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Spiritual Interventions Delivered by Nurses to Address Patients' Needs in Hospitals or Long-Term Care Facilities: A Systematic Review

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Abstract

Introduction: Despite increasing evidence of the benefits of spiritual care and nurses' efforts to incorporate spiritual interventions into palliative care and clinical practice, the role of spirituality is not well understood and implemented. There are divergent meanings and practices within and across countries. Understanding the delivery of spiritual interventions may lead to improved patient outcomes.

Aim: We conducted a systematic review to characterize spiritual interventions delivered by nurses and targeted outcomes for patients in hospitals or assisted long-term care facilities.

Methodology: The systematic review was developed following PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, and a quality assessment was performed. Our protocol was registered on PROSPERO (Registration No. CRD42020197325). The CINAHL, Embase, PsycINFO, and PubMed databases were searched from inception to June 2020.

Results: We screened a total of 1005 abstracts and identified 16 experimental and quasi-experimental studies of spiritual interventions delivered by nurses to individuals receiving palliative care or targeted at chronic conditions, such as advanced cancer diseases. Ten studies examined existential interventions (e.g., spiritual history, spiritual pain assessment, touch, and psychospiritual interventions), two examined religious interventions (e.g., prayer), and four investigated mixed interventions (e.g., active listening, presence, and connectedness with the sacred, nature, and art). Patient outcomes associated with the delivery of spiritual interventions included spiritual well-being, anxiety, and depression.

Conclusion: Spiritual interventions varied with the organizational culture of institutions, patients' beliefs, and target outcomes. Studies showed that spiritual interventions are associated with improved psychological and spiritual patient outcomes. The studies' different methodological approaches and the lack of detail made it challenging to compare, replicate, and validate the applicability and circumstances under which the interventions are effective. Further studies utilizing rigorous methods with operationalized definitions of spiritual nursing care are recommended.

Keywords: nursing care; palliative care; patient outcome assessment; spirituality; spiritual therapies; systematic review

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Introduction

S PIRITUAL CARE IS a growing field of health care and has been associated with various health outcomes.[1] Multiple studies have documented the benefits of spiritual interventions, including reduced anxiety and depression,[1–4] enhanced well-being,[5,6] improved life satisfaction,[7] increased quality of life,[8] and reduced spiritual distress for patients near death.[9]

Most Americans (75%) report spirituality is at least somewhat important, and 53% describe it as crucial for their lives.[10] Existing evidence suggests that patients become more involved with religious practices in clinical settings and a sense of spirituality magnifies with age[11] or when a patient is faced with the uncertainty of events, such as dealing with serious illness or an incurable illness amenable to palliative care. In this way, spiritual interventions deserve further investigation about their applicability across clinical settings and diverse care (e.g., oncology, long-term care, and palliative care) for the seriously ill.[12]

In delivering spiritual interventions, a discussion about the meaning of spirituality for religious and nonreligious can emerge. Spirituality defines a dynamic and intrinsic aspect of humanity, gives meaning and purpose to life through which individuals seek to experience relationships to self, others, nature, or sacred.[13] Spirituality is patient- and family-centered care,[13] recognizing the spiritual part of an individual's life.[14] According to Paloutzian and Ellison's[15] framework, spiritual interventions are usually described as having a religious focus (religious practices organized by individuals who share the same belief for achieving harmony with God) or existential focus (meaning and purpose in one's life).

The scope of nursing practice provides a natural context for spiritual interventions to be delivered to support patients in confronting existential types of questions related to the meaning of life, pain, agony, and death.[16,17] Nurses are searching for ways to incorporate spiritual care and alternative therapies based on patients' beliefs into clinical practice to improve their quality of life.[18] In fact, the American Holistic Nurses Association describes the holistic nursing practice as focusing on whole-person care that naturally embraces the spiritual dimensions.[19] In 2012, the American Nurses Association recognized that nurses provide spiritual interventions focused on presence, guidance, nurturing, or encouraging an individual's or group's ability to achieve personal, spiritual, and social well-being and integrate body, mind, and spirit.[20]

Across the world, spiritual care is also a growing topic of interest in health care organizations.[21] The International Council of Nurses describes nursing care as compassionate and ethical caring that addresses patients' spiritual needs.[22] Although nurses' delivery of spiritual interventions is recognized and advocated by different national and international associations, the role of spirituality in nursing practice is not well understood and has divergent meanings and practices within and across countries.

A meta-analysis[23] and systematic review[24] revealed positive effects of spiritual interventions on spiritual well-being and quality of life of patients with serious illnesses. In these studies, health care professionals delivering such interventions were limited to psychotherapists, chaplains, and multidisciplinary teams. Unfortunately, a psychotherapist's presence might not always be possible in the context of usual clinical practice.[25] Nurses are often the first point of reference for individuals in suffering. Being at the front line of care, nurses spend the greatest amount of time with patients[26] among health care providers and can offer spiritual interventions as part of their work. Therefore, nurses must be equipped to respond to patients' needs appropriately in diverse settings and contexts. Across the published reviews, our systematic review presents evidence of nurses' delivery of spiritual interventions and their impact on patient outcomes.

Methods

This systematic review was developed in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (see online Supplementary Material).[27] Our protocol was registered on PROSPERO (https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=197325). In our review, we sought to answer the following research questions: What studies on nurse-led spiritual interventions for patients hospitalized or institutionalized in long-term care facilities have been conducted? and What is the impact of the spiritual interventions delivered by nurses on patients' quality of life, including physical, psychological, social, and spiritual outcomes?

Data sources and search strategy

To answer the research questions, our team, with the assistance of a librarian with nursing expertise, developed the search strategy, including a comprehensive set of keywords and terms, and searched the databases. Details on the search strategies are presented in Table 1. We conducted a literature search on June 28, 2020, in the databases CINAHL, Embase, PsycINFO, and PubMed. The database-specific searches utilized combinations of the following terms: spirituality, existential needs, religious, transcendent, life purpose, nurse-led, nursing, experiment, controlled trial, and randomized studies. We filtered for adult and older patients and English-language publications. The records identified through the searches in each database were downloaded into a reference management program (EndNote version X9). In addition, we analyzed reference lists of included studies as supplementary sources.

Eligibility criteria

To be eligible, included studies had to be either randomized controlled trials (RCT) or quasi-experimental studies that assessed outcomes preintervention and post-intervention or through a control group comparison. Eligible participants were adults (18 years of age or older), hospitalized or resided in an assisted living nursing facility or a nursing home during the study. Studies were required nurse-led spiritual interventions (existential, religious, or mixed) delivered to an individual or group through face-to-face interactions or the Internet. Studies used previously validated tools to measure patient outcomes before and after the intervention or comparison/control groups. Included studies had to be peer-reviewed publications written in English, with no date limits.

We excluded studies that involved spiritual interventions delivered to caregivers or family members, educational interventions for health care professionals or nurses that did not measure patient outcomes, and spiritual interventions delivered in patients' homes, community centers, and dwelling

TABLE 1. SEARCH STRATEGY BY DATABASE

Database	Search	Number of records
PubMed	(Spiritu*[Text Word] OR ''Existential needs'' [Text Word] OR ''Existential need'' [Text Word] OR Relig*[Text Word] OR Faith [Text Word] OR ''Transcenden*'' [Text Word] OR ''Life Purpose'' [Text Word]) AND (''Nurse-led''[Title/Abstract] OR Nursing [Mesh] OR ''Nurs*'' [Text Word] OR BSN[Text Word] OR APN[Text Word) AND (experiment* OR ''controlled stud*'' OR ''controlled trial '' OR ''control group'' OR ''comparison group '' OR quasi OR randomized OR randomly OR ''before and after stud* '' OR ''pretest post* '')	269
CINAHL	(''Spiritu*'' OR ''Existential need*'' OR ''Relig*'' OR ''Faith'' OR ''Transcenden*'' OR ''Life Purpose'') AND (''Nurse-led'' OR ''Nursing'' OR ''Nurs*'' OR ''BSN'' OR ''APN'') AND (experiment* OR ''controlled stud* '' OR ''controlled trial '' OR ''control group'' OR ''comparison group '' OR quasi OR randomized OR randomly OR ''before and after stud* '' OR ''pretest post*'')	248
PsycINFO	(''Spiritu*'' OR ''Existential need*'' OR ''Relig*'' OR ''Faith'' OR ''Transcenden*'' OR ''Life Purpose'') AND (''Nurse-led'' OR ''Nursing'' OR ''Nurs*'' OR ''BSN'' OR ''APN'') AND (experiment* OR ''controlled stud* '' OR ''controlled trial '' OR ''control group'' OR ''comparison group'' OR quasi OR randomized OR randomly OR ''before and after stud* '' OR ''pretest post*'')	274
Embase	('spiritu*' OR 'existential need*' OR 'relig*' OR 'faith'/exp OR 'transcenden*' OR 'life purpose') AND ('nursing'/exp OR 'nurs*'/exp OR 'bsn' OR 'apn' OR 'nurse-led') AND ('experiment*' OR 'controlled stud*' OR 'controlled trial'/exp OR 'control group'/exp OR 'comparison group' OR 'quasi' OR 'randomized' OR 'randomly' OR 'pretest post*')	214

