

A Systematic Review on Exploring the Need for Spiritual Care in the Perioperative Phase among Patients

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ABSTRACT

Spiritual care (SC) is an essential component of holistic patient care, particularly during the perioperative phase when patients often experience heightened anxiety, fear, and existential distress. While SC is increasingly recognized for its benefits, its implementation in surgical settings remains limited compared to palliative or chronic care environments. This systematic review explores patient perspectives and the impact of SC on recovery among perioperative patients. A comprehensive search across multiple databases identified 17 relevant studies. Findings indicate that SC interventions—such as meditation, prayer, and spiritual counseling—significantly reduce preoperative anxiety, enhance postoperative resilience, and contribute to overall well-being. Improved spiritual well-being is also linked to lower surgical anxiety and higher patient satisfaction. Additionally, SC has been shown to foster a sense of emotional stability and promote faster psychological recovery. However, despite these benefits, SC remains inconsistently integrated into perioperative care, often due to a lack of standardized guidelines and healthcare providers' varying levels of preparedness to deliver spiritual support. This review highlights the need for culturally and religiously sensitive SC approaches tailored to surgical settings. Incorporating SC into routine perioperative care requires multidisciplinary collaboration, including training healthcare professionals to recognize and address patients' spiritual needs effectively. Future research should focus on developing standardized SC protocols to ensure consistent implementation and maximize patient benefits. By systematically integrating SC, surgical teams can enhance patient experiences, alleviate distress, and contribute to holistic healing. Strengthening the role of SC in perioperative care is essential for improving both psychological and clinical outcomes.

Keywords: Anxiety, emotional support, patient well-being, perioperative phase, recovery, spiritual care

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INTRODUCTION

Spiritual care (SC) is a comprehensive concept that focuses on helping individuals confront and understand their deeper questions and feelings related to life's challenges, especially those brought on by illness and crises. It refers to the support provided to individuals to help them find meaning, purpose, and connection in their lives, particularly during times of crisis or suffering (Monareng, 2012). In addition, it is an encompassing approach to address people's spiritual needs, values, and beliefs while respecting and valuing the diversity of perspectives and viewpoints. SC not only involves providing support, guidance, and companionship to individuals in their spiritual journey, but also fosters a sense of meaning, purpose, and connection (Goli et al., 2024). When a patient experiences illness, loss, and stress, spiritual strength can help the individual heal and fulfill goals with or through fulfilling spiritual needs (Biawan & Suroso, 2020).

Within the last decade, SC has been increasingly acknowledged as a pivotal component of comprehensive patient care and plays a vital role in addressing the diverse needs of individuals undergoing various medical situations. Most of the research on spiritual care has focused on patients with serious illnesses, like cancer, or those in intensive care. However, very little is known about the spiritual requirements of patients having surgery, particularly the period before they are wheeled into the operating room. It is generally accepted that surgery and

various dimensions of surgery may have a negative impact on a patient's emotional state (Karačić et al., 2023). This is particularly concerning given that the surgical period can evoke heightened levels of anxiety, fear, and existential questions in patients, underscoring the importance of tailored spiritual support during this critical phase of their healthcare journey.

BACKGROUND OF STUDY

Why is SC important in the perioperative stage of a surgery? People's spiritual practices and beliefs interact in intricate ways, making it difficult to concentrate solely on the physical body, particularly during times of illness (Keonig, 2017). Many patients have spiritual requirements associated with their illnesses, and meeting those needs has an impact on the quality of life, health care expenses, and patient satisfaction with care (Alexi et al., 2011). According to Hvidt et al. (2020), patients who receive limited SC experience more worries, anxiety, shortness of breath, increasing pain, and are stressed about the probability that they will be hospitalised and die in intensive care units (ICUs), instead of at home.

Any invasive procedure may result in anxiety and depressive symptoms due to fear of the unknown, which may lead to poor postoperative prognosis and lower patient satisfaction (Bajo et al., 2003). Patients with high religiosity levels had lower levels of anxiety (Eduardo, Karolayne, Paulo, & Simone, 2018). Thus, the significance of identifying and appreciating the potential benefits that SC might provide to perioperative patients cannot be overstated. By embracing the positive impact it could have on their post-surgery recovery process, overall satisfaction levels, and general well-being, healthcare can take a significant step towards providing holistic and comprehensive care. Therefore, this literature review is to explore the need for spiritual care among patients during the perioperative phase as it is important to explore this area and provide a baseline understanding of how spiritual care can make a difference for patients during this crucial time

Objectives of Literature Review

According to Paré et al. (2015), review articles represent powerful information sources for practitioners looking for state-of-the-art evidence to guide their decision-making and work practices. Thus, a review of past research in this study should be able to generate suggestions that help nurses make the right clinical choices in some clinical situations where spiritual nursing care is suitable. These guidelines encourage the development of a high-quality, evidence-based clinical environment where nurses who approach patients in need of spiritual care in practice demonstrate self-awareness of inner and professional accountability, thereby reducing inappropriate variations in nursing practice of spiritual care. Most of the research conducted has mainly targeted the nurses, but not many have focused on the patients themselves. This literature review aims to provide a comprehensive analysis of previous research, theories, and knowledge related to the spiritual care needs of patients during the preoperative phase. By reviewing and synthesizing relevant studies, the researcher will identify research gaps and establish the significance of the current study. The objectives of the literature review were:

- To understand patients' perceptions of spiritual care during the perioperative phase.
- To analyse studies exploring specific spiritual care needs expressed by patients in the perioperative phase.

