MEDICA

(International Medical Scientific Journal)
Vol.8, No.7, July 2026, pp. 678 – 696
ISSN 2622-660X (Online), ISSN 2622-6596 (Print)
https://doi.org/10.53770/medica.v8i7.1170

A Scoping Review of Nursing Approaches to Spiritual Care in Cardiovascular Disease: Clinical Practice and Patient Outcomes

Aris Citra Wisuda[1,2]✉, Masniati Arafah[1,3], Ayu Prawesti Priambodo[4], Fermata Sari[1,5], Neny Nursahaza[1], Citra Suraya[6], Dian Emiliasari[6], Wa Ode Nurlina[7], Basmalah Harun[8]

[1] Medical-Surgical Nursing Specialist Program, Faculty of Nursing, Universitas Padjadjaran, West Java, Indonesia
[2] Nursing Profession Study Program, Sekolah Tinggi Ilmu Kesehatan Bina Husada, Palembang, South Sumatera, Indonesia
[3] Nursing Profession Study Program, Sekolah Tinggi Ilmu Kesehatan Hesti Wira Sriwijaya, Palembang, South Sumatera, Indonesia
[4] Faculty of Nursing, Universitas Padjadjaran, Sumedang Regency, West Java, Indonesia
[5] Diploma in Nursing Study Program, Sekolah Tinggi Ilmu Kesehatan Hesti Wira Sriwijaya, Palembang, South Sumatera, Indonesia
[6] Nursing Study Program, Sekolah Tinggi Ilmu Kesehatan Bina Husada, Palembang, South Sumatera, Indonesia
[7] Diploma in Nursing Study Program, Sekolah Tinggi Ilmu Kesehatan RS. Prof. Dr. J.A. Latumeten, Ambon, Maluku, Indonesia
[8] Diploma in Nursing Study Program, Sekolah Tinggi Ilmu Kesehatan Makassar, South Sulawesi, Indonesia

Article Info

Article History:
Received:
14 June 2026
Revised:
26 July 2026
Accepted:
28 July 2026
Published:
30 July 2026

Keywords:
Cardiovascular Disease
Cardiovascular Nursing
Patient Outcomes
Scoping Review
Spiritual Care

Citation:
Wisuda, A.C., Arafah, M., Priambodo, A.P., Sari, F., Nursahaza, N., Suraya, C ., Emiliasari, D., Nurlina, W.O., & Harun, B. (2026). A Scoping Review of Nursing Approaches to Spiritual Care in Cardiovascular Disease: Clinical Practice and Patient Outcomes. *MEDICA (International Medical Scientific Journal)*, 8(7), 678–696. https://doi.org/10.53770/medica.v8i7.1170

Abstract

Cardiovascular disease (CVD) remains a leading cause of global morbidity and mortality. Beyond physical symptoms, patients frequently experience psychological distress, existential concerns, and spiritual needs that may influence coping, treatment adherence, and overall well-being. Although spiritual care is increasingly recognized as a component of holistic cardiovascular nursing, evidence regarding nurse-led spiritual care remains heterogeneous in terms of intervention models, implementation strategies, cultural adaptation, and reported outcomes. This scoping review aimed to systematically map nursing approaches to spiritual care for adults with CVD and summarize their implementation across clinical settings. The review followed the PRISMA Extension for Scoping Reviews (PRISMA-ScR) guidelines. Searches were conducted in PubMed, Scopus, Web of Science, CINAHL, and ScienceDirect for studies published between 2015 and 2025. Quantitative, qualitative, and mixed-methods studies involving nurse-led or nurse-integrated spiritual care interventions were included. Eighteen studies met the eligibility criteria. Thematic synthesis identified four categories of nursing approaches: spiritually supportive communication, faith-based spiritual interventions, mindfulness- and meaning-centered approaches, and holistic spiritually integrated nursing care. These interventions were implemented across acute care, coronary care, cardiac rehabilitation, outpatient, palliative, and community settings. Reported outcomes encompassed psychosocial, spiritual, patient-centered, and selected physiological domains, with anxiety reduction, emotional comfort, coping, spiritual well-being, quality of life, and patient satisfaction being the most frequently described outcomes. This review provides a comprehensive overview of contemporary nursing approaches to spiritual care in cardiovascular practice, highlights important variations in intervention characteristics and outcome assessment, and identifies priorities for developing standardized, culturally responsive, and theory-informed spiritual care frameworks and future cardiovascular nursing research.

Corresponding Author:

✉ Aris Citra Wisuda
Nursing Profession Study Program, Sekolah Tinggi Ilmu Kesehatan Bina Husada, Palembang, South Sumatera, Indonesia
Email: ariscitrawisuda.edu@gmail.com

1. INTRODUCTION

Cardiovascular disease (CVD) continues to impose a substantial clinical, economic, and societal burden worldwide and remains the foremost contributor to premature mortality and long-term disability. According to recent global epidemiological reports, approximately 523 million individuals are currently living with cardiovascular disease, while an estimated 20.5 million deaths occur annually due to cardiovascular-related conditions, accounting for nearly one-third of total global mortality (World Health Organization [WHO], 2023; Tsao et al., 2023). The prevalence of CVD is expected to increase further due to population aging, sedentary lifestyles, obesity, hypertension, diabetes mellitus, tobacco exposure, and persistent psychosocial stressors that accelerate cardiovascular deterioration and recurrent complications (Mensah et al., 2023). In addition to physiological impairment, patients with cardiovascular disease frequently experience prolonged hospitalization, recurrent admissions, reduced functional status, emotional instability, uncertainty regarding prognosis, and diminished quality of life (Khan et al., 2020). Psychological conditions such as anxiety, fear, stress, and depression are particularly common among patients with coronary artery disease, heart failure, arrhythmias, and post-cardiac intervention recovery, with prevalence estimates ranging from 20%–45% across cardiovascular populations (Celano et al., 2021; Levine et al., 2021). These psychological disturbances may negatively influence autonomic nervous system regulation, inflammatory responses, medication adherence, sleep quality, coping capacity, and overall cardiovascular prognosis, thereby contributing to poorer recovery outcomes and increased healthcare burden (Vaccarino et al., 2020; Cohen et al., 2021). Consequently, modern cardiovascular nursing increasingly emphasizes comprehensive and patient-centered care approaches that address not only physiological stabilization but also psychosocial and spiritual well-being.

Within contemporary nursing science, spiritual care has emerged as an essential dimension of comprehensive care because it addresses patients' needs for meaning, hope, connectedness, inner peace, and existential adaptation during illness and recovery. Spirituality is recognized as a multidimensional aspect of human experience that may or may not involve religious practices but significantly influences emotional resilience, coping mechanisms, and perceptions of health and suffering (Wei et al., 2024; Puchalski et al., 2020; Caldeira et al., 2021). The integration of spiritual care within nursing practice is strongly supported by nursing theories and holistic care frameworks, including Watson's Theory of Human Caring, which emphasizes compassionate, transpersonal, and spiritually sensitive nurse–patient relationships to promote healing and preserve human dignity (American Nurses Association. (2021); Watson, 2022). Similarly, the Biopsychosocial-Spiritual Model proposes that spiritual well-being interacts dynamically with psychological and physiological processes, affecting stress regulation, neuroendocrine responses, emotional adaptation, and health outcomes (Sitzman, 2021; Sulmasy, 2021; Peteet & Balboni, 2022). In cardiovascular settings, spiritual support may help patients manage fear, uncertainty, and emotional distress associated with life-threatening conditions and invasive medical procedures. Emerging evidence suggests that spiritually supportive nursing interventions may contribute to reduced anxiety, improved emotional comfort, enhanced coping ability, better treatment adherence, and improved patient satisfaction among individuals with cardiovascular disease (Gonçalves et al., 2022; Vitorino et al., 2022). Several studies have also suggested potential physiological benefits, including stabilization of blood pressure, heart rate, relaxation responses, and autonomic balance during hospitalization and recovery processes (Tabei et al., 2021).