Filters applied: English. Adult/Older: 19–44 years, Middle aged: 45–64 years, Older aged: 65+ years.

communities. We excluded team interventions provided by the nurse and at least one non-nursing colleague (e.g., chaplain, physician, or psychologist) because we are interested in exploring nurses' participation in spiritual care. Other exclusion criteria included case studies, descriptive studies, editorials, books, reports, letters, literature reviews, dissertations, commentaries, guidelines, protocols, or conference proceedings.

Abstract and full-text screening

A two-step process was employed for abstract and full-text screening. First, two reviewers (F.D.S. and O.O.M.) independently screened abstracts. In step 2, three reviewers (F.D.S., O.O.M., and S.H.) independently examined the full text of the remaining articles to determine whether they met the inclusion criteria. Inter-rater reliability scores for the abstract and full text reviews were 93% and 85%, respectively, with the consensus reached through discussion on disagreements. This process resulted in a final sample of 16 intervention studies.

Data extraction and synthesis

Data extracted from the 16 studies included (1) author, year of publication, and country, (2) study purpose, (3) set-

ting and design, (4) sample size and characteristics, (5) type of spiritual interventions: existential (holistic care and meaning in life), religious (the role of faith and prayer), or mixed (studies including holistic care and prayer or faith related to intervention), (6) scales, (7) study outcomes, and (8) results relevant to the spiritual interventions and outcomes under study. Data were extracted by one reviewer (F.D.S.) and verified for accuracy by the other two reviewers (O.O.M. and S.H.). Any disagreement was noted and resolved through discussion among all reviewers. The results were tabulated and reported, and narrative synthesis was used to group outcomes of interest to spirituality within the nursing context.

Quality assessment

The quality of studies was appraised using the Standard Quality Assessment Criteria for Evaluating Primary Research Articles (QualSyst tool).[28] Two reviewers (F.D.S. and S.H.) independently assessed the reproducibility of each study by scoring the 14 items under the following categories: research question, sample size, study design, data collection and recruitment strategy, statistical analyses, and results reported for appropriateness of each item. The agreement rate between reviewers was 81%, and disagreements were resolved through discussion.

Scoring involved selecting one of four options reflecting the degree to which a study met each item: yes (2 points), partial (1 point), no (0), or NA (not applicable). The following equation calculated the overall score [Eq. (1)].

$$\text{Overall score} = \frac{[(\text{number of "yes"} \times 2) + (\text{number of "partials"} \times 1)]}{28 - (\text{number of "NA"} \times 2)} \tag{1}$$

Details and instructions for the quality assessment scoring can be found elsewhere.[28] Based on the overall score, we categorized the quality of each study as low if the overall score is below 60%, moderate if the overall score is between 60% and 79%, and high if it is above 80% (Table 2).[29]

Results

Through our comprehensive literature search, 1005 records were extracted from CINAHL, Embase, PsycINFO, and PubMed. After the removal of duplicates, 734 unique records were identified. Through screening of titles and abstracts, 693 records were excluded. Forty-one full-text articles were assessed, resulting in 16 studies (Fig. 1).

Characteristics of studies

Country. Ten countries were represented across the studies. Twelve of the 16 studies took place in China,[30] Hong Kong,[31,32] Turkey,[2] Japan,[25] Taiwan,[7,33] Indonesia,[34] and Iran.[3,35–37] The remaining four were conducted in Brazil,[38] Netherlands,[39] and the United States.[6,40]

Setting and design. Ten studies[3,7,25,30–32,36–39] were hospital-based investigations, and the remaining six[2,6,33–35,40] were conducted in assisted living facilities or nursing homes. Of hospital-based interventions, six were conducted in palliative care or oncology wards.[25,30–32,37,38] Nine[6,7,31–33,35–37,40] studies were RCTs and seven[2,3,25,30,34,38,39] were of quasi-experimental design.

Participant characteristics. Collectively, the studies included 1079 unique participants, who were primarily individuals with advanced cancer or in palliative care,[25,30–32,37,38] suffering from cardiac diseases[3,36] or diagnosed with dementia.[7]

Characteristics of spiritual nursing interventions

A wide variety of interventions were described. Building on Paloutzian and Ellison's framework,[15] we used the study description of the spiritual intervention to categorize each into one of three main types: existential, religious, or mixed (Fig. 2). In studies, spiritual nursing interventions were delivered to improve the spiritual and mental health of patients. A brief description of each spiritual intervention category appears in the following section.

Existential-based intervention ($n = 10$). This category represented nursing interventions targeted at the whole person and expressed through meaning in life. These consisted of interventions that collect spiritual history,[39] assess spiritual pain,[25] provide physical assistance and comfort through touch and healing,[2,6] or provide psychospiritual care focused on reminiscence,[7,40] life review,[30,31] meaning of life,[32]

TABLE 2. GENERAL QUALITY ASSESSMENT SUMMARY: REVIEW AUTHORS' JUDGMENTS FOR EACH STUDY

Study	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Overall score, %	Quality[a]
Wu and Koo[7]	2	2	1	2	2	0	0	2	1	2	2	2	2	2	79	Moderate
Kwan et al.[31]	2	2	1	1	2	2	2	2	2	2	2	2	1	1	86	High
Ayyari et al.[35]	2	1	1	2	2	1	0	2	2	2	1	1	1	1	68	Moderate
Mok et al.[32]	2	2	1	2	2	0	0	2	2	2	1	1	1	1	68	Moderate
Stinson and Kirk[40]	2	2	1	1	2	0	0	2	1	2	1	1	1	1	61	Moderate
Musarezaie et al.[37]	2	1	1	2	2	2	0	1	1	2	1	2	1	1	68	Moderate
Babamohamadi et al.[36]	2	2	1	2	2	0	1	2	2	2	1	2	2	2	82	High
Wang et al.[33]	2	2	1	2	2	0	0	2	2	2	1	2	1	1	71	Moderate
Butts[6]	2	2	1	1	2	0	0	1	1	2	1	2	1	1	61	Moderate
Pramesona et al.[34]	2	2	1	2	0	0	0	2	2	2	2	1	2	2	71	Moderate
Ichihara et al.[25]	2	2	1	2	0	0	0	2	2	2	1	2	2	2	71	Moderate
Elham et al.[3]	2	2	1	2	0	0	0	2	2	2	1	1	1	1	61	Moderate
Alp and Yucel[2]	2	2	1	2	1	0	0	2	2	2	1	2	1	1	68	Moderate
Zhang et al.[30]	2	2	1	1	0	2	0	1	2	2	1	1	2	2	68	Moderate
Carvalho et al.[38]	2	2	1	1	NA	NA	NA	1	1	2	1	1	1	1	64	Moderate
Vlasblom et al.[39]	2	1	1	2	NA	NA	NA	1	2	2	1	1	1	1	68	Moderate

Studies were scored using the Standard Quality Assessment Criteria for Evaluating Primary Research Articles developed by the Alberta Heritage Foundation for Medical Research.[28] Score: yes (2 points), partial (1 point), no (0 points), or NA (not applicable). Q1, question/objective; Q2, design; Q3, method of subject/comparison group; Q4, subject characteristics; Q5, intervention and random allocation; Q6, blinding of investigators; Q7, blinding of subjects; Q8, outcome(s)/robust measurement; Q9, sample size; Q10, analytic methods; Q11, estimate of variance (e.g., confidence intervals, standard errors); Q12, controlled for confounding; Q13, results reported; Q14, conclusions supported by the results.

