Stahl (1989), caregivers' awareness of spiritual health can create a positive motivation in health caregivers, which ultimately helps them achieve satisfaction in their personal and professional life [12].

Different studies have reported the spiritual health of nurses differently. For example, in the study conducted by Shamsai (2020), the spiritual health of Emergency Department nurses was at an average level [3]. While Mousavi and Nehri (2017) reported the spiritual health of nurses at a high level in the Special Ward [13]. Different studies have reported factors, such as age, gender

[14], moral distress [3], professional commitment and nursing care [15], and depression [16] affecting spiritual health. On the other hand, in Jalali's study (2019), no relationship was reported between clinical competence and spiritual health [17]. In the study conducted by Tavani (2016), no relationship was observed between the age, marriage, and education degree of nurses with spiritual health [18]. Therefore, the question arises, what factors are related to the spiritual health of nurses?

In recent decades, spiritual health has gained weight similar to other dimensions of health (physical, mental and social) [19]. The results of the mentioned studies can have useful information regarding the spiritual health of nurses and nursing students, and its related factors. It also helps design and implement suitable solutions to improve the spiritual health of nurses and nursing students. However, due to the multitude of studies, readers may not be able to reach a consensus. Also, most studies conducted in this field are descriptive. Therefore, conducting a review study can help clarify and integrate the results of the studies [20]. Since no review study has been conducted in this field so far, in this review study, we will focus on the spiritual health of Iranian nurses and nursing students and its related factors to help the researchers, nurses, managers, and other interested people in the field of spiritual health to reach a quick summary of the results of the relevant studies. Maybe, a small step can be taken to improve this problem.

Methods

This research was a systematic review that investigated spiritual health and its related factors among Iranian nurses and nursing students in January 2022. The last search was on February 2, 2022. To identify articles on Iranian nurses and nursing students in Persian and English journals, [Web of Science](#), [Science Direct](#), [Scientific Information Database \(SID\)](#), [Magiran](#), [Irandoc](#), [IranMedex](#), [Scopus](#), [Google Scholar](#), and [PubMed](#) databases were searched. To search in Farsi language databases, we used the keywords of "spiritual health", "spiritual well-being", "nurse", and "Iran", and in English databases, its MeSH equivalents, including "spiritual well-being", "spirituality", "nurse", "related factors", "Iran", and "spiritual health" in a combination and using the operators AND and OR without time limit. Search strategy in the English PubMed databases was based on this combination (spiritual health [Title/Abstract]) AND (nurse [Title/Abstract]) and in the Scopus database based on this combination (spiritual health AND nurse*) TITLE-ABS. Two independent researchers searched the phrases in databases.

Table 1. The quality assessment scores of the studies in this systematic review

Names of Authors of Descriptive Studies	Final Score	Names of Authors of Descriptive Studies	Final Score	Names of Authors of Descriptive Studies	Final Score
Osarrodi 2011 [41]	9.5	Khorami Markani 2017 [27]	10.5	Abbasi 2014 [61]	10.5
Abdolmaleki 2020 [4]	10.5	Fatemi 2011 [56]	11.5	Masoumi 2016 [46]	10.5
Mousavi Moghadam 2015 [32]	9.5	Musavi Vanhari 2016 [13]	10.5	Khodaveisi 2017 [54]	10.5
Masoumi 2016 [46]	10.5	Narimani 2015 [37]	10.5	Moghimian 2012 [53]	10.5
Akhlaghifard 2021 [23]	10.5	Golparvar 2014 [28]	10.5	Farahaninia 2006 [59]	10.5
Shamsaei 2020 [3]	10.5	Sotoudeh 2016 [44]	10.5	Taghizadeganzadeh 2020 [24]	10.5
Chavoshian 2015 [40]	11.5	Hajlo Nader 2016 [42]	10.5	Gharehbohlou 2016 [58]	10.5
Golipoor Khanmiri 2018 [14]	10.5	Jahandideh 2018 [36]	10.5	Mohammadi 2018 [52]	10.5
Zare 2014 [30]	9.5	Jafari 2015 [43]	10.5	Khoshnud 2016	10.5
Jalali 2019 [17]	10.5	Jafari 2015 [43]	10.5	Hatamipour 2016 [55]	10.5
Moeini 2015 [29]	9.5	Borjililoo 2014 [26]	10.5	Rahimi 2014 [57]	10.5
Tavan 2016 [18]	9.5	Samadifard 2018 [25]	10.5	Tavan 2016 [18]	10.5
Ramezanzade 2016 [33]	10.5	Khorami Markani 2018 [31]	10.5	Ebadi 2017 [48]	10.5
Aminasharieh 2018 [34]	10.5	Azarsa 2015 [35]	11.5	Ebadi 2017 [49]	10.5
Atashzadeh Shooride 2017 [2]	10.5	Ehsani 2015 [1]	9.5	Shamsizadeh 2020 [51]	10.5
Rafie 2019 [45]	10.5	Baghianpour 2019 [38]	10.5	Beigi 2015 [50]	10.5

To determine the compatibility of the articles with the research topic, the title and the abstract of the articles were first examined and after the approval of the article based on the inclusion criteria, the texts of the articles were studied by the researchers. Descriptive articles on Iranian nurses were reviewed. We used the critical appraisal skills programme (CASP) checklist to examine the quality of descriptive articles. This checklist is recommended by Cochrane. The cross-sectional checklist has 12 questions, the case-control 11 questions, and the cohort 12 questions [21]. Scoring was done based on the importance of each part according to the present study. No rating scale has been made specifically for this system. However, using the study of Rico Kano (2020), each evaluated item was given the following qualitative scores: “yes” (1 point), “can’t say” (0.5 points), or “no” (0 points). Accordingly, when we encountered “yes” in two-thirds of the CASP sections, this score was regarded as “High”. “Average” quality was considered when the score of at least half of the questionnaire was “yes”. And finally, if more than two-thirds of the answers were

“no”, the article was recorded as “low” quality [22]. In this way, the range of scores in case-control studies is 0-11, and in cross-sectional and cohort studies, 0-22. The higher the score, the higher the quality of the studies based on the CASP scale. Table 1 lists the results of the evaluation of the quality of the articles.