The growing recognition of spiritual care within cardiovascular nursing has encouraged the implementation of various nurse-led spiritual interventions across diverse healthcare and cultural settings. Reported nursing approaches include spiritual assessment, therapeutic communication, active listening, emotional presence, facilitation of religious practices, guided prayer, spiritually integrated counseling, mindfulness-based spiritual support, and Qur'anic murottal therapy (Ismail et al., 2023; Martins et al., 2021). These interventions are intended to provide emotional reassurance, strengthen spiritual coping, foster therapeutic relationships, and deliver culturally responsive nursing care for patients experiencing cardiovascular illness and recovery. In multicultural healthcare environments, culturally adapted spiritual interventions are increasingly recognized as essential components of patient-centered care because patients' spiritual beliefs frequently influence illness perceptions, treatment decisions, recovery expectations, coping processes, and engagement with healthcare services (Rosa et al., 2023). Despite the growing number of studies, the evidence remains fragmented across several important dimensions. Existing research varies considerably in the types of nursing spiritual care interventions delivered, their theoretical foundations, implementation strategies, intervention intensity and duration, cultural adaptations, and clinical settings. Furthermore, studies involve diverse cardiovascular populations, including patients with coronary artery disease, heart failure, myocardial infarction, post-percutaneous coronary intervention recovery, and cardiac rehabilitation, resulting in substantial variability in intervention delivery and reported outcomes. Outcome assessment is similarly inconsistent, with most studies emphasizing anxiety or psychological distress while comparatively few examine broader dimensions such as spiritual well-being, emotional comfort, therapeutic relationships, patient experience, quality of care, coping processes, or physiological indicators. This diversity limits the ability to develop an integrated understanding of current nursing approaches to spiritual care across the continuum of cardiovascular care.

Several reviews have previously examined spirituality in nursing and chronic illness; however, important knowledge gaps remain regarding the implementation of nurse-led spiritual care specifically within cardiovascular practice. Existing reviews frequently combine multiple chronic disease populations, discuss spirituality primarily from conceptual or theoretical perspectives, or evaluate selected psychological outcomes without comprehensively describing how spiritual care is implemented in cardiovascular nursing or how intervention characteristics differ across healthcare settings and cultural contexts (Timmins & Caldeira, 2019). Moreover, no previous review has systematically mapped the breadth of nursing approaches to spiritual care in cardiovascular disease by integrating evidence from quantitative, qualitative, and mixed-methods studies while simultaneously examining intervention characteristics, implementation strategies, cultural adaptations, and the full spectrum of reported psychosocial, spiritual, patient-centered, and physiological outcomes. Consequently, clinicians, educators, and researchers currently lack a comprehensive evidence map that identifies which nursing approaches have been implemented, how they have been delivered across different cardiovascular settings, and where important evidence gaps remain. Addressing these gaps is essential for informing the development of standardized, culturally sensitive, and evidence-informed spiritual care models for cardiovascular nursing practice.

Given the exploratory nature of these objectives and the breadth of the available literature, a scoping review was considered the most appropriate methodological approach. Unlike a systematic review, which is designed to answer narrowly focused questions regarding the effectiveness of a specific intervention using relatively homogeneous evidence, a scoping review is recommended when the objective is to map the extent, characteristics, and distribution of existing evidence, examine variations in

concepts and implementation, and identify knowledge gaps across diverse study designs and healthcare contexts. The literature on nursing spiritual care in cardiovascular disease encompasses quantitative, qualitative, and mixed-methods research, includes a wide range of intervention models and outcome measures, and reflects considerable cultural and clinical diversity. Accordingly, a scoping review provides the most suitable framework for comprehensively synthesizing this heterogeneous body of evidence while identifying areas requiring further investigation. Therefore, this review aimed to systematically map nursing approaches to spiritual care in patients with cardiovascular disease and identify reported clinical practices and patient outcomes across healthcare settings. By integrating evidence from multiple methodological traditions, this review provides the first comprehensive synthesis focused specifically on nurse-led and nurse-integrated spiritual care in cardiovascular disease, highlighting intervention characteristics, implementation patterns, cultural variations, and reported patient outcomes to inform future research, clinical practice, and the development of evidence-based spiritual nursing frameworks.

2. METHODS

This study employed a scoping review design to systematically map and synthesize existing evidence on nursing approaches to spiritual care in patients with cardiovascular disease (CVD), including intervention characteristics, implementation strategies, and associated patient outcomes. A scoping review was considered appropriate because the literature on spiritual care in cardiovascular nursing remains conceptually diverse, methodologically heterogeneous, and dispersed across various healthcare settings and cultural contexts. The review was conducted in accordance with the methodological framework proposed by Arksey and O'Malley and subsequently refined by Levac and the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis. Reporting followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) guidelines to enhance transparency, reproducibility, and methodological rigor (Page et al., 2021; Tricco et al., 2018).

A comprehensive literature search was conducted in PubMed, Scopus, Web of Science, CINAHL, and ScienceDirect to identify studies published between January 2015 and December 2025. The search strategy was developed according to the Population–Concept–Context (PCC) framework recommended by the Joanna Briggs Institute and combined Medical Subject Headings (MeSH), indexed terms, and free-text keywords related to cardiovascular disease, spiritual care, nursing interventions, and patient outcomes. Boolean operators (AND, OR), phrase searching, truncation, and database-specific indexing were applied to maximize search sensitivity and specificity. The search strategy was adapted to the indexing system and search functionality of each database while maintaining conceptual consistency across all databases. To ensure transparency and reproducibility in accordance with the PRISMA-ScR guidelines, the complete electronic search strategy for the PubMed database, including all search terms, Boolean operators, and search limits, is presented in Supplementary Table S1.

Eligibility criteria were established using the Population–Concept–Context (PCC) framework recommended by the Joanna Briggs Institute for scoping reviews. The population comprised adults aged 18 years and older diagnosed with cardiovascular conditions, including coronary artery disease, heart failure, myocardial infarction, arrhythmias, hypertension-related cardiovascular disorders, and other chronic cardiovascular diseases. The concept of interest was nursing approaches to spiritual care, operationally defined as nurse-led or nurse-integrated interventions that explicitly addressed patients' spiritual, existential, religious, or meaning-centered needs as part of routine nursing care. To meet the concept of spiritual care, eligible interventions were