Method

Search Strategies

The resources were obtained from the guidelines and online databases available, which are PubMed, Proquest, ScienceDirect, Scopus, and Clinical Key services that are subscribed to by the International Islamic University Malaysia Library. The items searched are scholarly articles and journals related to supporting the topic. The articles and journals searched were guided by filters, which enabled the researcher to sort out the selected ones based on fixed criteria using Advanced Search. The resources were filtered by format or type of sources, language, subject, and date of availability. The researcher has limited the source type to articles and scholarly journals. The language chosen was English. The researcher set the date of resources to availability five years back, from the year 2019 to 2024, and limited the articles and journals to full-text format. The full search strategy for all databases and screening of all abstracts and titles for inclusion was done by the first and second authors. Meanwhile, the review of full texts for the potentially eligible studies was done by all authors.

The keywords used in the search were specified using Boolean operators. The researcher used the "AND" and "OR" to narrow down the search topic. The researcher mostly used the location of the availability of the keywords anywhere, including the document title, document text, and abstract. The keywords used in the search strategy are 'spiritual care', 'patient', and 'perioperative phase'.

Inclusion and Exclusion Criteria

In this literature review, the inclusion and exclusion criteria are as follows:

Inclusion criteria

- The articles were original publications.
- The articles published from 2019-2024.
- The articles are written in English.
- Any research design utilized in the study

Exclusion criteria

- The subject of articles other than the perioperative phase patient

Findings of the Search

The database showed 161 articles that were related to the research topic. After duplicate articles were removed, 96 articles remained. After non-full-text articles were excluded, 60 full-text articles were assessed for eligibility and quality. Then, through assessment, 43 full-text articles were excluded as the majority focused on palliative care and cancer, which are not directly relevant to the perioperative phase. The final 17 studies included in this review were published between 2019 and 2024, ensuring that the synthesis reflects recent developments in perioperative spiritual care. All findings presented were extracted from peer-reviewed empirical studies. No primary patient data were collected by the authors. The summary and synthesis are based solely on published data retrieved through the stated inclusion criteria.