[a]Quality of each study as low if the overall score is below 60%, moderate if the overall score is between 60% and 79%, and high if it is above 80%.
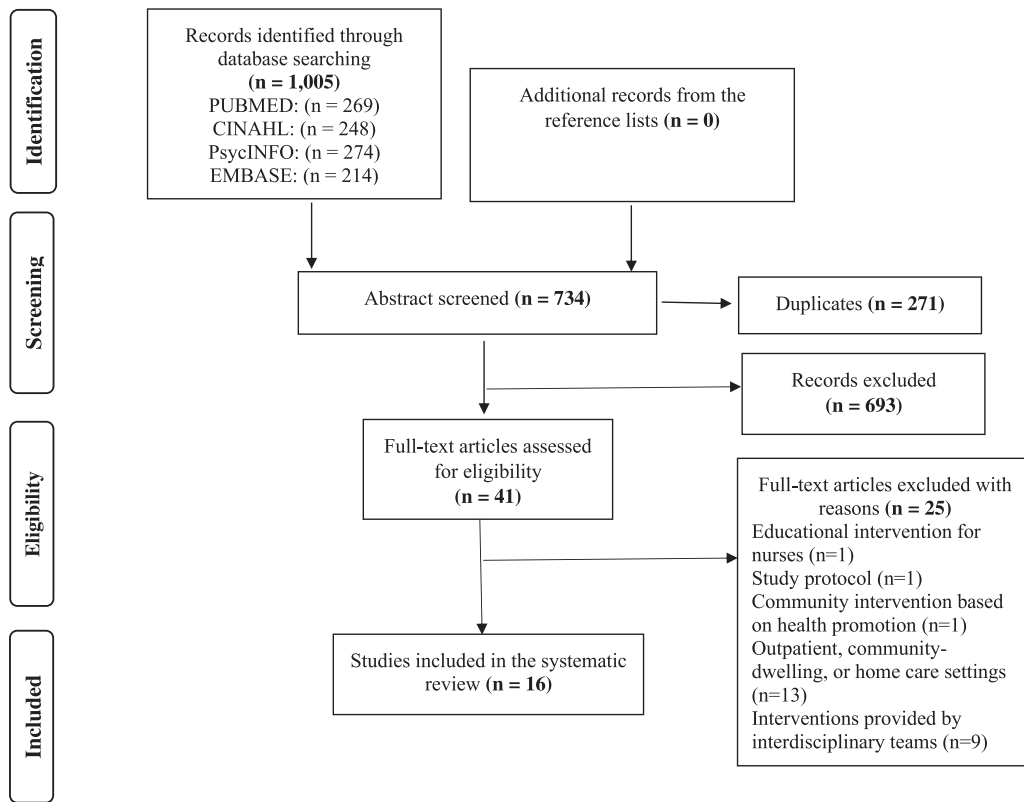
FIG. 1. PRISMA flow diagram of the selection process. PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses.
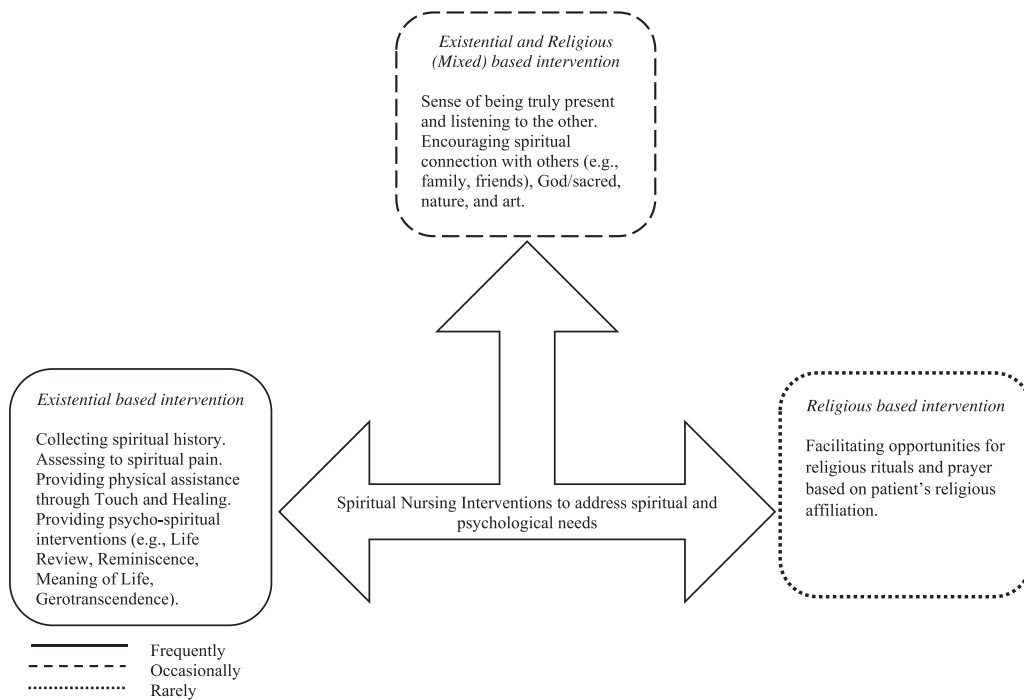

FIG. 2. Frequency and nature of spiritual interventions provided by nurses to hospitalized patients or institutionalized in long-term care facilities based on intervention studies across countries.

gerotranscendence,[33] and were delivered to a group or individually. For the group format, the group therapy was facilitated by nurses, in which nurses and patients provide each other with advice or support about handling specific spiritual or emotional distress, independent of religious affiliations. For individual format, nurses assessed patients' spiritual needs and delivered therapeutic touch and holistic care with close interaction between nurses and patients to enhance comfort, meaning, and purpose to their existence.

Religious-based intervention (*n* = 2). These interventions[34,38] were characterized by interactions between the nurse and an individual patient, including praying and reading religious passages from a patient's faith traditions and religious affiliations and other similar exchanges. In the prayer intervention, patients held hands with the nurse, praying the Psalm 138 of the Bible based on the Catholic religion.[38] In another study, a preacher nurse following the Muslim spiritual practice delivered Qur'anic recitation, which patients listened to about their faith.[34]

Mixed intervention (existential and religious) (*n* = 4). Studies were classified as both existential and religious if nursing interventions engaged patients' connections with oneself, environment, others, or God.[3,35–37] An example of this type of intervention involves the nurse offering relaxing music and nature connections to encourage a positive attitude and hope and praying with the patient in their faith traditions (e.g., kneeling on a rug reciting passages from the Quran). This type of intervention commonly provides active listening and a supportive presence for patients.

Patient outcomes

We categorized patient outcomes across studies under *well-being and human spirituality*, and *psychological*. Further information about outcome measurements is available in Table 3.

Well-being and human spirituality. This category includes spiritual well-being,[3,7,25,31,36,37,39] transcendence,[30,33,40] quality of life,[25,32,34] life satisfaction,[6,7,33] and other well-being-related concepts, such as hope,[7,30] meaning in life,[30] faith,[6] health status,[6] and comfort.[2] The most frequently measured outcome was spiritual well-being,[3,7,25,31,36,37,39] with all but one[39] of the seven studies utilizing these measures reporting statistically significant positive changes associated with the delivery of spiritual interventions.

Life satisfaction,[6,7,33] transcendence,[30,33,40] and quality of life,[25,32,34] were also utilized as outcomes in studies. Statistically significant improvements for these outcomes were seen in five[7,30,32–34] of the eight studies measuring them. Comparisons of outcomes across the studies could not be performed due to the heterogeneity of outcome measures. For instance, spiritual well-being was measured across studies[3,7,25,31,36,37,39] using five different validated self-report scales: Paloutzian and Ellison's Spiritual Well-Being, FACIT-Sp (Functional Assessment of Chronic Illness Therapy-Spiritual), MQOL-HK (McQill Quality-of-Life Index—Hong Kong version), Spirituality Index of Well-Being, and JAREL Spiritual Well-Being Scale.

Psychological outcomes. It comprises anxiety,[2,3,25,30,31,38] depression,[25,30,31,33,34,40] and other psychological and mood-related concepts.[6,35] Anxiety was measured using various scales. Three studies[2,3,38] used the validated self-report tool STAI (State-Trait Anxiety Inventory), containing 40 items distributed in 2 parts. The first 20 items measure STAI-S (anxiety about an event or situation), and the second 20 items measure STAI-T (anxiety that one experiences daily). These studies[2,3,38] reported a statistically significant decrease in total anxiety levels.