required to satisfy at least one of the following criteria: (1) include a structured spiritual assessment or assessment of spiritual needs; (2) provide spiritually supportive communication, therapeutic presence, or meaning-centered counseling delivered by nurses; (3) facilitate patients' religious or spiritual practices, such as guided prayer or Qur'anic murottal therapy; or (4) incorporate spirituality as an explicit component of holistic nursing care aimed at enhancing spiritual well-being, coping, hope, meaning, or emotional adaptation. Interventions solely involving psychological counseling, psychosocial support, or complementary therapies without an explicit spiritual or religious component were excluded. Studies conducted in hospital, outpatient, rehabilitation, and community-based cardiovascular care settings were considered. Quantitative, qualitative, and mixed-methods studies published in English between 2015 and 2025 were eligible. Editorials, conference abstracts, protocols, dissertations, opinion papers, commentaries, animal studies, studies unrelated to cardiovascular nursing or spiritual care, articles lacking sufficient methodological information, and studies for which the full text was unavailable were excluded. All identified records were imported into EndNote 21 for reference management and duplicate removal. Study selection was performed independently by two reviewers through title and abstract screening followed by full-text assessment according to predefined eligibility criteria. Any disagreements were resolved through discussion and consensus, with consultation from a third reviewer when necessary. The study selection process was documented using the PRISMA-ScR flow diagram. Data extraction and charting were conducted independently by two reviewers using a standardized and pilot-tested extraction form. Extracted information included study characteristics, methodological features, participant demographics, intervention characteristics, implementation approaches, and reported patient outcomes. Discrepancies in data extraction were resolved through discussion to ensure consistency and accuracy.

Methodological quality was not used as a basis for study exclusion, consistent with scoping review methodology. However, quality appraisal was conducted to provide contextual insight into the overall methodological strengths and limitations of the included evidence. Extracted data were synthesized descriptively using thematic and narrative approaches to map spiritual care interventions, implementation practices, cultural adaptations, healthcare contexts, and reported outcomes. Findings were organized according to intervention types and outcome domains, including psychosocial, spiritual, emotional, physiological, and patient experience outcomes. Meta-analysis was not performed because of substantial heterogeneity in study designs, intervention characteristics, and outcome measures. As this review synthesized evidence from previously published studies and did not involve direct human participants, ethical approval and informed consent were not required. The review adhered to the principles of scientific integrity, transparency, and responsible research conduct.

Table 1. Complete PubMed electronic search strategy.

Search Component (PCC)	**PubMed Search Strategy**
Population	("Cardiovascular Diseases"[Mesh] OR "Heart Failure"[Mesh] OR "Coronary Artery Disease"[Mesh] OR "Myocardial Infarction"[Mesh] OR "Arrhythmias, Cardiac"[Mesh] OR cardiovascular disease* OR heart failure OR coronary artery disease OR myocardial infarction OR cardiac rehabilitation)
Concept	("Spiritual Therapies"[Mesh] OR "Religion and Medicine"[Mesh] OR "Pastoral Care"[Mesh] OR "Spirituality"[Mesh] OR "spiritual

	care" OR spirituality OR "spiritual nursing" OR "nurse-led spiritual care" OR "spiritual assessment" OR "spiritual support" OR "spiritual counseling" OR "guided prayer" OR "religious support" OR "Qur'anic murottal" OR "murottal therapy" OR mindfulness OR "meaning-centered care")
Context	("Nursing Care"[Mesh] OR "Nurses"[Mesh] OR nursing OR nurse* OR "cardiovascular nursing" OR hospital* OR outpatient* OR rehabilitation OR community care)
Final Boolean Search	(#1 Population) AND (#2 Concept) AND (#3 Context)
Filters Applied	Humans; Adults (≥18 years); English language; Publication date from January 1, 2015 to December 31, 2025

3. RESULTS AND DISCUSSION

The results of this scoping review are presented in three stages: study selection, characteristics of the included studies, and synthesis of nursing approaches to spiritual care and their associated patient outcomes. The study selection process, including database searching, duplicate removal, reference list screening, and eligibility assessment, is summarized in Figure 1. The characteristics of the included studies are presented in Table 1, which highlights the methodological and clinical heterogeneity of the evidence. The synthesized findings provide an overview of how spiritual care has been implemented across diverse cardiovascular nursing settings and its reported psychosocial, spiritual, and physiological outcomes.

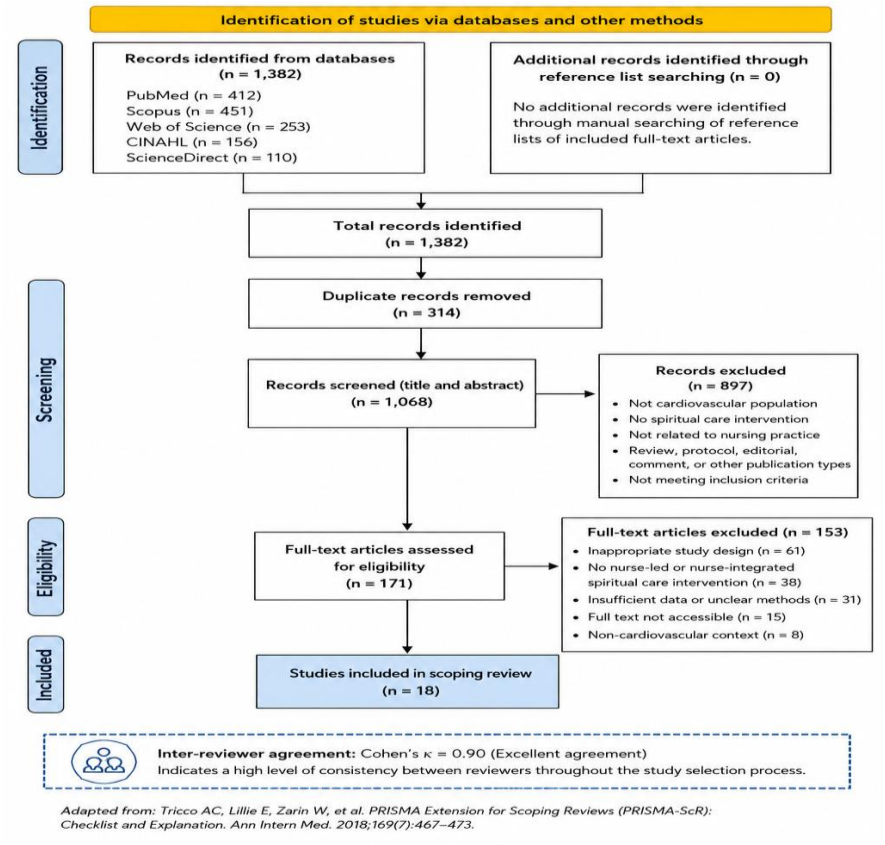

Figure 1. PRISMA-ScR flow diagram of study selection process.

Figure 1 presents the PRISMA-ScR study selection process. A total of 1,382 records were identified through searches of five electronic databases, including PubMed (n = 412), Scopus (n = 451), Web of Science (n = 253), CINAHL (n = 156), and ScienceDirect (n = 110). In addition, reference list screening of the eligible full-text articles was undertaken; however, no additional studies meeting the eligibility criteria were identified (n = 0). After removing 314 duplicate records, 1,068 unique studies remained for title and abstract screening. Of these, 897 records were excluded because they did not meet the predefined eligibility criteria, primarily due to non-cardiovascular populations, absence of spiritual care interventions, lack of relevance to nursing practice, or publication types such as reviews, protocols, editorials, and commentaries. Full-text assessment was conducted for 171 articles, of which 153 were excluded because of inappropriate study design (n = 61), absence of nurse-led or nurse-integrated spiritual care interventions (n = 38), insufficient methodological information (n = 31), inaccessible full texts (n = 15), or non-cardiovascular contexts (n = 8). Ultimately, 18 studies fulfilled all eligibility criteria and were included in the final scoping review. Inter-reviewer agreement during study selection was excellent (Cohen's κ = 0.90), indicating a high level of consistency between reviewers.