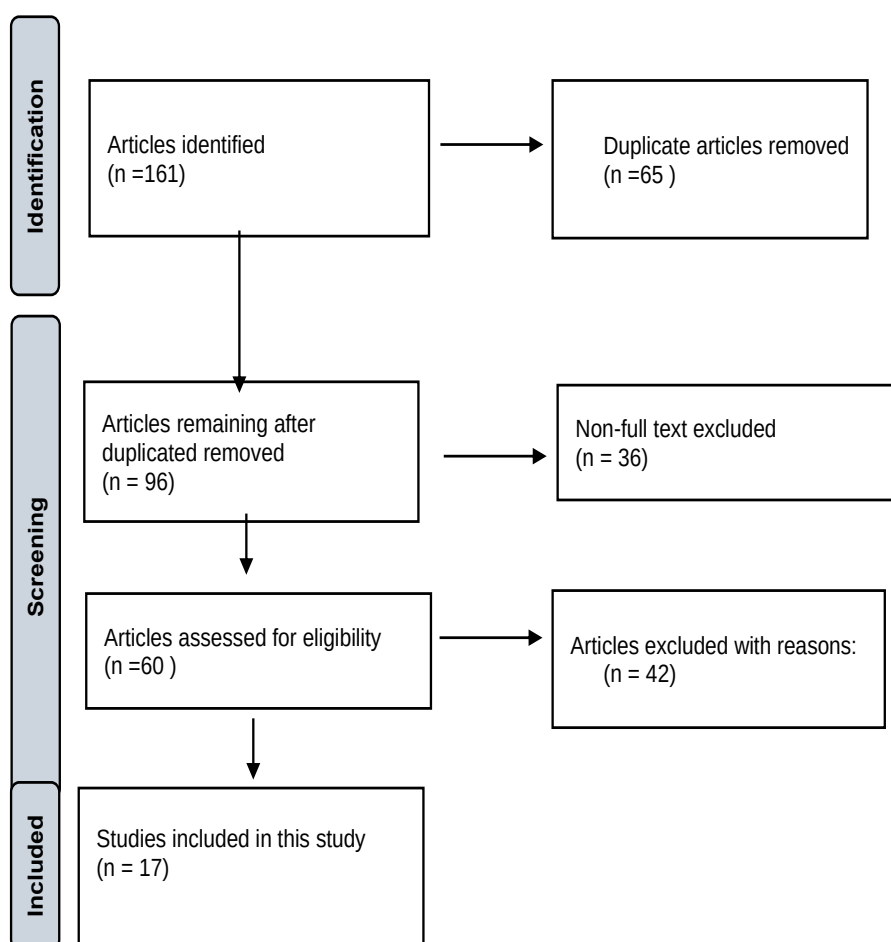


Figure 1: The Prisma Flow Diagram

Data Extraction and Results

From the 17 studies included in this literature review, five (5) studies were conducted in Iran, three (3) were in Brazil, two (2) each in Saudi Arabia and Indonesia, and one (1) in Turkey. Additionally, a single study was also found in Croatia, Ghana, Texas, and India. Design-wise, 7 (seven) studies included in this review were cross-sectional studies, while four (4) were randomised controlled trials. The rest used a quasi-experimental study, a cohort study, a non-random controlled trial study, pre-experimental with a post-test only design, an interventional study, a systematic review, and a qualitative study. This study uses the Joanna Briggs Institute (JBI) Critical Appraisal for Analytical Cross-Sectional Studies to critically appraise the articles.

All the studies reviewed in this research mainly involve participants who are 18 years old and above, all of whom gave informed consent and were scheduled for elective surgeries. Interestingly, Curcio et al. (2022) narrowed their focus to participants aged 35 and older, offering insights into a slightly older group. Meanwhile, Singh et al. (2022) concentrated on patients aged 60 and above, exploring how spiritual music could benefit elderly individuals, a demographic often facing unique health and emotional challenges. In contrast, Jamali Moghadam et al. (2022) did not mention the ages of their participants, providing only details about their gender and occupation. These differences in participant characteristics reflect the varied approaches researchers take to address spiritual care in different contexts.

Of the seventeen (17) articles reviewed, eight (8) did not address their limitations. Acknowledging limitations is an important part of research, as it helps to highlight any potential weaknesses, clarify the boundaries of the study, and explain any challenges in the methods used. This transparency makes it easier for others to understand and interpret the findings.

Since there are differences and heterogeneity between the studies included in the review, a qualitative synthesis method such as thematic analysis is used to identify, analyze, and report patterns in the form of themes within a text (Braun & Clarke, 2006). The data analysis used a standard data extraction form designed to capture essential information from each article. This includes checking the study design, participant sample, main results, and key spiritual care during the perioperative phase. The iterative process of regularly comparing the data helped to ensure the integration of the literature and to derive themes. Two themes emerged from the researcher's synthesis. They are:

Theme 1: Patient Perceptions and Expectations of Spiritual Care

Theme 2: Impact of Spiritual Care on Postoperative Recovery and Healing

Theme 1: Patient Perceptions and Expectations of Spiritual Care

According to Alavi et al. (2022), having a relationship with God plays a significant role in managing and controlling emotions and feelings, especially anxiety. They noted that spiritually-based therapy helps people develop a safe and healthy attachment to God, which can lower anxiety and improve life adjustment. In their study, data collected from 60 hospitalized patients for cardiac surgery aimed to investigate the effect of group logotherapy on spirituality and anxiety of patients undergoing cardiac surgery. By focusing on spiritual training, patients' anxiety can be reduced. These researchers also mentioned that spirituality-based interventions promote a sense of secure and positive attachment to God in human beings, which in turn can reduce anxiety levels and increase life adjustment.

In their study to examine associations between religiousness and surgical fear amongst adult surgical patients in Croatia, Karačić et al. (2023) found that there is a positive relationship between various dimensions of religiousness and surgical fear. They suggested that there is a mobilization effect, where patients with higher levels of surgical fear engage in religious beliefs and practices as a coping mechanism in response to their anxiety. Additionally, the results showed that patients who reported the need for sacral objects exhibited higher levels of surgical fear, indicating that they might benefit from targeted interventions. These findings suggest that individuals who experience greater fear the day before surgery are more likely to turn to religion as a coping resource. Alternatively, it is possible that religious individuals inherently experience heightened surgical fear.

Next, a quantitative study conducted by Biawan & Suroso (2020) showed that 27.8% did not experience anxiety, 56.9% experienced mild anxiety levels, and 15.3% faced moderate anxiety levels in preoperative patients. It showed that only 1.4% of preoperative patients at the hospital had a low spiritual level, the remaining 52.8% presented a moderate spiritual level, and 45.8% showed a high spiritual level. Their study aimed to investigate the correlation between the spiritual level and anxiety in preoperative patients in the surgical inpatient units of *Rumah*

Sakit Umum Daerah (RSUD) Banyumas, Indonesia. They concluded that the higher a patient's spiritual level, the lower their anxiety tends to be, while a lower spiritual level is associated with increased anxiety.