The inclusion criteria for selecting articles included articles published in Persian or English, the subject of the studies conducted in the field of the spiritual health of nurses working in Iranian medical centers and nursing students and the factors affecting it, availability of its publication, the full text in research and academic journals, and the studies obtaining medium and high points after quality evaluation. The exclusion criteria included the low quality of the study, short report, and letter to the editor.

To extract the data, the data extraction form was used, which included sections, such as the authors’ specifications and the year of publication, the purpose of the

study, the type of research, the sample size, and the method of collecting information and results. After completing this form, the obtained results from the review of the articles were analyzed, summarized, and reported. At first, 117527 articles related to the spiritual health of nurses and nursing students were found. By removing duplicates, irrelevant cases, articles without full text, qualitative studies, other provider health care, letters to the editor, and short reports, 48 articles were recognized as eligible (Figure 1).

Results

Among the present studies, 7 cases were in the English language, and the rest were in the Farsi language. Forty cases of the studies were published from 2015 to 2022 and the rest were published before 2015. All studies were descriptive. The number of samples varied from 50 to 550 people. A total of 21 cases of nurses were investigated in all clinical wards of the hospitals, 9 cases in special wards, one case in an emergency, and one case in the oncology ward. Students were examined at undergraduate and graduate levels.

Among the studies conducted, 12 studies were sampled by simple random method, 12 by census method, 9 by convenience method, 6 by stratified random method, 2 by cluster method, 1 by an easy method, 1 by the exclusive method, and 1 by the voluntary method. The sampling method was not mentioned for two studies.

The inclusion criteria of nurses included satisfaction and willingness to participate in the study, having a minimum degree in nursing, and work experience in a hospital. The exclusion criteria included unwillingness to cooperate, not signing the consent form to participate in the research, taking psychiatric drugs, unwillingness to cooperate, and delivering incomplete or invalid questionnaires.

The inclusion criteria of nursing students included willingness and consent to participate in the study, studying in the mentioned university, and not suffering from mental disorders based on self-report. The exclusion criteria included unwillingness to participate in the research despite initial consent, incomplete filling of the questionnaire, withdrawing from the university and not returning the questionnaire, and having a stressful event, such as the death of a loved one in the past year, a guest student, or illness.

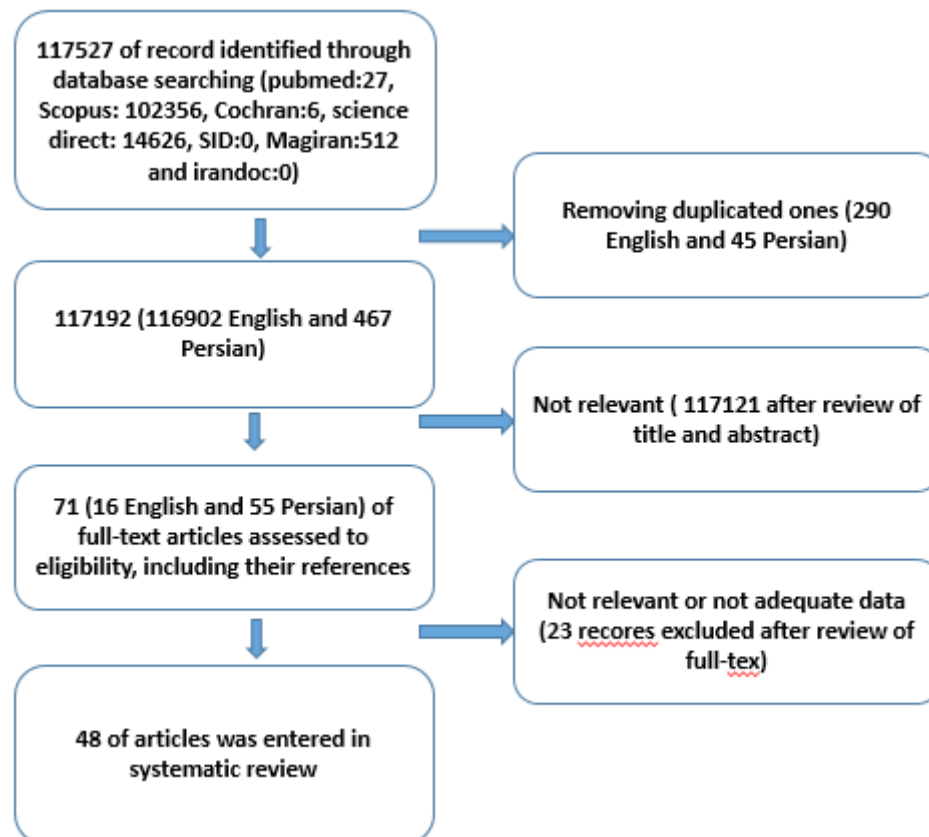


Figure 1. Flowchart of selecting studies to enter the analysis.

The tool for gathering information in 39 studies was Paloutzian and Ellison's spiritual health questionnaire, Amiri's spiritual health questionnaire [23], spiritual health from the perspective of Islam [18], spiritual health in Iranian society [24], Fisher's spiritual health [25], Delman and Frey's spiritual health [26], Oncology spiritual health [27], Golparvar's spiritual health [13, 28] and the questionnaire of statements of evaluating nurses' attitude towards spiritual health [1].

In most studies, the spiritual health of nurses (21 cases) and nursing students (14 cases) was at an average level (in the range of 20-120). Spiritual health in the religious dimension was more than the existential dimension.