Depression was measured in 3 other studies[33,34,40] using the GDS (Geriatric Depression Scale), containing 15 items with yes or no answers related to somatic and cognitive complaints, motivation, future/past orientation, mood, and others. Of three studies, only one[34] found a statistically significant decrease in depression. Two other articles[25,31] utilized the HADS (Hospital Anxiety and Depression Scale), comprising 14 items, 7 questions about anxiety and 7 others related to depression. Both studies[25,31] did not find a statistically significant decrease in anxiety and depression.

Quality of studies

The QualSyst tool assessed the overall quality of articles.[28] Only two studies[31,36] scored high quality with scores greater than 80% (Table 2). Most RCTs[6,7,32,33,35,37,40] and all the quasi-experimental[2,3,25,30,34,38,39] ranged from 60% to 79% (moderate quality). Although most studies were classified as moderate quality, we found that the general nature of the assessment did not fully capture the limitations of studies when viewed collectively—for instance, the lack of information about the interventions and their fidelity limited group comparison and reproducibility.

Furthermore, several studies presented baseline imbalance[31,32] or comparison of demographic variables were not comprehensive,[6,40] resulting in selection and performance bias between the groups. In addition, the quality ratings of studies were also adversely impacted by small sample sizes and difficult recruitment plans and follow-up. Most studies[2,7,25,30–33,35,36] presented lost to follow-up after randomization. Studies reported most enrolled participants were palliative care and died by the end of the study period[31,32] or participant's withdrawal.[2,7,25,30–33,35,36]

Furthermore, the studies demonstrated weakness in blinding between participants and investigators. The most common sampling method was convenience.[2,3,25,30,34,38,39] To estimate the treatment effect, several studies reported simple group comparison at post-test.[2,30,34,36,38,39] Others reported generalized estimating equation-based group versus time.[7,31] Repeated measures analysis ANOVA (analysis of variance)[32,34,35,40] or ANCOVA (analysis of covariance)[33,37] studies were used in their analyses. Finally, although all studies provided descriptions of the interventions, data collection methods and descriptions of scales used were not fully operationalized in some studies. All those concerns were particularly notable for assessing spiritual interventions' effectiveness on patient outcomes.

Discussion

This systematic review identified 16 studies to assess existential, religious, or mixed spiritual interventions delivered by nurses for palliative care and other chronic conditions. The

TABLE 3. SUMMARY OF STUDIES

Authors/ year published/ country	Study purpose, design, and setting	Sample — Intervention, n	Sample — Control, n	Intervention — Spiritual	Intervention — Control	Outcome measures	Results — Intervention, mean (SD)	Results — Control, mean (SD)	Treatment Effect, p
Wu and Koo, 2015, Taiwan[7]	Purpose: Investigate the effects of a 6-week spiritual reminiscence intervention on hope, life satisfaction, and spiritual well-being on elderly patients (≥65 yo) with mild/moderate dementia. Design: RCT. Setting: Geriatric unit Hospital	n=53: 64% female, mean age 73.5 (7.3) yo and 70% attending religious activities regularly	n=50: 74% female, mean age 73.6 (7.6) yo and 68% attending religious activities regularly	Type: Existential. Description: Spiritual reminiscence intervention. Six weekly sessions (60 minutes) of scrapbooks, handicrafts, autobiographical writing, observation of growth of plants, storytelling, and singing. These activities were based on MacKinlay's spiritual tasks of the aging model (1. Meaning in life; 2. Relationships and isolation; 3. Hopes, fears, and worries; 4. Growing older and transcendence; 5. Spiritual and religious beliefs; 6. Spiritual and religious practices) Format: Group (3–6 individuals)	Description: Routine care	Primary Herth Hope Scale No. of items: Response format: 4-point scale IC: 0.89 LSS No. of items: 18 Response format: agree, disagree, or unsure IC: 0.82 Spirituality Index of Well-Being No. of items: 12 Response Format: 5-point scale IC: 0.91 Measured at baseline (start of week 1 session) and post-test (end of week 6 session)	Hope 38.5 (4.6) Life satisfaction 26.4 (5.7) Spiritual well-being 40.1 (8.0)	Hope 35.6 (3.8) Life satisfaction 24.1 (5.0) Spiritual well-being 36.7 (7.1)	NR; <0.001[a,b] NR; <0.001[a,b] NR; <0.001[a,b]
Kwan et al., 2019, Hong Kong[31]	Purpose: Examine the effectiveness and applicability of a short-term life review to enhance spiritual well-being and reduce anxiety and depression among adults receiving palliative care. Design: RCT. Setting: Palliative care units and hospitals	n=54: 48% male, 61% married, 33% 61–70 yo, 46% had no religious affiliation	n=55: 65% male, 78% married, 25% 61–70 yo, 49% had no religious affiliation	Type: Existential. Description: Life review. Explore patient's life stories using structured questions, life review booklet with pictures and photographs to enrich the presentation and recall past events with two 45-minute communication sessions 1 week apart Format: Individual	Description: Routine care	Primary MQOL-HK No. of items: 17 Response format: 0–10 score Domain: Spiritual IC: 0.83 HADS No. of items: 7/7 Response format: 4-point scale Domains: Anxiety and depression IC: NR Measured at baseline and post-test (1 week later)	Spiritual well-being (MQOL-HK spiritual) Meaning and purpose 6.1 (2.8) Life goals achieved 7.2 (2.1) Feeling that life is worthwhile 6.2 (2.9) Feeling good about myself 7.5 (1.9) Feeling burdened 7.6 (3.2) Anxiety (HADS) 2.4 (3.3) Depression (HADS) 8.3 (5.0)	Spiritual well-being (MQOL-HK spiritual) Meaning and purpose 5.8 (3.2) Life goals achieved 5.6 (2.9) Feeling that life is worthwhile 5.5 (3.1) Feeling good about myself 5.7 (3.0) Feeling burdened 7.1 (3.3) Anxiety (HADS) 3.6 (3.7) Depression (HADS) 8.6 (4.9)	0.5; 0.404[a,b] 1.3; 0.002[a,b] 0.6; 0.209[a,b] 1.3; 0.008[a,b] 0.7; 0.334[a,b] −0.3; 0.681[a,b] −0.3; 0.646[a,b]
Ayyari et al., 2020, Iran[35]	Purpose: Evaluate the effects of 1-month spiritual interventions on the happiness of elderly women (>60 yo). Design: RCT. Setting: Nursing home	n=19: Mean age 77.9 (7.6) yo, 84% widowed, 84% illiterate, and 63% had active participation in religious rituals	n=19: Mean age 80.9 (10.0) yo, 84% widowed, 95% illiterate, and 68% had active participation in religious rituals	Type: Existential/Religious. Description: Spiritual Health Service. Every day for 4 weeks, acts of worship and religious rituals (e.g., turbah, praying rug, chador, Quran, and Mafatih). Active listening, supportive presence, and motivation for the elderly to write pleasant memories and life events Format: Individual	Description: Routine care	Oxford Happiness Questionnaire No. of items: 29 Response Format: 6-point scale IC: 0.97 Measured at baseline and post-test (immediate and 1 month later)	Happiness Pretest: 45.7 (14.1) Immediately post-test: 65.1 (9.9) 1 month post-test: 64.70 (9.7)	Happiness Pretest: 36.5 (11.9) Immediately post-test: 35.3 (9.4) 1 month post-test: 35.1 (8.9)	NR; 0.900[a,c,d]

TABLE 3. (CONTINUED)