Table 1. Characteristics of included studies (n = 18).

No	Study	Country	Setting	Design	Population / CVD Condition	Sample Size (n)	Nursing Spiritual Care Approach	Main Outcomes
1	Bekelman et al. (2020)	United States	Inpatient palliative cardiac care	RCT	Advanced heart failure	130	Spiritual care–integrated palliative nursing	Emotional well-being, quality of life
2	Wisuda et al. (2024)	Indonesia	Cardiology ward	Quasi-experimental	Coronary heart disease	110	Islamic spiritual care with Qur'anic murottal therapy	Anxiety, emotional comfort
3	Al-Dwaikat et al. (2023)	Jordan	Coronary care unit	RCT	Coronary artery disease	96	Guided prayer and supportive nursing	Blood pressure, anxiety
4	Ferreira et al. (2022)	Brazil	Outpatient heart failure clinic	Qualitative	Heart failure	24	Spiritual presence and therapeutic listening	Coping experience, emotional adaptation
5	Rollman et al. (2019)	United States	Cardiology outpatient clinic	RCT	Heart failure	68	Nurse-guided spiritual counseling	Depression, coping ability

6	Chen & Wang (2022)	China	Cardiac inpatient unit	RCT	Heart failure	150	Mindfulness-based spiritual nursing	Psychological well-being, quality of life
7	Hosseini et al. (2018)	Iran	Post-PCI cardiac ward	Quasi-experimental	Post-PCI patients	88	Spiritually integrated communication	Emotional adaptation, comfort
8	Uğurlu & Şen (2020)	Türkiye	Cardiology department	RCT	Cardiovascular disease	312	Religion-based spiritual intervention	Anxiety, hope
9	Kim et al. (2021)	South Korea	Cardiac rehabilitation center	Mixed-methods	Cardiac rehabilitation patients	76	Mindfulness spiritual nursing program	Recovery adaptation, resilience
10	Abdoli Nejad et al. (2018)	Iran	Coronary care unit	Quasi-experimental	Myocardial infarction	84	Qur'an recitation and spiritual counseling	Stress reduction, relaxation
11	Jbilou et al. (2019)	Canada	Cardiology inpatient ward	Qualitative	Myocardial infarction	31	Therapeutic presence and spiritual support	Meaning-making, emotional security
12	Mousavizadeh et al. (2024)	Iran	Multicenter cardiac hospitals	RCT	Cardiovascular disease	655	Holistic spiritually integrated nursing care	Psychological well-being, anxiety
13	Tabei et al. (2021)	Japan	Cardiac rehabilitation center	Quasi-experimental	Cardiac rehabilitation patients	72	Meaning-centered spiritual support	Relaxation, emotional stability
14	Ahmed et al. (2023)	Egypt	Coronary care unit	RCT	Coronary artery disease	94	Faith-based spiritual communication	Satisfaction, anxiety reduction

15	Sajadi et al. (2018)	Iran	Heart failure clinic	RCT	Heart failure	120	Meaning-centered spiritual nursing care	Quality of life, spiritual well-being
16	Barati et al. (2025)	Iran	Cardiac intensive care unit	Quasi-experimental	Intensive cardiac care patients	160	Online spiritual support intervention	Emotional support, coping
17	Lundberg et al. (2020)	Sweden	Community cardiovascular care	Qualitative	Chronic cardiovascular disease	22	Existential and spiritually supportive nursing	Hope, existential adaptation
18	Wisuda et al. (2025)	Indonesia	Coronary care unit	Quasi-experimental	Coronary artery disease	52	Spiritually integrated Islamic nursing care	Spiritual well-being, satisfaction

Abbreviations: *PCI = Percutaneous Coronary Intervention; RCT = Randomized Controlled Trial; CVD = Cardiovascular Disease.*

Table 1 summarizes the characteristics of the 18 studies included in this review, demonstrating substantial methodological and clinical heterogeneity. The studies were published between 2018 and 2025 and conducted across 12 countries, namely the United States, Indonesia, Jordan, Brazil, China, Iran, Türkiye, South Korea, Canada, Japan, Egypt, and Sweden. Collectively, the studies involved 2,544 participants representing a broad spectrum of cardiovascular conditions, including coronary artery disease, heart failure, myocardial infarction, post-percutaneous coronary intervention recovery, chronic cardiovascular disease, and cardiac rehabilitation populations. The included studies were undertaken across diverse healthcare settings, including coronary care units, cardiac intensive care units, inpatient and outpatient cardiology services, heart failure clinics, cardiac rehabilitation centers, palliative care services, multicenter cardiac hospitals, and community-based cardiovascular care, reflecting the broad range of clinical contexts in which nurse-led spiritual care has been implemented.

Considerable methodological heterogeneity was also observed. Eight studies employed randomized controlled trial designs, six used quasi-experimental approaches, three adopted qualitative methodologies, and one applied a mixed-methods design. Likewise, substantial variation was evident in the nursing approaches to spiritual care, including spiritually integrated palliative nursing, therapeutic presence and listening, guided prayer, spiritually integrated counseling, Qur'anic murottal therapy, mindfulness-based spiritual nursing, meaning-centered support, faith-based communication, online spiritual support, and holistic spiritually integrated nursing care. Outcome measures were similarly heterogeneous, encompassing psychosocial outcomes (anxiety, stress, depression, coping, hope, resilience, and emotional adaptation), spiritual outcomes (spiritual well-being and meaning-making), patient-centered outcomes (quality of life, emotional comfort, emotional security, and patient satisfaction), and selected physiological outcomes, including blood pressure and relaxation responses. Despite the diversity in study design, healthcare setting, intervention model, and outcome assessment, the

included studies consistently reported favorable effects of nurse-led spiritual care on psychosocial, spiritual, and selected physiological outcomes among patients with cardiovascular disease.

Table 2. Methodological quality appraisal of included studies using the JBI critical appraisal tools and MMAT (n = 18)

No	Study	Design	Appraisal Tool	Overall Quality	Main Methodological Limitation
1	Bekelman et al. (2020)	RCT	JBI-RCT	High	Blinding of participants not feasible
2	Wisuda et al. (2024)	Quasi-experimental	JBI-Quasi	Moderate	No random allocation
3	Al-Dwaikat et al. (2023)	RCT	JBI-RCT	High	Limited assessor blinding
4	Ferreira et al. (2022)	Qualitative	JBI-Qualitative	High	Researcher reflexivity incompletely reported
5	Rollman et al. (2019)	RCT	JBI-RCT	High	Short follow-up duration
6	Chen & Wang (2022)	RCT	JBI-RCT	High	Allocation concealment insufficiently described
7	Hosseini et al. (2018)	Quasi-experimental	JBI-Quasi	Moderate	No control for confounding factors
8	Uğurlu & Şen (2020)	RCT	JBI-RCT	High	Blinding procedures partially reported
9	Kim et al. (2021)	Mixed-methods	MMAT	High	Integration of qualitative and quantitative findings could be strengthened
10	Abdoli Nejad et al. (2018)	Quasi-experimental	JBI-Quasi	Moderate	Small sample size
11	Jbilou et al. (2019)	Qualitative	JBI-Qualitative	High	Limited discussion of researcher influence
12	Mousavizadeh et al. (2024)	RCT	JBI-RCT	High	Attrition handling not fully described
13	Tabei et al. (2021)	Quasi-experimental	JBI-Quasi	Moderate	Lack of randomization
14	Ahmed et al. (2023)	RCT	JBI-RCT	High	Participant blinding not possible
15	Sajadi et al. (2018)	RCT	JBI-RCT	High	Allocation concealment

					incompletely reported
16	Barati et al. (2025)	Quasi-experimental	JBI-Quasi	Moderate	Potential selection bias
17	Lundberg et al. (2020)	Qualitative	JBI-Qualitative	High	Limited transferability discussion
18	Wisuda et al. (2025)	Quasi-experimental	JBI-Quasi	Moderate	No random allocation