Another study conducted on 300 patients admitted to the general surgery ward of Namazi Hospital in Shiraz, Iran, reveals that there is a negative correlation between spiritual health and depression, anxiety, and stress. In addition, the study found that when the spiritual health of the patients is higher, the mean score of depression, anxiety, and stress will be lower. Thus, in conclusion, paying attention to the spiritual health and needs of patients hospitalized in the Surgery Unit seems necessary to control patients' depression, anxiety, and stress.

In Brazil, da Costa Galvão et al. (2023) found that the data collected from 62 patients showed a high use of religious-spiritual coping, with predominance for the positive. Regression analysis showed that religiosity played only a small role in explaining why people turn to religious-spiritual coping. This suggests that during tough times, even those who do not typically engage deeply with religion may still seek it out. It implies that spirituality, rather than religiosity, might be the key to understanding this coping process.

On the other hand, Adugbire & Aziato (2020) found that patients in northern Ghana often turned to spiritual guidance and protection to cope with the challenges of surgery. Exploring patients' perception of spirituality on the outcome of surgeries, some shared how difficult the experience was, admitting fears of not surviving the operation or its aftermath. Many felt they did not receive enough information from nurses about what to expect, leaving them uncertain and anxious, wondering if they would survive, be injured, or even die during or after the surgery. The study also found that while some patients valued prayers and spiritual support, they also emphasized the importance of the surgical team's skills. The patients believed that no amount of prayer could replace the need for competent doctors and nurses. Ultimately, while spirituality played a significant role for some, others felt their successful recovery depended more on the expertise of the healthcare team.

Theme 2: Impact of Spiritual Care on Postoperative Recovery and Healing

Based on their study to determine the impact of spiritual care on the quality of life of 100 stroke patients who underwent intracranial hemorrhage surgery, Goli et al. (2024) found that spiritual care had a positive impact, leading to significant improvements in the quality of life for the intervention group. There was noticeable progress in areas like self-care, mobility, upper limb function, speech, vision, work, thinking, family and social roles, personality, mood, and energy of patients. Spiritual care can make a real difference in improving symptoms and quality of life for stroke patients.

Next, a study from Curcio et al. (2022) that investigated the long-term associations of such psychological factors following cardiac surgery had revealed that their findings identify a population that is vulnerable to a decrease in resilience following cardiac surgery, as well as an avenue (i.e., spirituality) for potentially bolstering resilience. In this study, patients with high resilience were more spiritual, experienced less anxiety and depression, felt more supported socially, had greater confidence in their abilities, and enjoyed a better quality of life. The study also found that spirituality plays a key role in boosting resilience, particularly in the year following cardiac surgery. Patients with higher resilience reported stronger spirituality, better social support, and an improved quality of life, along with lower levels of anxiety and depression both before and after surgery. On the other hand, those with lower resilience experienced more anxiety, depression, and pain after surgery. These findings suggest that fostering spirituality during the surgical process could help patients build resilience and improve both their mental well-being and physical recovery (Curcio et al., 2022).

Another study by Mousavizadeh & Jandaghian-Bidgoli (2024) showed that spiritual interventions consistently lead to positive outcomes, helping to reduce anxiety, depression, pain, stress, and other negative emotions among cardiovascular disease (CVD) patients. In addition, the quality of life can be improved and the life expectancy extended. In evaluating the effectiveness of spiritual and psychological interventions in enhancing quality of life and reducing anxiety amongst these patients, these researchers concluded that incorporating spiritual care is recommended as part of a holistic approach to support CVD patients. By combining psychological and spiritual interventions, healthcare providers can address patients' emotional, mental, and spiritual needs, leading to better overall health and a higher quality of life.

Similarly, a study by Negré JAS, et al. (2022) in Brazil to evaluate 70 adult cardiac patients' hope in the preoperative period of surgery and its potential association with spirituality, found that there is a high level of hope associated with the expression of spirituality through religion and religiosity. The raw score was obtained in the Herth Hope Scale (HHS). They concluded that incorporating spiritual and health practices into care highlights the importance of a thoughtful and flexible approach to understanding a person's spirituality and religiosity,

especially for those facing chronic illnesses or serious health challenges. This approach not only offers a safe and effective way to support patients but also helps create a more compassionate environment. By addressing spiritual distress, it can improve emotional well-being and may even contribute to better survival outcomes.

In their quantitative study, Rodrigues dos Santos et al. (2020) aimed to assess the effectiveness of a complementary therapy called Reiki in reducing anxiety, depression, and improving preoperative well-being in cardiac surgery. Reiki, used in conjunction with other therapeutic and medical approaches, produces deep relaxation that has been shown to reduce stress and anxiety, pain perception, and to foster a sense of psychospiritual well-being (Burden et al., 2005). The results revealed a significant improvement in spiritual and existential well-being in the Reiki group compared to the control group. Although there was no significant difference in mean anxiety and depression levels between the two groups, the Reiki group showed better overall outcomes. Despite being an important factor in the preoperative period, it is evident that religiosity can interfere in some cases with the acceptance of holistic and integrative practices.