The spiritual health of nurses had a significant negative relationship with age [1, 27, 29-31], gender [18, 32], work experience [1, 18, 30], marriage, education, type of ward, type of shift and responsibility [33], financial status [27], caring behaviors [2], cooperation, assertiveness, self-control, hope, spiritual intelligence [34], clinical competence, professional ethics, interpersonal relationships [33], psychological capital and spiritual connection [13, 28], religious practices [26], provision of spiritual care [26, 30, 35, 36], attitude to spiritual care [27], religious adherence [37], job satisfaction [4, 14, 31, 38, 39], job compatibility [25], quality of life [40, 41], vision, attitude and behavior [23], marital satisfaction [32, 37, 42], Islamic lifestyle [38], meaning in life [43], social level, mental state [27], coping methods [39], psychological health [44] significant positive relationship with obstacles related to nurses [29], job stress [45, 46], moral distress [3], coronavirus anxiety, tension and emotional turmoil [23], depression, anxiety [23, 43], and social dysfunction [43] (Table 2).

The spiritual health of nursing students had a significant positive relationship with age [47], marital status, type of university [48, 49], academic year [24], psychological ability [50], moral sensitivity [51], happiness [48], hope [49], internal religious orientation, source of internal control and problem-oriented leaders [52], spiritual intelligence [53], exam anxiety [54], and general health [55]. Also, it had a significant negative relationship with students' anxiety at the time of entering the internship [56], and external control sources [52] (Table 3).

Discussion

The findings of most studies show that the spiritual health of nurses and nursing students was at an average level. Hsiao (2011) reported the spiritual health of nursing students at an average level which is consistent with

the present study [16]. While in Pesut's study, students had a high level of spiritual health [63]. In Wagner's study (1998), more than 50% of nurses had high spiritual health [64]. Nursing is inherently a spiritual profession, and nowadays the emphasis on the importance of spirituality and spiritual care in nursing is evident. The average level of spiritual health in this group may be because the nursing education system in Iran has not yet included spiritual care as part of its curriculum [65]. Also, the differences between the studies can be attributed to the place of employment and geographical and cultural differences.

Spiritual health in the religious dimension was more than the existential dimension. But in the study of Hsiao (2011), the dimension of communication with others had a higher score than the religious dimension [16]. The religious dimension shows the relationship with God and the existential dimension shows our relationship with others, the environment, and ourselves. Therefore, more spiritual health in the religious dimension is not far from expected for the Iranian society, which is inclined toward religious and spiritual values.

In this study, spiritual health had a significant positive relationship with age and work experience. In Borna's (2020) study, age was also related to spiritual health [66]. Hsiao's study results were contrary to the present study [16]. It seems that with the increase in work experience and received training, the professional and moral ability and therefore the spiritual health of nurses improves.

In this study, nurses' spiritual health had a significant relationship with job satisfaction. In the study of Bakhtiari (2018), the spirituality of the work environment had a significant positive relationship with life satisfaction [67]. Altaf (2011) also pointed out the positive relationship between spirituality and job satisfaction [68]. It seems that spiritual health leads to the existence of integrity, continuity of work, understanding of the deep values of the work environment, a sense of being together, sociability, and solidarity among employees, and therefore improves their job satisfaction [67].

The findings of the present study showed that spiritual health has a positive relationship with the provision of spiritual care. Nissen (2021) considers the provision of spiritual care as one of the requirements of patient care and the development of a person's spiritual health. Perhaps it can be said that spiritual care can be an inspiring conceptual framework for developing therapeutic programs and promoting spiritual health because it can help nurses to recognize the unmet spiritual needs of patients [69].

Table 2. Reviewed articles on spiritual health and its factors related among Iranian nurses

Name of the Author(S)/Year City in Iran	Type of Study/ Study Samples	The Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Rafiei et al. 2018 Ghazvin [45]	Cross-sectional/all nurses	The inclusion criteria: Consent to participate in the study	The role of spiritual health on the occupational stress of nurses working in the thera- peutic training center affiliated with Qazvin University of Medi- cal Sciences	A total of 220 nurses/ census/ Paloutzian and Ellison's spiri- tual health questionnaires and occupational stress of nurses	The spiritual health of the nurses was at an average level. Spiritual health in the existential dimen- sion was more than the religious dimension. Occupational stress had a significant relationship with spiritual health.
Atashzadeh Shooride et al. 2016 Tehran [2] (EN)	Descriptive-correlation- al/all nurses	The inclusion criteria: Having a bachelor's degree in nursing and two years of work experience	The relationship between nurses' spiritual health and their caring behaviors	A total of 256 nurses/ randomly/ Paloutzian and Ellison's spiri- tual health questionnaire and caring behaviors	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Caring behaviors had a significant relationship with spiritual health.
Aminalsharieh et al. 2018 Urmia [34]	Correlational/ Departments of public hospitals	The inclusion criteria: having at least an associate's degree, not taking psychoactive drugs, not having stressful events such as divorce and death, etc. in the last 6 months. The exclusion criteria: use of psychiatric drugs, unwillingness to cooperate, not signing the consent form to participate in the research, obtaining incomplete or invalid questionnaires.	Investigating the relationship between social skills, hope and spiritual intelligence with the spiritual health of nurses	A total of 280 nurses/ stratified/ Questionnaires of social skills, hope, spiritual intelligence and spiritual health of Paloutzian and Ellison	The variables of cooperation, assertiveness, self-control, hope, and spiritual intelligence had a significant positive relationship with spiritual health.
Ramezanzade et al. 2016 Neyshabur (EN) [33]	Cross-sectional/ nurses of all clinical wards	The inclusion criteria included em- ployees of different departments of the two studied hospitals, having at least a bachelor's degree in nursing and having at least six months of work experience as a nurse, and the exclusion criteria included doing something other than caring for patients and not completing or returning question- naires.	Investigating clinical compe- tence and its relationship with professional ethics and spiritual health in nurses	A total of 281 nurses/ census/ Clinical competency self-assess- ment scale, nursing ethics and spiritual health questionnaires of Paloutzian and Ellison	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Variables of clinical competence, professional ethics and interpersonal relation- ships had a significant positive relationship with spiritual health. Marriage, education, type of department, type of shift and having responsibility were related to spiritual health.