Authors/ year published/ country	Study purpose, design, and setting	Sample		Intervention provided by nurses		Outcome measures	Results		
		Intervention, n	Control, n	Spiritual	Control		Intervention, mean (SD)	Control, mean (SD)	Treatment Effect, p
Mok et al., 2012,[32] Hong Kong	Purpose: Develop the meaning of life intervention in response to the need for quality of life among patients with advanced-stage cancer receiving palliative care Design: RCT Setting: Oncology ward hospital	n=44: 55% male, 64% married, mean age 64.0 (12.4) yo, and 50% of them had no religious affiliation	n=40: 53% male, 78% married, mean age 65.3 (10.9) yo, and 45% had no religious affiliation	Type: Existential Description: Meaning of Life intervention. Two sessions over 2–3 days (15–60 minutes) involving a semistructured interview to facilitate the search for meaning and review of a summary sheet findings. Activities of the meaning of life proposed in logotherapy and creative, experiential, and attitudinal values Format: Individual	Description: Routine care	QOLC-E No. of items: 28 Response format: 11-point scale IC: 0.56 Single-item QOL scale No. of items: 1 (measure of global QOL) Response format: 11-point scale IC: NR Measured at baseline and post-test (1 day and 2 weeks later)	Pretest: 6.3 (1.1) D1 post-test: 7.1 (1.0) W2 post-test: 7.1 (1.1) Pretest: 5.1 (1.6) D1 post-test: 6.2 (1.5) W2 post-test: 6.3 (1.8)	Quality of life QOLC-E Pretest: 6.7 (1.2) D1 post-test: 6.9 (1.3) W2 post-test: 6.8 (1.4) Single-item QOL Pretest: 6.1 (1.8) D1 post-test: 5.7 (1.5) W2 post-test: 6.0 (2.1)	0.5; <0.050[c,e] 0.8; <0.050[c,e]
Stinson and Kirk, 2005, US[40]	Purpose: Evaluate the effects of group reminiscing on depression and self-transcendence of elderly women (≥60 yo) Design: RCT Setting: Assisted living facility	n=12: All were Caucasian female. Age varied from 72 to 96 yo	n=12: All were female. Age 72–90 yo, and 11 of them were Caucasian	Type: Existential Description: Structured reminiscence. Twice weekly sessions (60 minutes) for 6 weeks of reminiscence sessions, including 1. antecedent, 2. individual assessment, 3. establishing the therapeutic, 4. choosing a reminiscence therapy modality (recommendations of the NIC), and 5. outcome measurements Format: Group (size NR)	Description: Activity	Primary GDS No. of items: 30 Response Format: yes/no IC: 0.94 STS No. of items: 15 Response Format: 4-point scale IC: 0.93 Measured at baseline and post-test (3 and 6 weeks later)	Pretest: 7.7 (NR) W3 post-test: 6.9 (NR) W6 post-test: 8.5 (NR) Pretest: 3.0 (NR) W3 post-test: 3.3 (NR) W6 post-test: 3.1 (NR)	Depression Pretest: 12.9 (NR) W3 post-test: 11.0 (NR) W6 post-test: 10.0 (NR) Self-transcendence Pretest: 2.8 (NR) W3 post-test: 2.6 (NR) W6 post-test: 3.0 (NR)	NR; 0.190[a,c] NR; 0.150[a,c]
Musarezaie et al., 2015, Iran[37]	Purpose: Determine the effects of a spiritual intervention on spiritual well-being among adults diagnosed with leukemia Design: RCT Setting: Oncology ward hospital	n=32: 59% male, 68% married, and mean age 41.7 (17.2) yo. 47% had not finished high school	n=32: 63% male, 84% married, and mean age 41.6 (13.5) yo. 50% had not finished high school	Type: Existential/Religious Description: Spiritual based intervention. Supportive presence (active listening) and support for religious rituals (listening and reading to the Quran and pray) for 3 days at 4–8 pm Format: Individual	Description: Routine care	Paloutzian and Ellison's Spiritual Well-Being Scale No. of items: 20 Response format: 6-point scale IC: 0.82 Measured at baseline and post-test	93.6 (14.7)	Spiritual well-being 89.3 (18.4)	NR; <0.001[f]
Babamohamadi et al., 2020, Iran[36]	Purpose: Investigate the effect of spiritual care based on the sound heart model on the spiritual health of Shi'a Muslim patients hospitalized with acute MI Design: RCT Setting: hospital CCU	n=46: 50% female, 89% married, mean age 61.3 (8.9) yo. 41% had finished high school	n=46: 50% female, 91% married, mean age 62.7 (6.9) yo. 41% had finished high school	Type: Existential/Religious Description: Sound heart spiritual care model. An educational booklet containing the program of spiritual care based on the sound heart model: God (worship and prayer), oneself (meditation), others (charitable expenditure, family), and environment. After reading the booklet, the patients selected their desired spiritual care implemented for periods at 5–8 pm during the hospital stay and 1 month after discharge Format: Individual	Description: Routine care	Paloutzian and Ellison's Spiritual Well-Being Scale No. of items: 20 Response Format: 6-point scale IC: 0.85 Measured at baseline and post-test (1 month later)	96.0 (12.4)	Spiritual well-being 78.0 (19.4)	NR; <0.001[g]

(continued)

TABLE 3. (CONTINUED)

Authors/ year published/ country	Sample		Intervention provided by nurses		Outcome measures	Results		
	Study purpose, design, and setting		Spiritual	Control		Intervention, mean (SD)	Control, mean (SD)	Treatment Effect, p
	Intervention, n	Control, n						
Wang et al., 2010, Taiwan[33]	Purpose: Test the clinical use of the gerotranscendence and its influence on gerotranscendence, depression, and life satisfaction of elderly (≥65yo) Design: RCT Setting: Assisted living facilities and nursing home				Primary GTS No. of items: 10 Response format: score range from 10 to 40 points Domains: Cosmic, Coherence, and Solitude IC: 0.56 Secondary GDS No. of items: 15 Response Format: yes/no IC: 0.89 LSS No. of items: 10 Response format: 5-point scale IC: 0.88 Measured at baseline and post-test		Gerotranscendence Cosmic	
	n=35: Mean age 80.5 (7.3). 60% female, 46% widowed, and 46% Buddhist	n=41: Mean age 80.5 (7.3). 63% female, 51% widowed, and 56% Buddhist	Type: Existential Description: Gerotranscendence support group. Therapy manual to guide the group discussions related to aging signs and changes based on the cosmic, self, and social dimensions of GT. They could raise questions, interact with others, and exchange opinions on aging, transcendence, life, death, and weekly sessions (60 minutes) for 8 weeks Format: Group (8–12 per group)	Description: Routine care and weekly general chatting activities for 30 minutes		15.8 (2.8)	12.5 (2.0)	NR; 0.001[f]
						6.5 (1.5)	Coherence 6.0 (1.6)	NR; 0.010[f]
						9.43 (1.36)	Solitude 8.7 (1.4)	NR; 0.010[f]
						33.1 (5.2)	Life satisfaction 29.8 (6.9)	NR; 0.001[f]
						3.8 (3.2)	Depression 4.7 (4.0)	NR; 0.050[f]
Butts, 2001, US[6]	Purpose: Examine whether comfort touch improved the self-esteem, well-being, health status, life satisfaction, and faith and self-responsibility of elderly (≥65 yo) female nursing home residents Design: RCT Setting: Nursing homes				Rosenberg's Self-Esteem Scale No. of items: 10 Response format: 5-point scale IC: ranged from 0.88 to 0.90 Bradburn's Affect Balance Scale No. of items: 5/5 Response format: yes or no IC: 0.55 (Positive Affect) and 0.73 (Negative affect) Self-Evaluation of Health No. of items: NR Response Format: NR IC: NR JAREL Spiritual Well-Being Scale No. of items: 21 Response format: 6-point scale IC: NR Measured at baseline and post-test (2 and 4 weeks later)		Self-esteem Pretest: C1: 27.0 (NR) C2: 26.7 (NR) W2 post-test: C1: 27.3 (NR) C2: 28.2 (NR) W4 post-test: C1: 27.1 (NR) C2: 28.4 (NR)	NR
	n=15[h]	C1: n=15[h] C2: n=15[h]	Type: Existential Description: Comfort touch. Skin-to-skin touch in the form of handshaking and patting the hand, forearm, and shoulder with verbal interaction for the sole purpose of comfort and producing positive feelings for periods of 5 minutes twice a week for 4 weeks Format: Individual	Description: C1: No treatment or interaction C2: Verbal interaction		Pretest: 29.3 (NR) W2 pos-test t: 36.0 (NR) W4 post-test: 37.5 (NR)		
						Pretest: 7.0 (NR) W2 post-test: 9.0 (NR) W4 post-test: 10.2 (NR)	Well-Being Pretest: C1: 7.7 (NR) C2: 6.6 (NR) W2 post-test: C1:7.7 (NR) C2: 7.3 (NR) W4 post-test: C1: 7.9 (NR) C2: 7.3 (NR)	NR
						Pretest: 1.6 (NR) W2 post-test: 2.1 (NR) W4 post-test: 2.3 (NR)	Health Status Pretest: C1: 1.8 (NR) C2: 1.7 (NR) W2 post-test: C1: 1.8 (NR) C2: 1.7 (NR) W4 post-test: C1: 1.8 (NR) C2: 1.8 (NR)	NR
						Pretest: 25.7 (NR) W2 post-test: 35.4 (NR)	Life satisfaction Pretest: C1: 26.6 (NR) C2: 24.3 (NR)	NR