Abbreviations: JBI = Joanna Briggs Institute; RCT = Randomized Controlled Trial; MMAT = Mixed Methods Appraisal Tool

Table 2 presents the methodological quality appraisal of the included studies. Randomized controlled trials were evaluated using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Randomized Controlled Trials, quasi-experimental studies using the JBI Checklist for Quasi-Experimental Studies, qualitative studies using the JBI Checklist for Qualitative Research, and the mixed-methods study using the Mixed Methods Appraisal Tool (MMAT). Overall, the methodological quality of the included evidence ranged from moderate to high. Most randomized controlled trials fulfilled the majority of the JBI quality criteria, although participant blinding and allocation concealment were frequently limited due to the nature of spiritual care interventions. Quasi-experimental studies generally demonstrated moderate methodological quality, with the principal limitations being the absence of randomization and incomplete control of potential confounding variables. The qualitative studies were judged to be of high methodological quality but commonly provided limited reporting regarding researcher reflexivity and transferability. The mixed-methods study met the core MMAT criteria, although greater integration of qualitative and quantitative findings would have strengthened methodological rigor. No studies were excluded on the basis of methodological quality, consistent with the objectives of a scoping review.

Table 3. Comparative summary of nursing spiritual care interventions across included studies (n = 18).

Intervention Category	Frequency (n)	Countries	Common Healthcare Settings	Typical Duration	Follow-up Reported	Most Frequently Reported Outcomes
Spiritually supportive communication	7	United States, Canada, Brazil, Sweden, Iran	Cardiology wards, outpatient clinics, palliative care, community care	Single session–8 weeks	Limited	Anxiety reduction, coping, emotional adaptation, meaning-making
Faith-based spiritual interventions	6	Indonesia, Iran, Jordan, Egypt, Türkiye	Coronary care units, cardiac wards	Single session–4 weeks	Limited	Spiritual well-being, emotional comfort, hope, anxiety

						reduction, blood pressure
Mindfulness- and meaning-centered interventions	3	China, Japan, South Korea	Cardiac rehabilitation, inpatient cardiology	6–12 weeks	Reported in some studies	Psychological well-being, resilience, quality of life
Holistic spiritually integrated nursing care	2	United States, Iran	Multicenter hospitals, palliative cardiac care	Individualized programs	Limited	Quality of life, patient satisfaction, psychosocial well-being

Table 3 provides a thematic synthesis of the nursing approaches to spiritual care identified across the included studies by grouping interventions according to their principal characteristics, implementation contexts, duration, and reported outcomes. Despite substantial diversity in intervention design and delivery, four overarching categories were identified: spiritually supportive communication (7 studies), faith-based spiritual interventions (6 studies), mindfulness- and meaning-centered interventions (3 studies), and holistic spiritually integrated nursing care (2 studies). Spiritually supportive communication was the most frequently reported approach and comprised therapeutic presence, active listening, empathic communication, spiritual assessment, emotionally supportive interactions, and spiritually integrated counseling. These interventions were implemented across diverse healthcare settings, including inpatient cardiology wards, outpatient heart failure clinics, palliative cardiac care, and community-based cardiovascular services in the United States, Canada, Brazil, Sweden, and Iran. Faith-based spiritual interventions, including guided prayer, Qur'anic murottal therapy, Qur'an recitation, facilitation of religious practices, faith-based communication, and spiritually integrated Islamic nursing care, were predominantly reported in Indonesia, Iran, Jordan, Egypt, and Türkiye, particularly within coronary care units, cardiac intensive care units, and cardiology wards. Mindfulness- and meaning-centered interventions were mainly conducted in China, Japan, and South Korea and focused on mindfulness practice, resilience, existential meaning, and adaptation to chronic illness, whereas holistic spiritually integrated nursing care combined structured spiritual assessment, individualized spiritual support, therapeutic communication, and ongoing nurse–patient engagement within comprehensive cardiovascular nursing programs.

Considerable heterogeneity was also observed in intervention characteristics, implementation strategies, and outcome assessment. Intervention duration ranged from a single pre-procedural spiritual care session to structured nurse-led programs delivered over approximately 8–12 weeks, depending on the clinical context and intervention model. Likewise, follow-up assessments varied substantially across studies, with most evaluating outcomes immediately after intervention completion or at hospital discharge, whereas only a limited number reported longer-term follow-up beyond the intervention period. The reported outcomes encompassed psychosocial domains (anxiety, stress, depression, coping, hope, resilience, and emotional adaptation), spiritual domains (spiritual well-being and meaning-making), patient-centered outcomes (quality of life, emotional comfort,

emotional security, and patient satisfaction), and selected physiological indicators, including blood pressure, heart rate, and relaxation responses. Collectively, these findings demonstrate the broad range of nursing approaches used to deliver spiritual care in cardiovascular settings while highlighting considerable variability in intervention content, implementation, duration, and outcome measurement across the available evidence.

This scoping review mapped the current evidence on nursing approaches to spiritual care for patients with cardiovascular disease across diverse healthcare settings, cultural backgrounds, and methodological designs. The synthesis identified four overarching categories of interventions: spiritually supportive communication, faith-based spiritual care, mindfulness- and meaning-centered approaches, and holistic spiritually integrated nursing care. Although the included studies demonstrated substantial heterogeneity in intervention characteristics, implementation strategies, duration, follow-up, and outcome measurement, the available evidence consistently suggests that spiritual care is integrated into cardiovascular nursing primarily to address patients' psychosocial, emotional, existential, and spiritual needs. Psychosocial outcomes including anxiety, coping ability, emotional comfort, resilience, hope, and quality of life were the most frequently reported, whereas physiological outcomes such as blood pressure, heart rate, and relaxation responses were evaluated less consistently. These findings support contemporary nursing perspectives that advocate whole-person care by recognizing spirituality as an essential dimension of health and well-being (Dossey & Keegan, 2021; Koenig, 2020; Balboni et al., 2022). Furthermore, the methodological appraisal indicated that most included studies were of moderate to high quality, providing a reasonable level of confidence in the mapped evidence while also highlighting opportunities for methodological improvement in future research.