Name of the Author(S)/Year City in Iran	Type of Study/ Study Samples	The Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Tavan et al. 2016 Ilam [18]	Descriptive-correlational/ Special ward nurses	The inclusion and exclusion criteria are not mentioned.	Prediction of spiritual health dimensions in nurses working in special departments of Ilam City hospitals in the year: the role of demographic variables	Sixty nurses/ Convenience/ Questionnaire of spiritual health from the perspective of Islam	The spiritual health of the nurses was at an average level. Work experience and gender had a statistically significant positive relationship with spiritual health.
Moeini et al. 2015 Isfahan (EN) [29]	Descriptive-correlational/ CCU wards	The inclusion criteria: Nurses who have an associate's degree, bachelor's, or master's degree in nursing, have at least two years of experience in CCU, and not receiving psychotropic drugs. The exclusion criteria: incomplete filling of the questionnaire	Spiritual well-being of nurses and their views on barriers to providing spiritual care	Eighty-eight nurses/ census/ Paloutzian and Ellison's spiritual health questionnaire	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Obstacles related to nurse and patient to provide spiritual care had a significant negative relationship with spiritual health and a significant positive relationship with age.
Jalali et al. 2019 Tehran (EN) [17]	Cross-sectional/intensive care units	The inclusion criteria: informed consent of the samples to participate in the study, having a bachelor's degree in nursing, working in the intensive care unit, and at least two years of work experience	The relationship between spiritual health and clinical competence of nurses working in intensive care units	A total of 135 nurses/ Randomly classified / Paloutzian and Ellison's spiritual health questionnaire and intensive care nursing qualification scale	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension.
Zare et al. 2014 Shiraz [30]	Cross-sectional/nurses working in special wards	The inclusion and exclusion criteria are not mentioned.	The effect of the spiritual health of nurses in special wards on providing spiritual care to hospitalized patients.	A total of 210 nurses/ easy/ Paloutzian and Ellison's standard spiritual health questionnaire and Van Leeuwen's spiritual care competency	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Spiritual health has a significant positive relationship with age, work experience, and training spiritual principles during education.
Golipoor Khanmiri et al. 2019 Tabriz [14]	Cross-sectional/all nurses	The inclusion criteria: at least one year of work experience and interest in participating in research	Investigating the relationship between spiritual health and job satisfaction of nurses in Tabriz Shahadai Medical Training Center	A total of 155 nurses/ simple random Paloutzian and Ellison spiritual health questionnaire and Minnesota job satisfaction	The spiritual health of the nurses was at an average level. Spiritual health had a significant relationship with nurses' job satisfaction.

Name of the Author(S)/Year City in Iran	Type of Study/ Study Samples	The Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Chavoshian et al. 2015 Hamadan [40]	Cross-sectional-all nurses	The inclusion criteria: bachelor's and master's degrees, experience of at least one year of clinical work, lacking managerial positions, not facing major challenges such as divorce, death of loved ones, etc. in the last 6 months	The role of spiritual health and social support in predicting the quality of life of nurses	A total of 200 nurses/ census/ Paloutzian and Ellison's spiritual health questionnaires, the World Health Organization quality of life and social support	The spiritual health of the nurses was at an average level. Religious health showed a significant relationship with the physical, mental and environmental dimensions of quality of life, and the dimension of existential health showed a significant relationship with the physical and mental dimensions of quality of life. Religious health can predict the quality of life.
Shamsaei et al. 2020 Hamadan [3]	Cross-sectional/ emergency nurse	The inclusion criteria: nurses working in the emergency department who were interested in participating in the study. The exclusion criteria: nurses who were working overtime or case shifts and did not want to participate in the research.	Investigating the relationship between spiritual health and moral distress of nurses working in the emergency departments of Hamedan University of Medical Sciences hospitals	140 nurses/ census/ Paloutzian and Ellison's spiritual health and Corelli's moral distress questionnaires	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Spiritual health has a significant negative relationship with moral distress.
Akhlaghifard et al. 2021 Eslamshahr [23]	Cross-sectional/all nurses and paramedics	The inclusion criteria: at least nursing and nursing job experience for one year and not suffering from acute psychological problems based on self-report. The exclusion criteria: distortion of questionnaires (non-completion of questionnaires)	Prediction of coronavirus anxiety based on emotional disturbance (depression, anxiety, and tension) and spiritual health in nurses and paramedics	A total of 118 nurses/convenience/Coronavirus disease anxiety scale, Amiri's spiritual health questionnaire, and depression, anxiety, and stress scale	The spiritual health of the nurses was at an average level. Spiritual health had a significant negative relationship with coronavirus anxiety, depression, anxiety, tension and emotional disturbance and a significant positive relationship with insight, attitude and behavior.
Masoumi et al. 2016 Bushehr [46]	Cross-sectional/ nurses of intensive care units	The inclusion criteria: Having at least a diploma in health care, having at least 4 months of work experience in a special ward, and not having a history of physical, mental, or chronic illness. The exclusion criteria: Less than 4 months of work experience, having chronic physical and mental illnesses, not being satisfied with participation. In studying and intense stress during the last six months, such as the death of a loved one or divorce	Investigating the relationship between occupational stress and spiritual health of nurses working in special departments, Bushehr hospitals	A total of 140 nurses/ census/ Paloutzian and Ellison's spiritual health questionnaires and hospital occupational stress	The spiritual health of the nurses was at an average level. Spiritual health had a significant negative relationship with occupational stress.
Mousavi Moghadam et al. 2015 Shush [32]	Descriptive-correlational/All nurses	The inclusion and exclusion criteria are not mentioned	Investigating the relationship between spiritual health and marital satisfaction and demographic characteristics (age, length of marriage and length of employment in nurses (Nizam Mafi Hospital, Shush, 2015)	Fifty people/ Convenience/ Paloutzian and Ellison's spiritual health questionnaires and marital satisfaction (Enrich)	The spiritual health of the nurses was at an average level. Spiritual health had a significant positive relationship with nurses' marital satisfaction. Gender is a predictor of spiritual health.