However, in their study involving 150 patients from the General Surgery and Transplant clinics of a university hospital, Kapikiran et al. (2021) found that patients with higher levels of spiritual well-being experienced less surgical fear, while those aged 65 and older reported the highest levels of fear. They concluded that understanding and supporting patients' needs, healthcare providers can help reduce fear in a simple, affordable, and highly effective way by addressing patients' spiritual well-being before surgery.

Interestingly, a study by Maarof et al. (2023) investigated whether listening to verses of the Muslim holy book, the Qur'an during the immediate postoperative period affects patients' anxiety levels, the number of opioids used to control pain, and the length of stay (LOS) in the Post Anesthesia Care Unit (PACU). The results indicated that the anxiety scores were significantly reduced, opiate use, and overall PACU LOS were also reduced during the recovery period post-anaesthesia.

Another similar study by Hanan Soliman & Salwa Mohamed (2021) examined the effects of zikr mediation (the remembrance of God through repetitive chants from the Quran or the practices from the Prophet Muhammad, peace be upon him), and jaw relaxation therapy on reducing postoperative pain, anxiety, and physiologic response. This study was conducted on 40 patients in surgical wards at the Mansoura University Hospital, Egypt. All 4 patients in the study were Muslims and regularly included zikr meditation in their daily routines. The results revealed that patients who practiced Zikr meditation and jaw relaxation exercises experienced significantly less pain after surgery compared to those who did not. While both interventions helped strengthen their mind, body, and spirit, which reduced pain for those in the control group during the first two days after surgery, the experimental group reported even lower pain levels, since they practiced the meditation and relaxation exercises for 30 minutes longer each day than the control group.

On the other hand, in their study of the impact of spiritual music on perioperative anxiety and hemodynamic parameters in elderly patients undergoing procedures under spinal anaesthesia, Singh et al. (2022) found that those who listened to the music experienced lower levels of anxiety than those who did not. Furthermore, there was a significant difference in the intraoperative and postoperative visual analog scale for anxiety (VASA) score, lower sedative and analgesic requirements, and lower heart rate for those who were subjected to spiritual music.

In Indonesia, Atul Angga Fiari et al. (2023) studied the effectiveness of spiritual therapies on the level of patient anxiety in 50 preoperative patients at the University of Muhammadiyah Malang Hospital. The result showed that the intervention group had mild anxiety at 52%, while the control group had 80%. Most patients in the intervention group experienced only mild anxiety before surgery after receiving spiritual therapy, which focused on reflection and prayer, and helped them feel calmer and more at peace. Spiritual treatment helped them manage better with stress and reduced their overall anxiety levels by enhancing their emotional awareness and cultivating confidence in Allah.

Meanwhile, Amiri et al. (2021) studied the effect of spiritual care on the fear and anxiety of orthopaedic surgery patients. Their findings revealed a significant difference between the experimental and control groups. Those who received spiritual care before anaesthesia, showed reduced anxiety and fear compared to those who did not. The researchers concluded that since spirituality is a fundamental dimension of human existence, this approach to care could serve as a safe and effective method for supporting patients during the perioperative phase. As spirituality is a fundamental dimension of human existence, this approach to care could serve as a safe and effective method for supporting patients during the perioperative phase (Amiri et al., 2021).

A previous study found that providing spiritual care requires five fundamental bedside skills: hearing, sight, speech, touch, and presence. These abilities were not just technical; they were also greatly impacted by the inherent characteristics of the healthcare workers, such as their spirituality and personal values. Rather than using clinical competence or formal knowledge, spiritual care was mostly provided through relational, tacit exchanges. It developed as a theory included in physical and psychosocial care, as well as a separate area of care. These results imply that, frequently without the clinician's conscious intention, spiritual support is communicated at the bedside through subtle, humanistic acts (Sinclair et al., 2012).

Conceptual Framework

The conceptual framework developed for this study focuses on understanding the role and impact of spiritual care during the perioperative phase. It highlights key elements such as patients' perceptions and expectations of spiritual care, the influence of such care on postoperative recovery and healing, and the potential effects of unmet spiritual needs. By connecting these aspects, the framework provides a comprehensive approach to exploring how spiritual care contributes to improving the perioperative experience and supporting patients' overall well-being. Figure 2 summarises this conceptual framework.