A principal finding of this review is that communication-based spiritual care constituted the most frequently reported nursing approach across countries and healthcare settings. Therapeutic presence, active listening, empathy, emotionally supportive communication, spiritual assessment, and spiritually integrated counseling formed the foundation of routine nurse patient interactions and were commonly implemented in inpatient cardiology wards, outpatient heart failure clinics, palliative care services, and community cardiovascular programs. These approaches may be more widely adopted because they require minimal additional resources, can be incorporated into routine nursing care, and are readily adaptable to diverse cultural and religious backgrounds. Consistent with previous literature, communication-centered spiritual care appears to strengthen therapeutic relationships, enhance patient engagement, facilitate emotional regulation, and promote adaptive coping during illness and recovery (Steptoe & Kivimäki, 2020; Thayer et al., 2021; Bucciarelli et al., 2023; Jarvis et al., 2022). Faith-based interventions including guided prayer, Qur'anic murottal therapy, faith-based communication, and religiously integrated nursing care were predominantly reported in Middle Eastern and Southeast Asian countries, reflecting the important influence of religious beliefs on illness perception, coping, and healthcare decision-making within these settings. In contrast, studies conducted in East Asian and Western countries more frequently adopted mindfulness-based, existential, and meaning-centered approaches that emphasized self-awareness, resilience, acceptance, and meaning-making rather than formal religious practices. This geographical variation suggests that spiritual care is inherently culturally embedded and should be tailored to patients' beliefs, values, and sociocultural contexts rather than delivered through a universal intervention model.

Across all intervention categories, psychosocial and spiritual outcomes were reported more frequently than physiological outcomes, indicating that the primary contribution of spiritual care lies in supporting patients' emotional and existential

adaptation to cardiovascular illness. Reductions in anxiety, emotional distress, depression, and stress, together with improvements in hope, resilience, coping ability, emotional comfort, spiritual well-being, and quality of life, were consistently described across randomized controlled trials, quasi-experimental, qualitative, and mixed-methods studies. These findings align with previous systematic reviews and broader literature demonstrating that spirituality may facilitate meaning-making, strengthen coping resources, and improve patients' psychological adjustment during chronic illness (Lucchese, 2023; Pargament & Exline, 2022; Gonçalves et al., 2022; Ferrell et al., 2021). Conversely, physiological outcomes including blood pressure, heart rate, and relaxation responses were investigated in relatively few studies and were measured using heterogeneous intervention protocols and follow-up periods, making comparisons across studies difficult (Park et al., 2023; Chopra et al., 2022; Roth et al., 2020). Consequently, while the current evidence suggests potential physiological benefits, these findings should be interpreted cautiously because the available studies were not sufficiently homogeneous to permit conclusions regarding comparative effectiveness or sustained physiological impact.

This review has several strengths that enhance its contribution to the existing literature. By adopting a scoping review methodology, it was possible to comprehensively map a broad range of nurse-led spiritual care interventions across different countries, healthcare systems, cardiovascular populations, and research methodologies, thereby providing a more extensive overview than reviews focusing on a single intervention or outcome. The use of the PRISMA-ScR reporting guideline, the Population–Concept–Context framework, duplicate independent screening, standardized data extraction, and methodological appraisal using the JBI Critical Appraisal Tools and MMAT further strengthened the transparency and methodological rigor of the review. Nevertheless, several limitations should be acknowledged. Only English-language studies published between 2015 and 2025 and indexed in five electronic databases were included, introducing potential language and publication bias. Considerable heterogeneity in intervention characteristics, implementation strategies, cultural contexts, outcome measures, intervention duration, and follow-up assessment precluded quantitative synthesis and limited direct comparison among studies. Moreover, several quasi-experimental and qualitative studies had relatively small sample sizes or methodological limitations related to randomization, blinding, allocation procedures, and reporting transparency. Consistent with the purpose of a scoping review, this study sought to map the available evidence rather than determine intervention effectiveness; therefore, the findings should be interpreted as describing the current evidence landscape rather than providing definitive evidence of causal benefit.

The findings of this review have several implications for cardiovascular nursing practice and future research. The diversity of interventions identified suggests that spiritual care can be incorporated into routine nursing through culturally responsive communication, faith-based support, mindfulness, meaning-centered care, or integrated holistic nursing approaches according to patients' individual preferences and sociocultural backgrounds. Integrating structured spiritual assessment into routine cardiovascular nursing may facilitate more comprehensive person-centered care while addressing patients' emotional, existential, and spiritual concerns throughout the illness trajectory. Future studies should prioritize the development of theory-informed and standardized spiritual care frameworks, establish core outcome sets to improve comparability across studies, evaluate long-term sustainability through longitudinal follow-up, and conduct adequately powered multicenter randomized controlled trials across diverse cultural

settings. Such efforts will strengthen the quality of evidence and support the more consistent integration of spiritual care into comprehensive cardiovascular nursing practice.

4. CONCLUSION

This scoping review provides a comprehensive overview of the current evidence on nursing approaches to spiritual care for patients with cardiovascular disease across diverse healthcare settings and cultural contexts. The mapped evidence identified four broad categories of nurse-led spiritual care interventions spiritually supportive communication, faith-based spiritual care, mindfulness and meaning-centered approaches, and holistic spiritually integrated nursing care demonstrating the diversity of strategies currently incorporated into cardiovascular nursing practice. Although the included studies varied considerably in intervention characteristics, implementation strategies, duration, cultural adaptation, and outcome assessment, the available evidence suggests that spiritual care has primarily been implemented to address patients' psychosocial, emotional, spiritual, and existential needs while complementing routine cardiovascular care.

This review does not establish the effectiveness of individual interventions; rather, it maps how spiritual care has been conceptualized, delivered, and evaluated within contemporary cardiovascular nursing. The findings highlight the pivotal role of nurses in integrating culturally responsive and person-centered spiritual care into routine clinical practice while identifying important gaps related to intervention standardization, outcome measurement, and long-term follow-up. These findings provide an evidence-informed foundation for developing theory-driven and culturally adaptable spiritual care frameworks, supporting future clinical implementation, and informing future research aimed at establishing standardized intervention models, core outcome measures, and more rigorous longitudinal evaluations in cardiovascular nursing.

CONFLICT OF INTEREST

The authors declare that they have no competing interests.

AUTHOR CONTRIBUTIONS

Aris Citra Wisuda contributed to conceptualization, methodology, literature search, study selection, data charting, formal analysis, evidence synthesis, visualization, writing of the original draft, writing review and editing, supervision, project administration, and final approval of the manuscript. Masniati Arafah contributed to methodology, literature search, study selection, data charting, validation, writing review and editing, and final approval of the manuscript. Ayu Prawesti Priambodo contributed to literature search, study selection, data charting, validation, writing review and editing, and final approval of the manuscript. Fermata Sari and Neny Nursahaza contributed to literature screening, data extraction, data curation, validation, writing review and editing, and final approval of the manuscript. Wa Ode Nurlina and Dian Emiliasari contributed to data curation, evidence synthesis, visualization, validation, writing review and editing, and final approval of the manuscript. Citra Suraya contributed to conceptualization, methodology, supervision, validation, formal analysis, interpretation of findings, critical revision of the manuscript for important intellectual content, writing review and editing, and final approval of the manuscript. All authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work, ensuring that any questions related to the accuracy, integrity, or interpretation of the evidence presented in this scoping review are appropriately investigated and resolved.

ACKNOWLEDGEMENT

The authors sincerely express their appreciation to Sekolah Tinggi Ilmu Kesehatan Bina Husada Palembang, Sekolah Tinggi Ilmu Kesehatan Hesti Wira Sriwijaya Palembang, Universitas Padjadjaran, and Sekolah Tinggi Ilmu Kesehatan RS. Prof. Dr. J.A. Latumeten Ambon for their academic support and institutional facilitation throughout the conduct of this scoping review. Gratitude is also extended to the authors of the primary studies included in this review, whose scholarly contributions made this synthesis possible, as well as to the database providers (PubMed, Scopus, Web of Science, CINAHL, and ScienceDirect) for enabling comprehensive access to the relevant literature. The authors further acknowledge colleagues and peer reviewers for their constructive feedback, which contributed to strengthening the methodological rigor and clarity of this manuscript.