(continued)

TABLE 3. (CONTINUED)

Authors/ year published/ country	Study purpose, design, and setting	Sample		Intervention provided by nurses		Outcome measures	Results		Treatment Effect, p
		Intervention, n	Control, n	Spiritual	Control		Intervention, mean (SD)	Control, mean (SD)	
							W4 post-test: 39.0 (NR)	W2 post-test: C1: 27.0 (NR) C2: 26.0 (NR) W4 post-test: C1: 27.0 (NR) C2: 27.0 (NR) Faith or belief	NR
							Pretest: 60.4 (NR) W2 post-test: 62.7 (NR) W4 post-test: 70.0 (NR)	Pretest: C1: 62.1 (NR) C2: 58.9 (NR) W2 post-test: C1: 62.3 (NR) C2: 8.4 (NR) W4 post-test: C1: 61.8 (NR) C2: 60.5 (NR) Depression	
Pramesona and Taneepanichskul,[34] 2018, Indonesia	Purpose: Investigate the effects of religious intervention on depressive symptoms and quality of life of elderly. Design: Quasi-experimental. Setting: Nursing home	n=30: 37% <80 yo, 42% female, 47% had no partner, 43% no or low education, 35% had <3 physical illness	n=30: 40% <80 yo, 35% female, 45% had no partner, 45% no or low education, 25% had <3 physical illness	Type: Religious. Description: Religious intervention. 36 sessions of listening to Qur'anic recital plus from 20- to 25-minute sessions of attending a sermon by a Muslim religious preacher/nurse. Format: Individual	Description: Routine care. Activities included praying, watching television, counseling, and playing or listening to music	Primary GDS No. of items: 15 Response format: yes/no IC: 0.80 Secondary WHOQOL No. of items: 26 Response format: 0–100 IC: ranges between 0.41 and 0.77 Measured at baseline and post-test (4, 8 and 12 weeks later)	Pretest: 6.6 (2.1) W4 post-test: 6.2 (2.0) W8 post-test: 5.3 (1.7) W12 post-test: 4.3 (1.2) Quality of life Pretest: 44.2 (5.3) W4 post-test: 47.3 (5.0) W8 post-test: 53.5 (4.8) W12 post-test: 58.9 (3.9)	Pretest: 7.4 (2.2) W4 post-test: 7.3 (2.2) W8 post-test: 6.8 (1.8) W12 post-test: 6.6 (1.7) Quality of life Pretest: 42.2 (4.1) W4 post-test: 44.2 (3.9) W8 post-test: 48.2 (3.1) W12 post-test: 51.3 (2.5)	NR; 0.170[g] NR; 0.042[g] NR; 0.002[g] NR; <0.001[g] NR; 0.113[c] NR; 0.007[c] NR; <0.001[c] NR; <0.001[c]
Ichihara et al., 2019, Japan[25]	Purpose: Investigate the effects of spiritual care using the Spiritual Pain Assessment Sheet on spiritual well-being, quality of life, anxiety, and depression of advanced cancer patients. Design: Quasi-experimental. Setting: Hematology/ oncology ward, and palliative care units	n=22: 59% male, 59% married, mean age of 65.6 (13.1) yo and 73% reported religious affiliation	n=24: 50% male, 79% married, mean age of 71 (13.3) yo, and 71% reported religious affiliation	Type: Existential. Description: Spiritual care using the Spiritual Pain Assessment Sheet. Evaluate spiritual pain and develop a plan of care based on current spiritual status ("Are you at peace?" and "What do you feel is valuable or meaningful from now on?") and, subsequently, incorporating questions related to relationship, autonomy, and temporality dimensions (e.g., isolation, burden, dependency, loss of control in the future, and hopelessness) for 2 weeks. Format: Individual	Description: Routine care. Basic care for psychosocial and spiritual problems (i.e., listening, consulting with psychotherapist or chaplain as needed)	Primary FACIT-Sp scale No. of items: 12 Response format: 5-point scale IC: ranges between 0.72 and 0.87 Secondary CoQoLo No. of items: 18 Response format: 7-point scale IC: 0.90 HADS No. of items: 7/7 Response format: 4-point scale Domains: Anxiety and depression IC: NR Measured at baseline and post-test (2 weeks later)	Spiritual well-being Peace/meaning Pretest: 19.0 (5.2) W2 post-test: 20.1 (6.4) Faith Pretest: 7.8 (3.5) W2 post-test: 8.6 (4.3) Quality of life Pretest: 81.9 (14.0) W2 post-test: 82.8 (17.0) Anxiety (HADS) Pretest: 7.0 (3.8) W2 post-test: 4.7 (2.5) Depression (HADS) Pretest: 8.6 (4.3) W2 post-test: 7.4 (4.3)	Spiritual well-being Peace/meaning Pretest: 19.5 (5.5) W2 post-test: 13.9 (8.3) Faith Pretest: 8.0 (3.4) W2 post-test: 7.8 (3.5) Quality of life Pretest: 82.6 (12.8) W2 post-test: 78.2 (18.0) Anxiety (HADS) Pretest: 6.0 (4.0) W2 post-test: 7.4 (4.4) Depression (HADS) Pretest: 8.4 (4.2) W2 post-test: 9.6 (5.0)	1.0; <0.010[i,j] 0.7; 0.045[i,j] 0.2; 0.540[i,j] 0.9; 0.010[i,j] 0.5; 0.100[i,j]

(continued)

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TABLE 3. (CONTINUED)