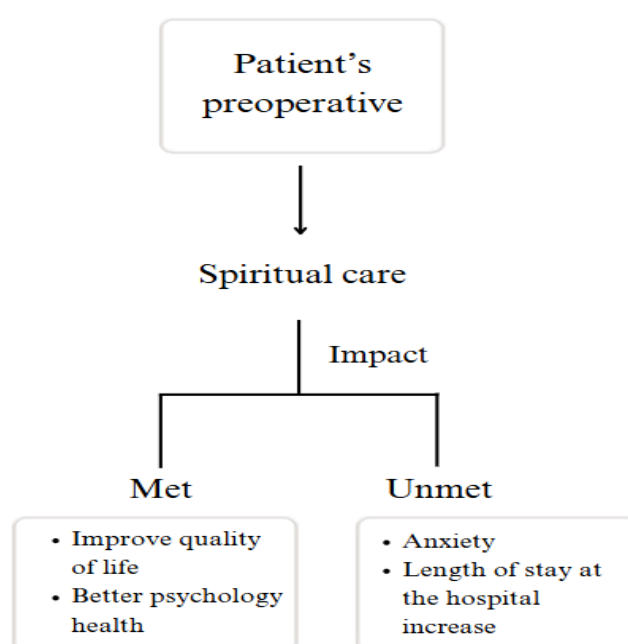


Figure 2: Conceptual Framework

DISCUSSION AND THEORETICAL FRAMEWORK OF STUDY

Past studies done on SC in this paper have shown that a variety of research methodologies have been used on different age groups and for different types of illness. Most of these studies have investigated patients' views on the need for SC before and after a surgery, while other studies have compared the anxiety and pain levels of patients who had SC and those who did not. Although the study design may be different across the globe with different cultural backgrounds and different spiritual beliefs, the literature review seems to point out that SC has helped to lower anxiety before the surgery, as well as post-surgery. These findings confirm the approach taken by Dr. Christina Puchalski, who advocates that spiritual well-being is just as important to a person's health as physical, emotional, and social well-being (Puchalski, 2021). The Puchalski Model of Spiritual Care encourages caregivers to take a holistic view of the patient, considering all aspects of their care, and to respect each person's unique spiritual beliefs and values. Understanding these beliefs can play a key role in how patients cope with illness, make decisions, and ultimately impact their healing journey.

According to this model, healthcare providers can offer compassionate care by being present with the patient, listening to their concerns, and providing emotional support (Puchalski, 2021), both before, during and after surgery. This presence and empathy can help alleviate anxiety and fear about any issues associated with surgery.

Integrating spiritual care into the overall care plan ensures that a patient's spiritual needs are addressed alongside their physical and emotional needs. This holistic approach can lead to better patient outcomes and satisfaction. Since this review encompassed a wide range of cultures and beliefs, it is important to explore the patient's faith, the significance of their beliefs, their community support, and their preferences on how these issues should be addressed. Healthcare providers can create a more personalized and holistic care plan for their patients. In their study, Mohd Asri et al. (2024) found that if the nurses shared the same ethnic background as the patient, these nurses were more likely to understand the intricacies of the patient's spiritual needs better having been raised in the same way, and able to offer the necessary spiritual care required by the patient and family. Here, it can be seen that ethnicity or race played a role in nurses' competency in delivering spiritual care.

Healthcare providers can improve patients' general well-being and provide a more positive surgical and recovery experience by implementing the Puchalski Model throughout the perioperative period.

CONCLUSION AND LIMITATION OF STUDY

In conclusion, the literature review highlights how important spiritual care is for patients during the perioperative phase. Meeting these needs can greatly improve patients' experiences and recovery. However, there is still a gap in research focused specifically on spiritual care in this setting, as most existing studies are about palliative care or chronic illnesses. Moving forward, it's important to explore how patients perceive spiritual care during surgery, how it affects their healing, and what happens when these needs are overlooked. Understanding these aspects can help healthcare providers offer more compassionate, personalized care that supports patients through every step of their surgical journey.

One of the limitations of this study is the inclusion of studies that utilize different methodologies, thus potentially affecting the comparability of results. This is because different research designs and data collection methods can result in biases and affect the generalizability of the findings. However, the findings do highlight the need for culturally and religiously sensitive SC approaches tailored to surgical settings.

SIGNIFICANCE AND IMPLICATION OF STUDY

This study has provided feedback and highlighted several potential benefits of SC for both the patients and the nurses. For patients, the findings of this study have addressed the spiritual needs in the perioperative phase, which can enhance emotional and psychological well-being by providing comfort, reducing anxiety, and fostering a sense of peace. This holistic approach may contribute to a more positive surgical experience and increased satisfaction with care. Furthermore, integrating spiritual support into perioperative care may facilitate improved recovery outcomes. Patients who receive comprehensive support, encompassing physical, psychological, and spiritual aspects, are likely to develop more effective coping mechanisms, enhancing resilience and potentially accelerating recovery. Additionally, recognizing and addressing spiritual needs aligns with the principles of holistic care, ensuring that patients receive treatment that respects their beliefs and values, thereby promoting overall well-being and preserving personal dignity. Thus, this review highlights the need for a systematic SC to be integrated in perioperative care, with an emphasis on culturally and religiously appropriate approaches. Future studies should focus on creating standardized SC guidelines for surgical settings to enhance patient outcomes and experiences.