FUNDING

This research received no external funding.

DECLARATION OF ARTIFICIAL INTELLIGENCE USE

During the preparation of this manuscript, the authors used generative artificial intelligence (ChatGPT, OpenAI) solely as a language-support tool to improve grammar, readability, clarity of expression, and overall manuscript organization. Artificial intelligence was not used to identify, select, screen, extract, analyze, or synthesize the literature, develop the study methodology, interpret the evidence, formulate scientific conclusions, or make editorial decisions. All literature searches, study selection, data charting, evidence synthesis, critical interpretation, and manuscript revisions were performed independently by the authors. The authors carefully reviewed, verified, and approved all manuscript content and accept full responsibility for its accuracy, originality, scientific integrity, and compliance with the journal's ethical standards.

REFERENCES

Abdoli Nejad, M. R., Bagheri Nesami, M., Jafari, H., Mousavi Nasab, N., & Kahen, S. (2018). Comparing the effect of Qur'an recitation and scheduled visits on hemodynamic status and oxygen saturation of acute myocardial infarction patients. *Journal of Nursing and Midwifery Sciences, 5(1),* 1–8. https://doi.org/10.4103/jnms.jnms_11_18

Ahmed, F. R., Aburuz, M. E., & Al-Dweik, G. (2023). The effect of listening to Holy Quran recital on pain and length of stay post-CABG: A randomized control trial. *Critical Care Research and Practice, 2023*, 9430510. https://doi.org/10.1155/2023/9430510

Al-Dwaikat, T., Al-Amer, R., & Khalifeh, A. (2023). The effect of Holy Quran audio therapy on depression and anxiety among Jordanian patients following coronary artery bypass graft surgery: A randomized controlled trial. *The Open Nursing Journal, 17*, 1–10. https://doi.org/10.2174/0118744346262682230921094004

American Nurses Association. (2021). *Nursing: Scope and standards of practice* (4th ed.). ANA.

Balboni, T. A., et al. (2022). Spiritual care and patient outcomes in serious illness: A systematic review. *JAMA Network Open, 5*(4), e228123. https://doi.org/10.1001/jamanetworkopen.2022.8123

Barati, D., Veisani, Y., Heidarzadeh, H., Vasiee, A., & Azadi, A. (2025). Investigating the effectiveness of online system spiritual therapies program on the attitude and competence of intensive care unit nurses in providing spiritual healing: A quasi-experimental study. *Journal of Education and Health Promotion, 14*, 479. https://doi.org/10.4103/jehp.jehp_1331_24

Bekelman, D. B., Fink, R. M., Sannes, T., Kline, D. M., Borrayo, E. A., Turvey, C., & Fischer,

S. M. (2020). Puente para cuidar (bridge to caring): A palliative care patient navigator and counseling intervention to improve distress in Latino/as with advanced cancer. *Psycho-Oncology, 29*(4), 688–695. https://doi.org/10.1002/pon.5313

Bucciarelli, V., et al. (2023). Psychosocial and spiritual determinants of cardiovascular outcomes. *European Heart Journal Supplements, 25*(Suppl C), C45–C52. https://doi.org/10.1093/eurheartj/suad012

Caldeira, S., et al. (2021). Spiritual care in nursing practice: A concept analysis. *Journal of Advanced Nursing, 77*(3), 1034–1045. https://doi.org/10.1111/jan.14612

Celano, C. M., et al. (2021). Depression and anxiety in patients with cardiovascular disease: Mechanisms and treatment. *Current Cardiology Reports, 23*(9), 120. https://doi.org/10.1007/s11886-021-01558-9

Chen, Y., Li, H., & Wang, X. (2022). Effects of mindfulness-based intervention on quality of life and psychological distress in patients with heart failure: A randomized controlled trial. *International Journal of Nursing Studies, 129*, 104199. https://doi.org/10.1016/j.ijnurstu.2022.104199

Cohen, B. E., Edmondson, D., & Kronish, I. M. (2021). State of the art review: Depression, stress, anxiety, and cardiovascular disease. *American Journal of Hypertension, 34*(5), 447–456. https://doi.org/10.1093/ajh/hpab011

Dossey, B. M., & Keegan, L. (2021). *Holistic nursing: A handbook for practice* (8th ed.). Jones & Bartlett Learning.

Ferreira, V. M., Barbosa, M. H., & Souza, D. F. (2022). Spiritual care in patients with heart failure: Nurses' perspectives on therapeutic listening and presence. *Journal of Clinical Nursing, 31*(15–16), 2345–2354. https://doi.org/10.1111/jocn.16045

Ferrell, B. R., et al. (2022). Integrating spirituality into patient-centered care. *Nursing Outlook, 70*(1), 1–10. https://doi.org/10.1016/j.outlook.2021.08.012

Gonçalves, J. P., et al. (2022). Spirituality and quality of life in chronic disease: A systematic review. *Journal of Religion and Health, 61*(2), 890–910. https://doi.org/10.1007/s10943-021-01363-2

Hosseini, S.-R., Valizad-Hassanloei, M.-A., & Feizi, A. (2018). The effect of using communication boards on ease of communication and anxiety in mechanically ventilated conscious patients admitted to intensive care units. *Iranian Journal of Nursing and Midwifery Research, 23(5),* 358–362. https://doi.org/10.4103/ijnmr.IJNMR_68_17

Ismail, H., et al. (2023). Religious and spiritual interventions in cardiac care: A clinical review. *BMC Cardiovascular Disorders, 23*, 112. https://doi.org/10.1186/s12872-023-03112-0

Jarvis, S. S., et al. (2022). Autonomic regulation and cardiovascular outcomes in stress-related conditions. *Journal of the American Heart Association, 11*(6), e024567. https://doi.org/10.1161/JAHA.121.024567

Jbilou, J., Grenier, J., Chomienne, M.-H., Talbot, F., Tulloch, H., D'Antono, B., & Greenman, P. (2019). *Understanding men's psychological reactions and experience following a cardiac event: A qualitative study from the MindTheHeart project. BMJ Open, 9*(9), e029560. https://doi.org/10.1136/bmjopen-2019-029560

Khan, M. A., et al. (2020). Global burden of cardiovascular diseases. *The Lancet, 396*(10254), 1–10. https://doi.org/10.1016/S0140-6736(20)31031-5

Kim, S. S., Kim-Godwin, Y., Gil, M., Kim, D. E., & Cheon, Y. K. (2021). The benefits of spiritual diaries: A mixed-method study in Korea. *Journal of Religion and Health, 60*(6), 3978–3992. https://doi.org/10.1007/s10943-021-01277-8

Koenig, H. G. (2020). Religion, spirituality, and cardiovascular disease. *International Journal of Psychiatry in Medicine, 55*(3), 123–136. https://doi.org/10.1177/0091217420909487

Levine, G. N., et al. (2021). Psychological factors and cardiovascular risk. *Circulation Research, 128*(5), 594–609. https://doi.org/10.1161/CIRCRESAHA.120.317403

Lucchese, F. A., & Koenig, H. G. (2023). Spirituality and mental health in chronic disease. *Journal of Religion and Health, 62*(1), 1–15. https://doi.org/10.1007/s10943-022-01654-9