Authors/ year published/ country	Study purpose, design, and setting	Sample — Intervention, n	Sample — Control, n	Intervention provided by nurses — Spiritual	Intervention provided by nurses — Control	Outcome measures	Results — Intervention, mean (SD)	Results — Control, mean (SD)	Results — Treatment Effect, p
Elham et al., 2015, Iran[3]	Purpose: Investigate the effects of spiritual/ religious interventions on spiritual well-being and anxiety of patients with cardiovascular diseases (≥60 yo) Design: Quasi-Experimental Setting: CCU hospital	n=33: 55% male, 58% married. 76% 60–70 yo. 58% illiterate	n=33: 64% male, 70% married. 64% 60–70 yo. 58% illiterate	Type: Existential/religious Description: Spiritual/religious intervention. Presence for 30 minutes, giving them hope, talking about spiritual experiences, encouraging the sense of generosity and forgiveness, strengthening their relationships with the family, providing opportunities for worship and prayer, and listening to relaxing music for at least 3 days (60–90 minutes) in the evening shift Format: Individual	Description: Routine care	Primary Paloutzian and Ellison's Spiritual Well-Being Scale No. of items: 20 Response format: 6-point scale IC: 0.87 STAI No. of items: 20/20 Response format: 4-point scale IC: 0.97 Measured at baseline and post-test	83.3 (9.4) 50.0 (NR)	Spiritual well-being 81.0 (8.7) Anxiety (State-Trait) 58.0 (NR)	NR; 0.049[i] NR; <0.001[k]
Alp and Yucel, 2021, Turkey[2]	Purpose: Investigate the impacts of therapeutic touch on the comfort and anxiety of elderly (<89 yo) Design: Quasi-experimental Setting: Nursing home	n=30: 50% female, 67% widowed, 50% ranged from 75 to 89 yo, and 50% had hypertension	n=30: 50% female, 63% widowed, 50% ranged from 75 to 89 yo, 73% had hypertension	Type: Existential Description: Therapeutic touch. Touch with the hands for periods of 20 minutes for four successive days Format: Individual	Description: Routine care	Primary STAI No. of items: 20/20 Response format: 4-point scale Domains: S-Anxiety and T-Anxiety IC: 0.88 General Comfort Questionnaire No. of items:48 Response format: 4-point scale Domain: Comfort subdimensions and levels IC: 0.82 Measured at baseline and post-test (measurement 2 after intervention)	44.0 (2.1) 2.9 (0.04) 3.2 (0.08) 3.4 (0.05) 2.6 (0.04) 3.2 (0.03) 3.0 (0.05) 3.0 (0.07)	Anxiety (State-Trait) 48.4 (1.2) General comfort p=0.01[g] Physical 2.8 (0.02)[l] Psychospiritual 3 (0.02)[l] Environmental 3.2 (0.03)[l] Sociocultural 2.4 (0.02)[l] Relief 3 (0.02)[10] Relaxation 2.9 (0.05)[l] Superiority 2.8 (0.02)[l]	0.001[g] NR NR NR NR NR NR NR
Zhang et al., 2019, China[30]	Purpose: Evaluate the feasibility and effects of the WeChat-based life review on anxiety, depression, self-transcendence, meaning in life, and hope Design: Quasi-experimental Setting: Oncology ward hospital	n=44: 77% male, age ranged from 41 to 60 yo, 93% married, 82% had advanced cancer with metastasis, 55% had no religious affiliation	n=42: 69% male, age ranged from 41 to 60 yo, 83% married, 86% had advanced cancer with metastasis. 67% had no religious affiliation	Type: Existential Description: WeChat-based life review program. Weekly sessions over 6 weeks (40–60 minutes), in which the modules included Memory Prompts, Mind Space, Review Extraction, Mind Space, and E-legacy products. The interviews covered participants' lives, including the present (cancer experience), adulthood, childhood, and a summary of their lives Format: Virtual face-to-face	Description: Routine care. Personal care, medical care, health education, free Internet access, and emotional support, all provided by the study hospital	Self-transcendence scale No. of items: 15 Response format: 4-point scale IC: ranges between 0.83 and 0.87 Meaning-in-Life Questionnaire No. of items: 10 Response format: 7-point scale IC: ranges between 0.79 and 0.93 Herth Hope Scale No. of items: 12 Response format: 4-point scale IC: 0.87 Zung's self-rating anxiety scale No. of items: 20	53.5 (4.6) 56.6 (10.1) 36.4 (3.3) 25.9 (3.7) 30.5 (4.4)	Self-Transcendence 43.9 (6.6) Meaning in life 49.4 (8.6) Hope 35.1 (3.5) Anxiety 32.1 (5.5) Depression 39.0 (7.5)	NR; 0.001[g] NR; 0.001[g] NR; 0.098[g] NR; 0.001[g] NR; 0.001[g]

TABLE 3. (CONTINUED)

Authors/ year published/ country	Study purpose, design, and setting	Sample		Intervention provided by nurses		Outcome measures	Results		
		Intervention, n	Control, n	Spiritual	Control		Intervention, mean (SD)	Control, mean (SD)	Treatment Effect, p
						Response format: 4-point scale IC: 0.79 Zung's self-rating depression scale No. of items: 20 Response format: 4-point scale IC: 0.87 Measured at baseline and post-test			

Authors/ year published/ country	Study purpose, design, and setting	Sample, pretest, and post-test (single group)	Intervention provided by nurses	Outcome measures	Results		
					Pretest mean (SD)[m]	Post-test mean (SD)[n]	Difference between pretest and post-test[o]
Carvalho et al.,[38] 2014, Brazil	Purpose: Evaluate the effect of prayer on anxiety. Design: Quasi-experimental. Setting: Oncology ward Hospital	n=20: 75% were male, 55% 51–60 yo, 75% were married, and 65% Catholic	Type: Religious. Description: Prayer intervention. An audio recording of a musician's voice with good diction. The intervention was based on no invocation of saints, citing Psalm 138 of the Bible, which speaks of divine omniscience: God knows all and sees all. Patients held hands with the nurse researcher, who conducted an intercession prayer for periods of 11 minutes. Format: Individual	STAI No. of items: 20/20 Response Format: 4-point scale IC: NR	33.5 (4.9)	Anxiety (state) 28.4 (5.6)	5.1; <0.001[g]
Vlasblom et al., 2015, Netherlands[39]	Purpose: Investigate the implementation of a spiritual screening and assess the effects on the spiritual well-being. Design: Quasi-experimental. Setting: Hospital	n=106 (pretest), n=103 (post-test): 58% were female. Mean age was 64 (16.20) yo and 48% of them had any spiritual background	Type: Existential. Description: Nurses' Screening of Spiritual Needs. On admission, nurses administer the spiritual screening (questions related to the purpose and the meaning of life, illness, and spiritual beliefs) through an electronic patient history using the software program Mediscore. In the case of a positive spiritual distress score, the Department of Spiritual and Pastoral Care receives notifications. Format: Individual	Primary FACIT-Sp scale No. of items: 12 Response format: 5-point scale IC: NR Spiritual consultation requests (n)	23.7 (5.8) 7.7 (4.4) n=2	Spiritual well-being Meaning and peace 22.8 (4.3) Faith 6.1 (4.3) Spiritual consultation n=33	0.9; 0.004[g] 1.6; 0.036[g] NR

[a]Interaction effects (group×time).

[b]p Values were calculated using generalized estimating equations.

[c]Repeated measures ANOVA.

[d]Reported p value in the interaction effect (group×time) equal 0.90. However, the study presents discrepancies in report of results.

[e]p<0.05 to adjusted difference and 95% CI using ANOVA. Each outcome measure was tested individually, with its corresponding baseline score used as a covariate. The results of the study present high attrition (31%) combined with per-protocol analysis (instead of the more rigorous intent to treat analysis) and baseline imbalance on outcome variables.

[f]ANCOVA.

[g]Simple group comparison at post-test.

[h]The study lists demographic characteristics for the entire sample (n=45) instead of reporting by each group.

[i]Difference in change score between intervention and control groups.

[j]Standardized effect size.

[k]p Value does not report comparison between two groups. Instead, it reported pretest and post-test for the group intervention only.

[l]The study reports a small range of SD by each subdimension and levels of comfort, for instance, Relief subscale: 3.2 (SD=0.03) and 3 (SD=0.02), intervention and control group, respectively. We found discrepancies in the SD compared to another Turkey study[41] using the same General Comfort Questionnaire, for example, Relief: 2.7 (SD=0.3) and 2.8 (SD=0.3).

[m]Mean and standard deviation at pretest.

[n]Mean and standard deviation at post-test.

[o]Difference between pretest and post-test.

ANCOVA, analysis of covariance; ANOVA, analysis of variance; CoQoLo, Comprehensive Quality-of-Life Outcome; FACIT-Sp, Functional Assessment of Chronic Illness Therapy-Spiritual; GDS, Geriatric Depression Scale; GTS, Gerotranscendence Scale; HADS, Hospital Anxiety and Depression Scale; IC, internal consistency reliability is estimated by Cronbach's coefficient alpha; IC:NR, Cronbach's coefficient alpha did not report in this study; LSS, Life Satisfaction Scale; MQOL-HK, McQill Quality-of-Life Index—Hong Kong version; NIC, Nursing Interventions Classification; NR, not reported; QOLC-E, Quality-of-Life Concerns in the End of Life; RCT, randomized controlled trial; SD, standard deviation; STAI, State-Trait Anxiety Inventory; STS, Self-Transcendence Scale; WHOQOL, World Health Organization Quality of Life; yo, years old.

studies demonstrated that different spiritual interventions improved individuals' spiritual health and psychological outcomes in hospitals or assisted long-term care facilities.