AUTHOR CONTRIBUTION

NAR, NHMR and JJ conducted the data screening, data analysis and manuscript writing, while SML performed the data analysis.

DECLARATION OF STATEMENT

The authors of this paper declare that this manuscript is their own.

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CONFLICT OF INTEREST STATEMENT

The author has no conflicts of interest to state. This article submission is an original work and is not being considered for another publication.

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APPENDIX I: Articles Summary

Title / Types	Year	Author & Country	Objectives	Findings	Limitations
Are religious patients less afraid of surgery? A cross-sectional study on the relationship between dimensions of religiousness and surgical fear	2023	Karačić et al. / Croatia N=178	This study aimed to examine associations between religiousness and surgical fear in a representative sample of adult surgical patients in Croatia.	This study demonstrated significant positive associations between dimensions of religiousness and surgical fear, potentially suggesting that surgical patients experience increased religiousness to cope with heightened anxiety.	The study was single-center and cross-sectional and did not assess patients' specific religious identity.
Brazilian Adults' Hope and Spirituality in Preoperative Heart Surgery: A Cross-Sectional Study	2022	Negré JAS, et al. / Brazil N=70	<u>To evaluated adult cardiac patients' hope in the preoperative period of cardiac surgery and its potential association with spirituality.</u>	<u>Regardless of the religious strand and time dedicated to religious practices as an expression of spirituality, hope was associated with the participants' religion and religiosity.</u>	The limitations of this study are related to the survey design and sample size, which interfere with the validity of the results obtained for.
Effect of spiritual care on the quality of life in patients who underwent intracranial hemorrhage surgery: a randomized controlled trial	2024	Goli et al. / Iran N=100	This study was conducted to determine the impact of spiritual care on the quality of life of stroke patients.	the authors strongly recommend the use of spiritual care as a holistic method to improve the symptoms and quality of life of stroke patients.	One of the limitations of the present study was the participants' differences and psychological conditions, which can affect the results of the study. The second limitation was the differences in the cultural, religious and spiritual beliefs of each patient, which could affect their quality of life. In addition, the present study was performed only in one hospital and on a limited number of patients with stroke, so

					similar researches in other centres with higher sample size should be conducted over a longer period of time. Moreover, another limitation of the study is the short follow-up period, which may restrict the ability to fully capture and evaluate the long-term effects of the spiritual care.
Religious-spiritual coping of patients in the Preoperative period of cardiac surgery cross-sectional, analytical study	2023	Da Costa Galvão et al. / Brazil N=62	to evaluate the religious spiritual coping in patients in the preoperative period of cardiac surgery	the patients showed a high use of religious-spiritual coping	This research was limited to consider the dimensions of religiosity, however, without considering and using a validated scale for the construct spirituality, which could bring more information and contribute to a greater understanding of religious-spiritual coping for patients waiting for cardiac surgery.
The effect of group logotherapy on spirituality and preoperative anxiety in patients seeking open heart surgery referring to Tehran Heart Center in 2020	2020	Mansouri an, et al. / Iran N=60	to investigate the effect of group logotherapy on spirituality and anxiety of patients undergoing cardiac surgery.	by focusing on spiritual training of patients who are candidates for surgery, the incidence or severity of anxiety can be reduced.	N/A

(Quasi-experimental study)					
The role of resilience and spirituality in recovery following cardiac surgery Prospective cohort study	2022	Curcio et al. / Texas N=402	to investigate the long-term associations of resilience with spirituality and other psychosocial factors following cardiac surgery in a nonemergent, allcomers population.	Improving resilience via spirituality postoperatively may foster better overall recovery and better mental and physical health outcomes.	N/A
A correlation between spiritual level and preoperative patients' anxiety cross-sectional	2020	Biawan and Suroso / Indonesia N=72	To discover the correlation between the spiritual level and anxiety in preoperative patients in the surgical inpatient units of RSUD Banyumas.	There was a correlation between the patients' spiritual level and preoperative anxiety in the surgical inpatient units of RSUD Banyumas.	N/A
Correlation between Spiritual Health and Depression, Anxiety, and Stress in Patients Undergoing General Surgeries (cross-sectional)	2022	Jamali moghadam et al. / Iran (2022) N=300	to determine the correlation between spiritual health and stress, anxiety and depression in patients hospitalized in general surgery ward	spiritual health of patients in the Surgery Unit is more they experience less depression, anxiety and stress	One of the limitations of this study was that the questionnaires were self-reports and may not reflect the actual behavior of the patients and may distort the results of the study. Further studies are suggested to investigate other factors affecting the studied variables. In addition, interventional studies are recommended to evaluate the effect of spiritual health-promoting interventions on depression, anxiety and stress in patients.