Name of the Author(S)/Year City in Iran	Type of Study/ Study Samples	The Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Abdolmaleki et al. 2020 Kordestan [4]	Cross-sectional/all nurses	The inclusion criteria: at least one year of work experience and interest in participating in research and the exclusion criteria: failure to complete the questionnaire and the individual's desire to withdraw from the study in each level	Examining the relationship between job satisfaction and spiritual health in nurses	A total of 110 nurses/ a simple random/ Paloutzian and Ellison's spiri- tual health questionnaires and Minnesota job satisfaction	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Spiritual health had a significant positive relationship with nurses' job satisfaction.
Osarodi et al. 2011 Mashhad [41]	Cross-sectional/ all nurses		Investigating the relationship between spiritual health and quality of life in nurses	Ninety-three nurses/ easy/ Paloutzian and Ellison spiritual health and quality of life ques- tionnaires SF-36	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Spiritual health had a significant positive relationship with nurses' quality of life.
Baghianpour et al. 2019 Karaj [38]	Descriptive-correlation- al/All nurses	The inclusion and exclusion criteria are not mentioned	Predicting job satisfaction based on Islamic lifestyle and spiritual health in nurses	A total of 144 nurses/ simple random/ Paloutzian and Ellison's spiritual health questionnaires, Islamic lifestyle and job satisfaction	Spiritual health had a significant positive relationship with the Islamic lifestyle and job satisfac- tion of nurses.
Ehsani et al. 2015 Tehran (EN) [1]	Cross-sectional/nurses of ICU	The inclusion criteria: at least six months of work in the ICU and having a bachelor's degree or higher	The concept of spiritual health from the point of view of nurses working in intensive care units	Sixty-two nurses/ randomly/ Questionnaire of statements evaluating nurses' attitude toward spiritual health	More than half of the nurses paid good attention to spiritual health. Spiritual health had a significant positive relationship with age and work experience.
Azarsa et al. 2015 Tabriz (EN) [35]	Correlational/ All nurses of intensive units	The inclusion criteria: nurses with a bachelor's degree and at least one year of work experience in the intensive care unit, and the exclusion criteria: passing official spiritual care training courses.	Spiritual well-being, attitude towards spiritual care and its relationship with the compe- tency of spiritual care in special care nurses	A total of 109 nurses/ Sampling method is not men- tioned. Paloutzian and Ellison's spiritual health questionnaires, rating of spirituality and spiritual care and competence of spiritual care	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Spiritual health was positively related to spiritual caregiving competence.
Khorami Markani et al. 2018 Tehran (EN) [27]	Descriptive-Correlation- al/oncology nurses	The inclusion and the exclusion criteria are not mentioned.	The relationship between the spiritual health of oncol- ogy nurses and their attitude towards providing spiritual care based on Neumann's system model: evidence from Iran	A total of 130 nurses/ The sampling method is not mentioned. Spiritual health scale of oncol- ogy nurses and scale of spiri- tual care attitudes of oncology nurses	Spiritual health had a significant relationship with their attitude to spiritual care, age, financial status, social level, mental status and spiritual health.

Name of the Author(S)/Year City in Iran	Type of Study/ Study Samples	The Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Samadifard et al. 2018 Ardabil [25]	Descriptive-Correlational/ female nurses in public hospitals	The inclusion criteria: having an associate's degree in nursing and above, not having physical or mental illness. According to self-report and informed consent to participate in the research. Exclusion criteria: unwillingness to cooperate with researchers.	Determining the relationship between moral identity, spiritual well-being and religious orientation with job adaptability in nurses	A total of 120 nurses/ Convenience/ Questionnaires of Aquino and Reed's moral identity, Fisher's spiritual health, Allport's religious orientation, and Davies and Lofquist's job adjustment	The spiritual health of the nurses was at an average level. Spiritual health had a positive relationship with job adaptability.
Borjaliloo et al. 2014 Tehran [26]	Descriptive-Correlational/ nurses of all clinical departments	The inclusion criteria: having at least 6 months of work experience in clinical departments, having a Bachelor's degree in nursing or master's degree, having at least one shift in the desired department	Care, daily experiences and spiritual well-being in nurses of Tehran hospitals	A total of 250 nurses/ cluster random/ Questionnaires of spiritual care, daily spiritual experiences, and spiritual well-being by Delman and Frei	The spiritual health of the nurses was at a high level. Spiritual health had a significant positive relationship with religious practices and spiritual care.
Jafari 2015 Talesh [43]	Descriptive-correlational/ nurses of all clinical departments	The inclusion criteria: having at least a bachelor's degree, at least one year of work experience, the exclusion criteria: having a profession other than nursing, suffering from physical and mental illnesses, unwillingness to complete the questionnaire	Spiritual predictors of psychiatrists' health: The role of meaning in life, religious health and existential health	A total of 103 nurses/ Convenience/ Questionnaires of meaning in life, spiritual health and general health Paloutzian and Ellison	Spiritual health was in the existential dimension more than the religious dimension. Spiritual health had a significant positive relationship with meaning in life and a significant negative relationship with anxiety, depression and social dysfunction.
Jafari et al. 2015 Parsabad [39]	Descriptive-analytical/ nurses of all clinical departments	The inclusion and exclusion criteria are not mentioned.	The role of spiritual well-being and stress coping strategies in predicting nurses' job satisfaction	Ninety-three nurses/ Convenience/ Paloutzian and Ellison's spiritual well-being questionnaires, stress coping strategies and job satisfaction	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Spiritual health had a significant positive relationship with job satisfaction and coping methods.
Jahandideh et al. 2018 Shiraz [36]	Cross-sectional/nurses of intensive care units	The inclusion and exclusion criteria are not mentioned.	Spiritual well-being of nurses and spiritual care of patients in Iran	A total of 210 nurses/ Convenience/ Paloutzian and Ellison's spiritual well-being questionnaires, basic psychological needs and spiritual care competence	The spiritual health of the nurses was at an average level. Spiritual health in the religious dimension was more than the existential dimension. Spiritual health had a significant positive relationship with spiritual care.
Hajlo et al. 2016 Talesh [42]	Descriptive-correlational/ nurses of all clinical departments	The inclusion and exclusion criteria are not mentioned.	The role of spiritual well-being and meaning of life in predicting nurses' marital satisfaction	Seventy-five nurses/ exclusive / Questionnaires of meaning in life, Paloutzian and Ellison's spiritual health and Enrich marital satisfaction	Spiritual health was in the existential dimension more than the religious dimension. Spiritual health had a significant positive relationship with marital satisfaction.