The spiritual interventions generally seemed to clarify and enhance self-understanding of the meaning and purpose of life, relationships, and death[30–32,38] for individuals receiving palliative care or cancer treatment. In addition, the spiritual interventions tended to address patients' emotional and psychological needs, inducing a sense of relief, comfort, and calm spirit.[25,32,37,38] In the social context, spiritual interventions helped patients near to death experience connectedness with their inner self (integrity restoration in the final lifespan stage) and others (family).[30–32]

Across the studies, spiritual interventions delivered by nurses were primarily existential based. For instance, nurses focused on recovering the whole-person health status based on energetic therapies or reviewing life events of individuals in assisted nursing homes, as exemplified by the delivery of touch therapy[6] and reminiscence.[40] Psychospiritual narratives were also usual existential interventions represented in several cultures.[7,30–33,40] Of the six[7,30–33,40] psychospiritual intervention studies, three[30–32] were delivered to seriously ill patients in palliative care and oncology units. Nurses discussed existential questions and counseled patients with strong emotions in daily care, enhancing a sense of meaning during patients' dying process.[32]

In approaching the delivery of this type of spiritual care, the patients tend to notice their spirituality. Unlike physical or pharmacologic treatments that are disease stage specific, psychospiritual interventions are usually applicable at all stages of care to improve patient outcomes and support them cope with the disease. Those interventions encourage patients to share pleasant or unpleasant experiences and re-evaluate their spiritual peace state and life satisfaction. Our study supports previous findings reported by Chen et al., evaluating the effects of spiritual care provided by a multidisciplinary team, which found that life review and spiritual group therapy relieve patients' stress and improve inner peace.[24]

Conversely, religious-based interventions were delivered less often by nurses.[34,38] In only one study,[38] nurses used prayer to improve psychological outcomes in individuals with advanced-stage cancer. Although researchers found that patients use prayer as a form of spirituality and prefer to receive prayer from their nurses,[42] the clinical application of religious practices is limited. Possible reasons may include hospital rules[43] or nurses' concerns about approaching their patients in a manner that is comfortable and accessible, no matter their religious-faith affiliation.[44] Furthermore, religious-based interventions are rarely covered in the nursing curriculum. Therefore, nurses are encouraged to refer this type of intervention to pastoral care.

Noteworthy, the delivery of mixed interventions[3,35–37] have been tested in clinical settings based on Islamic beliefs. Compared to other interventions, mixed based interventions such as active listening and presence helped patients feel that nurses indeed were concerned about them during an existential crisis. Our findings revealed that the nurse's presence induced a sense of relief and increased the patient's connectivity with the faith.[3,35–37] In addition, during routine nursing care, patients were encouraged to seek healing by invoking God's mercy through supplication and the connectivity between other individuals and nature. Corroborating our

findings, Ghorbani et al. also found that nurses created a spiritually nurturing environment where nurses demonstrated empathy and listened to patients express their feelings, concerns, and spiritual beliefs.[16]

Our finding is consistent with the nursing interventions derived from the conceptual analysis of spiritual care proposed by Ramezani et al.[45] That study includes interventions focused on patients' meaning of life and spiritual growth, healing presence, and exploring spiritual perspectives.[45] Agrimson and Taft explain that religion and spirituality are inseparable in many cultures.[46] The authors state that understanding individual and cultural differences in spirituality and religion makes it possible to reduce nursing care barriers.[46]

Despite the variability in spiritual interventions and patient outcomes, nearly all studies reported improved outcomes following the interventions. Increased spiritual well-being was associated with existential based interventions[7,25,31] and mixed interventions.[3,35–37] Reduced levels of anxiety and depression during a patient's distress were reported for existential,[2,25,30,33] religious,[34,38] and mixed interventions.[3] These findings are similar to those presented in a previous meta-analysis of 14 RCTs that concluded spiritual interventions have a moderate effect on spiritual well-being and meaning in life for cancer patients.[23] Our findings should be carefully interpreted and applied to populations outside the studies presented in this review due to the variability of spiritual interventions and their delivery methods and the limited reliability and validity of the outcome measures to answer the questions of fidelity and efficacy of interventions.

The spiritual interventions' characteristics (format, session length, content, and approach) and the comparison groups varied considerably across studies. Most articles did not develop a comprehensive protocol or standards for implementing the spiritual interventions to ensure ease of replicating and evaluating interventions. Even the studies rated with moderate quality presented limited descriptions of their interventions, challenging their generalizability and reproducibility. We also found interventions delivered in the control groups defined as ''routine care'' without a detailed description of this type of care. Of 16 studies, only four[25,30,33,34] cited routine care activities in the control group, including consulting with chaplains or psychotherapists,[25] emotional support,[30] chatting activities,[33] or praying.[34]

The lack of description of the interventions provided to control groups hinders the interpretability of the impact of spiritual interventions on the patient outcomes. For instance, access to coping management or counseling sessions as part of institutional care may have interfered with the effectiveness of spiritual interventions. Future investigations should include standardized protocols about the type of spiritual intervention, time of sessions, activities included within the interventions, how the nurses perform them, and whether they received previous training, such as those from religious facilities.

The sampling methods across the studies also pose limitations to the study findings. Seven of the studies were quasi-experimental,[2,3,25,30,34,38,39] with two of them being single group pre–post-test.[38,39] Studies with this type of design typically are at risk of selection bias due to all participants receiving the same intervention and assessments without a group comparison. Conclusions about the efficacy of spiritual

interventions delivered by nurses were also limited by the small sample sizes, convenience sampling, and absence of power analysis-reported small effect sizes. The absence of power analyses for the RCTs[6,7,32,37,40] was a serious limitation of evaluating the effect of interventions. To improve the generalizability of spirituality studies, we recommend that these studies be replicated in larger multicenter RCTs using a longitudinal design to assess patients' changing experiences and needs over time[47,48] and that the intervention's procedure be rigorously defined and monitored to ensure fidelity.

Finally, the studies showed some inconsistency and heterogeneity in the patient outcome measures. Across the studies, the same outcomes, such as spiritual well-being, anxiety, and depression, were assessed with different scales. In addition, the absence of evidence supporting the reliability of scales used in the studies[6,25,31,32,38,39] weakens the conclusions that can be drawn. Despite the weaknesses noted, our review is a valuable contribution to understanding the state of the science of spiritual interventions delivered by nurses and subsequent studies needed to advance this important area of science in nursing.

Our systematic review showed limitations. This review did not include studies from the gray literature or other sources outside of electronic databases. For additional literature, we searched the reference lists cited in the studies included in our sample. Only English studies were included, and relevant studies in other languages may have been omitted. Despite these limitations, our review offers an overview of spiritual interventions delivered by nurses across countries and cultures, with suggestive evidence of improved psychological and spiritual outcomes.

Implications for practice and research

The studies in our review varied in scope and design. To overcome the heterogeneity of spiritual interventions and limited generalizability, reliable and validated spiritual interventions found in standardized nursing terminologies (SNTs) should be implemented in practice.

In our review, three studies[6,38,40] recommended the spiritual interventions, Therapeutic Touch, Reminiscence, and Spiritual Support, from the Nursing Interventions Classification (NIC)[49] to assist nurses across cultures in providing existential based interventions and religious based interventions. NIC is a standardized terminology recognized by the American Nurses Association as a nursing classification system that meets consistent data standards.[50] Other spiritual interventions, such as Spiritual Growth Facilitation, Presence, and Active Listening, have also been described to provide new knowledge regarding core spiritual care activities and a more concrete way to identify and document patients' spiritual needs.[51] A recent systematic review reporting secondary analyses of data coded with SNTs revealed that SNTs are a viable foundation for systematically building knowledge to demonstrate and measure nurses' contribution to health care and advance nursing.[52]

Other future paths of inquiries about spiritual interventions might include the following: Why should nurses take time to assess the spiritual needs of religious and nonreligious patients? What are the spiritual nursing interventions feasible in short- or long-term care? What are the measured patient outcomes? Are there gold standard spiritual interventions in the palliative care context? What role do nurses play in this care that differs from the other palliative care members (chaplains or psychologists)?

Conclusion

Meaningful conclusions can be drawn from this systematic review, moving the state of the science of spiritual care forward in different patient groups, especially patients presenting fear of death and loss of faith. This study revealed new insights that may positively contribute to increased visibility and interest in using spiritual interventions in palliative care and clinical practice.

As noted, however, additional research is needed to advance our understanding of spiritual interventions within the scope of nursing. Further investigations should include rigorously designed RCTs to answer important questions about spiritual nursing interventions with clearly defined concepts and high-quality measures.

Authors' Contributions

Concept and planning of the study, protocol writing, and writing of the first draft: F.D.S., G.K., and TM. Review of abstracts and articles, and data extraction: F.D.S., S.H., and O.M. Quality assessment rating of studies and revising: F.D.S. and S.H. Article preparation, conceptualization, and editing/drafting of the article: F.D.S., T.M., Y.Y., S.H., O.M., K.D.L., H.C., R.B., D.W., and G.K. Revised critically for important intellectual content. All authors approved the final version.

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Supplementary Material

PRISMA 2020 Checklist

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