Reiki protocol for preoperative anxiety, depression, and well-being: a non-randomized controlled trial	2020	Santos et al. / Brazil N=90	To assess the effectiveness of Reiki in reducing anxiety, depression, and improving preoperative well-being in cardiac surgery.	Anxiety and depression were lower in the intervention group, with no statistically significant difference.	one still has that the intervention group did not reach the expected sample size, besides that the high refusal to participate can contribute as a sample selection bias. The outcomes were not assessed before and after intervention in the same group, which could evidence the effectiveness of Reiki in improving the measured effects.
The effect of spiritual well-being on surgical fear in patients scheduled to have abdominal surgery cross-sectional	2021	Kapikiran et al. / Turkey n=150 (18 above)	to investigate the effects of the levels of the spiritual well-being of patients who are planned to have abdominal surgery on their surgical fear.	there was a negative significant relationship between surgical fear and spiritual well-being, and the highest score for surgical fear was observed in the individuals who were 65 years old or older.	N/A
The Effects of Listening to the Qur'an in the Postoperative Management of the Patients Undergoing Laparoscopic Cholecystectomy in the Day Surgery Unit (Randomized Control Trial)	2023	S.R. Maarof et al. / Saudi Arabia N=112 (18 above)	To determine if listening to verses of the Qur'an during the immediate postoperative period has an effect on patients' anxiety levels, the number of opioids used to control pain, and the length of stay (LOS) in the Post Anesthesia Care Unit (PACU).	The findings showed that by listening to chosen verses from the Qur'an in the recovery period post-anaesthesia, anxiety scores were significantly reduced	the timeline was prolonged to 4 years, the number of laparoscopic cholecystectomy cases in the tertiary hospital was limited, researcher had no control over the participants' emotional states
Effects of Zikr Mediation and Jaw Relaxation on	2021	Soliman and	to examine the effects of zikr	The findings of the present study showed that	N/A

Postoperative Pain, Anxiety and Physiologic Response of Patients Undergoing Abdominal Surgery Randomized controlled		Mohamed / Egypt N=40 (18 above)	mediation and Jaw relaxation on reducing postoperative pain, anxiety and physiologic response	patients undergoing surgery who practice zikr mediation & jaw relaxation have significantly lower subjective indices of anxiety and pain, after following the guideline of Zikr meditation & jaw relaxation practice	
Effect of Spiritual Music on Old-age Patients Undergoing Lower Limb Surgery under Spinal Anesthesia : randomized controlled study.	2022	Singh, et al / India N=80 (60 above)	To study the effect of spiritual music on perioperative anxiety and hemodynamic parameters in elderly patients undergoing procedures under spinal anesthesia	Our study showed that patients who were subjected to spiritual music showed decreased anxiety levels as compared to group who were not subjected to music	N/A
The Effectiveness of Spiritual Therapy in Reducing the Anxiety Level of Preoperative Patients pre-experimental with a post-test-only design	2023	Fiari et al. / Indonesia	to determine the effectiveness of spiritual therapies on the level of patient anxiety in preoperative patients.	The intervention group had mild anxiety at 52%, while the control group had 80%.	The limitation of this study is the limited number of samples, and the measurement of anxiety levels is only carried out at the time of post-test because the patient enters the hospital less than one day before surgery, so the research time is limited.
Surgical Patients' Perception of Spirituality on the Outcome of Surgery in Northern Ghana (Qualitative Study)	2020	Adugbire & Aziato / Ghana N=15 (23-65)	To explore surgical patients' perception of spirituality on the outcome of surgeries in the northern part of Ghana	Surgical patients perceived threat, harm, or loss when they had to undergo surgery. Participants' perceived that a successful surgical outcome will depend on divine intervention from their religious faith.	N/A
Effect of Spiritual Care on Anxiety and Fear of Orthopaedic Surgery Patients (Intervention-al study)	2021	Amiri et al. / Iran	the effect of spiritual care on the fear and anxiety of orthopaedic surgery candidates.	The results showed the spiritual care could reduce the anxiety and fear of orthopaedic surgery candidates.	First, it did not compare pain levels before surgery. Second, not all patients received the same intervention as

					outlined in the Method section. Third, the spiritual care protocol was tailored to Muslim patients of the Shiite sect, limiting its generalizability to other groups, although it could apply universally. Additionally, most patients underwent minor surgeries,
The effects of nurse-led spiritual care on psychological well-being in the healthcare services of patients with cardiovascular diseases in Iran: a systematic review	2024	Mousavi zadeh & Jandaghi an-Bidgoli / Iran	to evaluate the effectiveness of spiritual and psychological interventions in enhancing quality of life and reducing anxiety among CVD patients	All reviewed studies reported positive outcomes with spiritual interventions, demonstrating their effectiveness in reducing anxiety, depression, pain, stress, and negative emotions, while also improving quality of life and possibly life expectancy	Firstly, the heterogeneity of the data precluded the possibility of conducting a meta-analysis. Secondly, limiting the search to English and Farsi languages potentially excluded relevant studies. Thirdly, some studies may have been conducted without fully considering prior research, potentially leading to redundancy.