Name of the Author(S)/Year City in Iran	Type of Study/ Study Samples	The Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Sotoudeh et al. 2016 Bojnourd [44]	Analytical description of the type of correlation- al/nurses of all clinical departments	The inclusion and exclusion criteria are not mentioned.	The role of family health and spiritual health in the psycho- logical well-being of nurses	A total of 120 nurses/ Convenience/ Main family health question- naires, Paloutzian and Ellison's spiritual health questionnaire and Reef's psychological well- being	The spiritual health of the nurses was at an average level. Spiritual health had a significant positive relationship with psychological well-being.
Golparvar et al. 2014 Esfahan [28]	Cross-sectional/ nurses of all clinical depart- ments	The inclusion and exclusion criteria are not mentioned.	Determining the relationship between spiritual connection with psychological capital and spiritual well-being among nurses	A total of 145 nurses/ Convenience/ Kings spiritual and intelli- gence questionnaire, McGee's psychological capital question- naire and Golparvar's spiritual well-being	Psychological capital and spiri- tual connection predict spiritual health.
Narimani et al. 2015 Ardabil [37]	Analytical description of the type of correlation /intensive care, infec- tious, surgical and emer- gency departments of all government hospitals	The inclusion criteria: Passing two years since their marriage, not suffering from chronic mental ill- nesses, having at least 20 years of age and at least one year of work experience in the aforementioned departments	Determining the role of spiri- tual well-being and religious adherence in predicting nurses' marital satisfaction	A total of 176 nurses/ multi-stage cluster/ Paloutzian and Ellison's spiri- tual well-being questionnaires, religious adherence and marital satisfaction based on Islamic standards	The spiritual health of the nurses was at a high level. Spiritual health in the religious dimension was more than the existential dimension. Spiritual health has a significant positive relation- ship with marital satisfaction and religious adherence.
Musavi and Nahri 2017 Esfahan [13]	Descriptive-correlational / Nurses of intensive units	The inclusion and exclusion criteria are not mentioned.	Investigating the relation- ship between spiritual bond with psychological capital and spiritual well-being of intensive care unit nurses	A total of 100 nurses/ simple random/ Questionnaire of spiritual con- nection, psychological capital, and spiritual well-being of Golparvar	Spiritual health was at a high level. Spiritual health had a sig- nificant positive relationship with spiritual bonds and psychological capital.
Fatemi et al. 2011 [56]	Descriptive-correlational / nurses of all clinical departments	The inclusion criteria: having at least 6 months of work in one of the clinical departments, having a master's degree in nursing, passing at least one full shift in the desired department	The relationship between nurs- es' spirituality and patient's satisfaction with nursing care	A total of 100 nurses/ randomly/ Paloutzian and Ellison's spiri- tual health questionnaire	Spiritual health was at a high level. Then religious health was more than existential.
Khorami Markani 2017 Tehran [31]	Cross-sectional/nurses of all clinical depart- ments	The inclusion criteria: having any kind of service relationship with the health system and having at least one year of service experi- ence	Determining the correlation be- tween spiritual health and job satisfaction of employees	Ninety-one nurses/ stratified random/ Paloutzian and Ellison's spiri- tual health and Herzberg's job satisfaction questionnaire	The spiritual health of the nurses was at a high level. Spiritual health had a statistically signifi- cant relationship with job satisfac- tion and age.

Table 3. Reviewed articles on spiritual health and its factors affecting Iranian nursing students