Lundberg, K., Jong, M., Jong, M. C., & Kristiansen, L. P. (2020). Patients' experiences of the caring encounter in health promotion practice: A qualitative study in Swedish primary health care. *BMC Family Practice, 21*(1), 232. https://doi.org/10.1186/s12875-020-01296-6

Martins, H., et al. (2021). Spiritual care interventions in nursing practice. *Journal of Nursing Management, 29*(7), 1954–1963. https://doi.org/10.1111/jonm.13357

Mensah, G. A., et al. (2023). Global burden of cardiovascular diseases and risk factors. *Circulation, 147*(1), 1–10. https://doi.org/10.1161/CIRCULATIONAHA.122.061321

Miles, J., Ross, L., Jarvis, P., & Pickett, S. (2021). Spiritual Support in Advanced Heart Failure: A Randomized Controlled Feasibility Study. *Health and Social Care Chaplaincy*, *9*(2), 191–215. https://doi.org/10.1558/hscc.41171

Mousavizadeh, S. N., & Jandaghian-Bidgoli, M. (2024). 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. *BMC Cardiovascular Disorders, 24*, 403. https://doi.org/10.1186/s12872-024-04076-7

Page, M. J., et al. (2021). PRISMA 2020 statement. *BMJ, 372*, n71. https://doi.org/10.1136/bmj.n71

Pargament, K. I., & Exline, J. J. (2022). Working with spiritual struggles in psychotherapy: From research to practice. *Guilford Press*.

Park, C. L., et al. (2023). Spirituality and stress regulation mechanisms. *Psychoneuroendocrinology, 148*, 105987. https://doi.org/10.1016/j.psyneuen.2023.105987

Peteet, J. R., & Balboni, M. J. (2022). Spirituality and biopsychosocial health. *Harvard Review of Psychiatry, 30*(2), 85–95. https://doi.org/10.1097/HRP.0000000000000335

Puchalski, C. M., et al. (2020). Spirituality in healthcare. *Journal of Palliative Medicine, 23*(1), 1–5. https://doi.org/10.1089/jpm.2019.0410

Rollman, B. L., et al. (2019). *Blended collaborative care for treating heart failure and co-morbid depression (Hopeful Heart trial)*. American College of Cardiology Scientific Session (ACC 2019). https://www.acc.org/Latest-in-Cardiology/Clinical-Trials/2019/03/15/13/30/Hopeful-Heart

Rosa, W. E., et al. (2023). Holistic nursing care in chronic disease populations. *Nursing Outlook, 71*(2), 200–210. https://doi.org/10.1016/j.outlook.2022.10.005

Roth, G. A., et al. (2020). Global burden of cardiovascular diseases and risk factors. *Journal of the American College of Cardiology, 76*(25), 2982–3021. https://doi.org/10.1016/j.jacc.2020.11.021

Sajadi, M., Niazi, N., Khosravi, S., Yaghobi, A., Rezaei, M., & Koenig, H. G. (2018). Effect of spiritual counseling on spiritual well-being in Iranian women with cancer: A randomized clinical trial. *Complementary Therapies in Clinical Practice*, *30*(February), 79–84. https://doi.org/10.1016/j.ctcp.2017.12.011

Sitzman, K. (2021). Watson's theory of human caring. *Nursing Science Quarterly, 34*(2), 145–152. https://doi.org/10.1177/0894318420983445

Steptoe, A., & Kivimäki, M. (2020). Stress and cardiovascular disease. *Nature Reviews Cardiology, 17*(7), 401–420. https://doi.org/10.1038/s41569-020-0359-7

Sulmasy, D. P. (2021). The biopsychosocial-spiritual model. *Theoretical Medicine and Bioethics, 42*(3), 145–156. https://doi.org/10.1007/s11017-021-09549-4

Tabei, S. M., et al. (2021). Spiritual interventions and physiological outcomes. *Complementary Therapies in Medicine, 58*, 102676. https://doi.org/10.1016/j.ctim.2021.102676

Tawakol, A., Ishai, A., Takx, R. A. P., Figueroa, A. L., Ali, A., Kaiser, Y., Truong, Q. A., Solomon, C. J., Calcagno, C., Mani, V., Tang, C. Y., Mulder, W. J. M., Murrough, J. W., Hoffmann, U., Nahrendorf, M., Shin, L. M., & Fayad, Z. A. (2017). Relation between resting amygdalar activity and cardiovascular events: A longitudinal and cohort study. *The Lancet, 389*(10071), 834–845. https://doi.org/10.1016/S0140-6736(16)31714-7

Thayer, J. F., et al. (2021). Autonomic imbalance and cardiovascular disease. *Biological Psychology, 165*, 108202. https://doi.org/10.1016/j.biopsycho.2021.108202

Timmins, F., & Caldeira, S. (2019). Spiritual care in nursing practice. *Journal of Clinical Nursing, 28*(17–18), 3241–3250. https://doi.org/10.1111/jocn.14942

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D. J., Horsley, T., Weeks, L., Hempel, S., Akl, E. A., Chang, C., McGowan, J., Stewart, L., Hartling, L., Aldcroft, A., Wilson, M. G., Garritty, C., … Straus, S. E. (2018). PRISMA extension for scoping reviews (PRISMA-ScR): Checklist and explanation. *Annals of Internal Medicine, 169*(7), 467–473. https://doi.org/10.7326/M18-0850

Tsao, C. W., et al. (2023). Heart disease and stroke statistics update. *Circulation, 147*(8), e93–e161. https://doi.org/10.1161/CIR.0000000000001123

Uğurlu, N., & Şen, S. (2020). The effect of religious coping and spiritual care on anxiety levels in patients undergoing cardiac surgery: A randomized controlled study. *Journal of Religion and Health, 59*(6), 3114–3126. https://doi.org/10.1007/s10943-020-01010-6

Vaccarino, V., et al. (2020). Mental stress and cardiovascular disease. *Circulation, 141*(10), 767–783. https://doi.org/10.1161/CIRCULATIONAHA.119.043075

Watson, J. (2022). *Human caring science* (3rd ed.). Jones & Bartlett Learning.

Wei, H., et al. (2024). Caring science and patient outcomes. *International Journal of Nursing Studies, 142*, 104520. https://doi.org/10.1016/j.ijnurstu.2023.104520

Wisuda, A. C., Suraya, C., Suzanna, S., Saputra, M. A. S., Manisha, M., Desvitasari, H., Emiliasari, D., & bin Sansuwito, T. (2025). Enhancing Patient Satisfaction Among Coronary Heart Disease Patients Through Islamic Spiritual Care with Murottal in Nursing Practice. *Jurnal Keperawatan Indonesia*, *28*(3), 203–210. https://doi.org/10.7454/jki.v28i3.1270

Wisuda, A. C., bin Sansuwito, T., Suraya, C., Rusmarita, Emiliasari, D. (2024). Transformative impact of Islamic spiritual care (ISC) enriched with murottal: Alleviating anxiety and depression among coronary heart disease patients through pre- and post-intervention analysis. *Public Health of Indonesia* 10(3). https://doi.org/10.36685/phi.v10i3.813

World Health Organization. (2023). *Cardiovascular diseases (CVDs) fact sheet.* https://www.who.int/news-room/fact-sheets/detail/cardiovascular-diseases-(cvds)