Name of the Author/Year/ City	Type of Study/ Study Samples	Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Beigi and Khademi. 2015 Bandar Abbas [50]	Descriptive-correlational/ nursing students	The inclusion and exclusion criteria are not mentioned.	The relationship between spiri- tual health and psychological ability in nursing students	A total of 112 nursing students/ census/ Paloutzian and Ellison's mental health questionnaires and Spritzer's psychological ability questionnaire	The spiritual health of nursing students was at an average level. Spiritual health had a significant relationship with two dimensions of psychologi- cal empowerment (meaningful and effective dimensions).
Shamsizadeh et al. 2020 Hamedan [51]	Cross-sectional/undergradu- ate and graduate nursing students	The inclusion criteria: Islam and Shia religion, not having mental disorders based on self-report. The exclusion criteria: unwill- ingness to participate in the research despite initial consent and incomplete completion of the questionnaire	The relationship between spiritual health and moral sen- sitivity of nursing students	A total of 123 nursing students/ census/ Paloutzian and Ellison's spiritual health and moral sensitivity questionnaires	The spiritual health of nursing students was at an average level. The religious health score was higher than the existential health dimension. Spiritual health had a significant rela- tionship with moral sensitivity.
Ebadi et al. 2017 Yazd [48]	Cross-sectional/all nursing students	The inclusion criteria: male and female nursing students studying in both universities and willing to participate in research. The exclusion criteria: filling out the questionnaire incompletely, withdrawing from the university and not returning the questionnaire.	Determining the relation- ship between spiritual health and the happiness of nursing students of Islamic Azad and Medical Sciences Universities in Yazd	A total of 550 nursing students/ census/ Questionnaires of Paloutzian and Ellison's spiritual health and happiness of Oxford	The spiritual health of the students was at an average level. Spiritual health had a significant relationship with happiness and its areas, marital status and type of university.
Ebadi et al. 2017 Yazd [49]	Descriptive-correlational/all nursing students	The inclusion criteria: male and female nursing students studying in both universities and willing to participate in research. Exclusion criteria: filling out the questionnaire incompletely, withdrawing from the university and not returning the questionnaire	Determining the correlation between spiritual health and hope in nursing students of Islamic Azad and Medical Sciences Universities in Yazd in 2015	A total of 550 nursing students/ census/ Paloutzian and Ellison's spiri- tual health questionnaire and Schneider's adult hope scale	The spiritual health of the students was at an average level. Spiritual health had a significant relationship with hope, marital status and type of university.
Tavan et al. 2016 Ilam [47]	Descriptive-comparative /all nursing students	The inclusion and exclusion criteria are not mentioned.	Comparative study of spiritual health of nursing students	A total of 100 nursing students/ simple random/ Paloutzian and Ellison's spiri- tual health questionnaire	The spiritual health of the stu- dents was at a high level. The dimension of religious health was more than the dimension of existential health. Existential health had a significant rela- tionship with age.

Name of the Author/Year/ City	Type of Study/ Study Samples	Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Gharehbaghlou et al. 2015 Kashan [58]	Descriptive-analytical/all undergraduate and graduate students	The inclusion and exclusion criteria are not mentioned.	Investigating the relationship between religious attitude and spiritual health with life satisfaction of nursing students of Kashan University of Medical Sciences	A total of 176 nursing students/ stratified random/ Questionnaires of religious attitude, satisfaction with life scale and spiritual health of Paloutzian and Ellison	The spiritual health of the stu- dents was at an average level.
Hatamipour et al. 2017 Mazandaran [55]	Cross-sectional/all nursing students	The inclusion and exclusion criteria are not mentioned.	Determining the relationship between spiritual health and anxiety in nursing students upon entering internship	A total of 189 nursing students/ simple random/ Paloutzian and Ellison's spiri- tual health questionnaires and Beck's anxiety questionnaires	The spiritual health of the stu- dents was at an average level. The dimension of religious health was more than the dimension of existential health. Spiritual health and its dimen- sions had a significant negative relationship with students' anxiety at the time of entering internship.
Mohammadi et al. 2016 Pishva [52]	Descriptive correlational analysis/all nursing students	The inclusion criteria: having physical and mental health, being a nursing student, no family members suffering from mental or chronic physical illness, and no stressful events, such as the death of relatives in the past year.	The relationship between re- ligious orientation, happiness, source of control and coping strategies with the spiritual health of nursing students	A total of 140 nursing students/ stratified random/ Paloutzian and Ellison's spiritual health questionnaires, Allport and Ross's religious orientation, Argyle and Low's happiness, Rutter's locus of control and Rosaros and Fleckman coping strategies.	Spiritual health had a signifi- cant positive relationship with an internal religious orienta- tion, happiness, internal locus of control, and problem-ori- ented leaders, and a significant negative relationship with external locus of control.
Moghimian et al. 2018 Brujen [53]	Cross-sectional/nursing students	The exclusion criteria: being an employee and completing courses of spiritual education or participation in spiritual education workshops.	Determining the relationship between spiritual intelligence and spiritual health in nursing students	A total of 178 nursing students/ census/ Paloutzian and Ellison's spiritual health and spiritual intelligence questionnaires	The spiritual health of the students was at an aver- age level. The dimension of religious health was more than the dimension of existential health. Spiritual health had a significant positive relationship with spiritual intelligence.
Gharehbaghlou et al. 2016 Kashan [58]	Cross-sectional/nursing students	The inclusion criteria: Willing- ness to participate in the study and pass at least one academic semester. The exclusion crite- ria: guest student.	Determining the relationship between spiritual health and depression among nursing students in Qom and Kashan	A total of 250 nursing students/ simple random/ Paloutzian and Ellison's spiri- tual health questionnaires and Beck's depression	The spiritual health of the stu- dents was at an average level. The dimension of religious health was more than the dimension of existential health.

Name of the Author/Year/ City	Type of Study/ Study Samples	Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Taghizadeganzadeh et al. 2020 Jahrom [24]	Cross-sectional/nurse from all wards and nursing students	The inclusion and exclusion criteria are not mentioned.	Determining the spiritual health of nurses, professors and nursing students of Jahrom University of Medical Sciences	A total of 268 nurses and 156 nursing students/census/ Spiritual health in Iranian society	The spiritual health of nurses and students was at an average level. The dimension of insight and orientation was more than the dimension of performance. The spiritual health of students had a significant relationship with the academic year.
Farahani et al. 2006 Tehran [59]	Cross-sectional/freshman and senior nursing students	The inclusion and exclusion criteria are not mentioned.	The spiritual health of nursing students and their views on spirituality and spiritual care of patients	A total of 283 nursing students/ census/ Paloutzian and Ellison's spiritual health questionnaires, views on spirituality and spiritual care	The spiritual health of the stu- dents was at an average level.
Moghimian et al. 2012 Najafabad [53]	Descriptive-correlational / students of the 4th and 5th semesters of the bachelor's field	The inclusion criteria: student's timely attendance at the exam session, willingness to partici- pate in research. The exclusion criteria: late attendance to the exam session, not completing both questionnaires, having an anxiety-related heart disease and taking anti-anxiety drugs	Investigation of exam anxiety and spiritual health in female nursing students	A total of 110 nursing students/ easy/ Paloutzian and Ellison's spiri- tual health questionnaires and Sarason's test anxiety	The spiritual health of the students was at an average level. Spiritual health had a significant positive relationship with exam anxiety.
Khodaveisiet al. 2017 Hamedan [54]	Descriptive-correlational / nursing undergraduate stu- dents of 2012-2015	The inclusion criteria: passing the theoretical units and start- ing the internship, as well as the willingness to participate in the study. The exclusion cri- teria: people's lack of consent to participate in the research during the study.	Investigating the correlation between general health and spiritual health of nursing stu- dents of Hamadan University of Medical Sciences	A total of 258 nursing students/ stratified random/ Paloutzian and Ellison's spiri- tual health and general health questionnaires	The spiritual health of the students was at an average level. Spiritual health had a significant positive relationship with general health.

Name of the Author/Year/ City	Type of Study/ Study Samples	Exclusion and Inclusion Criteria	The Purpose of the Study	Sample Size/ Sampling Method/ Tool	Results
Musavi et al. 2016 Rasht [13]	Descriptive-correlational/ senior undergraduate nursing students	The inclusion criteria: senior nursing students, willingness to participate in the study. Exclu- sion criteria: Students suffering from infectious diseases, hor- monal disorders, kidney failure, metabolic diseases, acute and chronic emotional and nervous disorders, history of allergies, gastrointestinal diseases, use of steroid drugs and other cases prescribed by a specialist of im- munology affects blood cortisol levels.	Determining the correlation between spiritual health and blood cortisol levels in nursing students	A total of 100 nursing students/ simple random/ Paloutzian and Ellison's spiri- tual health questionnaire	The spiritual health of the students was at an average level. The existential health dimension was more than the religious health dimension.
Abbasi et al. 2014 Tehran [61] (EN)	Comparative-descriptive/ nursing undergraduate students	The inclusion and exclusion criteria are not mentioned.	Determining spiritual health, spirituality and spiritual care of nursing students	A total of 283 nursing students/ voluntary/ Paloutzian and Ellison's spiritual health questionnaires, spiritual perspective and nursing spiri- tual care perspective	The spiritual health of the stu- dents was at an average level.

The findings of the present study showed that spiritual health has a positive relationship with professional ethics and interpersonal relationships. In Akrami Fard's study (2018), spirituality had a significant relationship with the moral sensitivity of nursing students. It seems that the strong influence, the growing ability, and the flourishing of the nature of professional ethics in different aspects of a person's existence lead to a relationship with spiritual health [70]. It seems that those nurses who consider themselves obliged to do the work correctly in the hospital and somehow observe ethical and professional considerations have high spirituality.

In this study, spiritual health had a positive relationship with clinical competence. A study that reported consistent results with the present study was not found. Therefore, according to the study of Ebrahimi (2017), it can be argued that a person with spiritual health can have skills used in the professional field or nursing process, including therapeutic relationships between nurses and patients, availability for patients, active listening, and expressing empathy, providing religious facilities for patients with specific religious beliefs, helping patients, etc. [70] and therefore have better clinical competence. On the other hand, it can be argued that spirituality and its aspects positively affect adaptation techniques and are effective in improving the quality of health care and nurses' performance.

In this study, spiritual health had a positive relationship with the general health of nursing students. This study's results are consistent with the study of Bozek (2020) [71] and Padehban's (2020) results [72]. Health has physical, mental, spiritual, and social dimensions. Therefore, a person with better spiritual health is expected to have higher general health. On the other hand, it can be concluded that students with a closer relationship with God, have a positive feeling towards their lives, hope for the future, pay more attention to the great God in solitude, and feel the presence of God in all areas of their lives. They realized that they are always supported by the creator of the universe. They can be useful and efficient people for society and have the necessary ability to fulfill their roles and duties and because of that, these students can pay attention to the necessary measures to deal with pressures and stresses and always try to create a healthy and lively environment.

According to the findings of this study, depression, anxiety, stress, and emotional turmoil weaken spiritual health. Hsiao's study finding is also consistent with the present study [16]. It can be said that a person in the mentioned conditions cannot use spiritual coping strategies and a positive attitude when dealing with stressful events, so spiritual health also decreases.

Regarding the limitations of this study, different questionnaires were used that examined different dimensions.

Conclusion

Based on the findings of this study, the spiritual health of nurses and nursing students was at an average level. An increase in factors such as demographic variables, job, education, job satisfaction, and spiritual care improves the level of spiritual health, and demoting factors, like stress, anxiety, and depression improve the level of the spiritual health of nurses. In addition, most studies conducted in the field of spiritual health and the factors affecting it in nurses and nursing students are descriptive. One of the strengths of this study is to determine the confirming factors for improving spiritual health in clinical departments, and one of its weaknesses is to examine spiritual health in only one culture (Iranian society), eliminate qualitative studies, and use more observational studies and methods of different evaluations. Therefore, the researchers are recommended to pay more attention to qualitative and experimental studies in their research. A specific tool should be designed to determine the spiritual health of nurses. Also, it is suggested that educational committees for the spiritual health of nurses be formed to promote and update this crucial matter in hospitals.

Ethical Considerations

Compliance with ethical guidelines

The principle of protecting information and using the results of all studies was considered.

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Authors' contributions

All authors equally contributed to preparing this article.

Conflict of interest

The authors declared no conflict of interest.

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