



Exploring How Spiritual Care Enhances Quality of Life in Children with Leukemia: A Systematic Review

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Abstract

Context: Leukemia is recognized as one of the most common malignancies in children, significantly influencing their physical, emotional, social, and spiritual dimensions of health.

Objectives: This systematic review aims to explore and synthesize existing evidence on the role of spiritual care in improving the quality of life among children diagnosed with leukemia, based on findings from 13 studies published between 2010 and 2025.

Methods: From the initial search that yielded 2,854 records, 99 articles were selected for full-text screening after removing duplicates and reviewing the title/abstract, of which 13 met the inclusion criteria between January 2010 and March 2025. These studies examined the psychosocial experiences of parents whose children were receiving chemotherapy. A systematic search was conducted across PubMed, Scopus, Web of Science, Google Scholar, and SID using a set of predefined keywords. Two independent reviewers performed the screening and data extraction procedures. The methodological quality of the included studies was evaluated using the Cochrane risk of bias tool, the Newcastle-Ottawa Scale (NOS), and the critical appraisal skills programme (CASP) checklist. Both qualitative and quantitative data were synthesized using a thematic analysis approach.

Results: Spiritual care approaches, including counseling, meditation, prayer, and supportive spiritual presence, were found to enhance psychological resilience, social adaptation, and spiritual well-being in children with leukemia. Reported benefits included reduced anxiety, greater hope for the future, and an enhanced sense of meaning and purpose in life.

Conclusions: The findings highlight spiritual care as a valuable complementary intervention for improving the overall quality of life in children living with leukemia. Healthcare professionals are encouraged to incorporate structured educational programs and tailored spiritual interventions into routine care to address the unique needs of this group.

Keywords: Spiritual Care, Quality of Life, Children, Leukemia

1. Context

Leukemia ranks among the most prevalent cancers in children, imposing substantial psychological and physical challenges on both patients and their families (1). Within clinical environments, the spiritual component of care is frequently overlooked, despite its importance for children confronting significant life events such as serious illnesses (2). The consequences of leukemia for children are extensive and multifaceted,

encompassing not only the physical difficulties associated with the disease and its intensive treatments but also profound psychological, social, and spiritual issues (3). Due to their distinct cognitive, emotional, and developmental characteristics, adolescents are particularly susceptible to the pressures brought on by illness and its management. Enhancing the quality of life for these individuals necessitates a holistic approach that integrates spiritual considerations into routine care (4).

Spiritual care focuses on supporting individuals in discovering meaning, purpose, inner peace, and a sense of connection, whether with themselves, others, or a greater entity. Engaging with these aspects can alleviate anxiety and depression, foster self-worth, encourage acceptance of illness, and improve overall psychosocial health (5). Essential elements of spiritual care include engaging in meaningful dialogue, assisting with existential concerns, fostering hope, providing compassionate support during crises, and facilitating access to spiritual resources regardless of religious affiliation (6).

Quality of life itself is a multidimensional construct shaped by the interplay of physical, psychological, social, and spiritual domains. There is a growing acknowledgment within healthcare of the significance of spirituality, particularly in supporting patients as they navigate chronic or life-limiting conditions during critical developmental periods (7). Spiritual care involves specific strategies aimed at recognizing and addressing the spiritual needs of patients within medical settings. For children with leukemia, these interventions are crucial for enhancing quality of life by deepening existential insight, altering perceptions of illness, promoting acceptance, and mitigating psychological distress. Additionally, forming supportive relationships with spiritual counselors or healthcare providers can strengthen feelings of belonging, security, and emotional well-being among adolescent patients (8).

Despite considerable theoretical and empirical evidence highlighting the benefits of spiritual care for cancer patients' quality of life, this dimension remains insufficiently addressed in many healthcare settings, particularly those serving child populations (9). Consequently, a notable disparity exists between the spiritual needs of patients and the services available to them. This research was therefore undertaken to investigate the association between spiritual care and quality of life in adolescents diagnosed with leukemia (10). The findings may clarify the crucial role of spiritual elements in improving patient experiences and guide the development of more holistic care strategies within healthcare systems. This systematic review has been registered in PROSPERO CRD420251140128.

2. Objectives

This study investigates various facets of quality of life, including psychological, social, physical, and spiritual components, to assess how spiritual interventions may improve well-being among adolescent leukemia patients. The outcomes may

contribute to designing effective approaches for delivering integrated care that addresses the spiritual requirements of this population.

3. Methods

From the initial search that yielded 2,854 records, 99 articles were selected for full-text screening after removing duplicates and reviewing the title/abstract, of which 13 met the inclusion criteria between January 2010 and March 2025.

3.1. Data Sources

A thorough literature search was carried out across five well-established databases: PubMed, Scopus, Web of Science, Google Scholar, and SID. These sources were selected due to their broad and reliable coverage of health sciences, medicine, and social research.

3.2. Search Strategy

The search employed a combination of predefined terms: ("Spiritual care" OR "Hospice Care") AND ("Leukemia" OR "Cancer") AND ("Children" OR "Pediatrics") AND ("Quality of life" OR "Life Style"). Boolean operators were applied to refine the results, and the reference lists of included studies were manually screened to identify any additional relevant articles.

3.3. Eligibility Criteria

Studies were eligible for inclusion if they investigated how spiritual care enhances quality of life in children with leukemia. Additionally, research addressing broader quality of life enhancements in children with leukemia was considered when it offered relevant insights. Exclusion criteria: Studies lacking original data or a clear methodological framework, such as commentaries, editorials, or letters, were excluded unless they presented structured empirical findings. Publications in languages other than English or Persian, or those without sufficient outcome information, were also excluded.

3.4. Study Design

Both quantitative and qualitative study designs were included, covering experimental trials, observational studies, systematic reviews, and case reports.

3.5. Outcomes of Interest

To qualify, studies had to report on at least one of the following domains: Spiritual care, quality of life, or

issues connected to adolescents with leukemia.

3.6. Time Frame and Language

Only studies published between January 2010 and March 2025, and written in either English or Persian, were included.

3.7. Data Extraction and Management

Data extraction was conducted independently by two reviewers using a standardized template. Collected information included authorship, year of publication, study design, sample size, and study setting, as well as details regarding psychosocial and spiritual issues, including their type, duration, and frequency. Extracted data were first organized in Google Sheets and later managed in EndNote to remove duplicates and ensure accurate referencing.

3.8. Quality Appraisal

Given the methodological diversity of the included studies, we used different validated tools based on study design to ensure appropriate and rigorous assessment: For randomized controlled trials (RCTs), we applied the Cochrane risk of bias 2 (RoB 2) tool. For observational studies, the Newcastle-Ottawa Scale (NOS) was used. For qualitative studies, we applied the critical appraisal skills programme (CASP) checklist. This stratified approach allowed us to assess each study with the most appropriate and design-specific tool, enhancing the precision and relevance of our quality assessment. All reviewers followed standardized scoring rubrics and discussed discrepancies collaboratively to ensure consistency. Studies were not excluded based on their risk of bias ratings. However, the assessments informed the narrative synthesis, and findings from studies rated as moderate or high risk were interpreted with appropriate caution during analysis. More information is provided in [Table 1](#).

3.9. Data Analysis

A thematic synthesis approach was employed to integrate findings across studies. Following Braun and Clarke's six-phase framework – familiarization, coding, theme generation, review, definition, and reporting – two reviewers independently coded the data using an inductive method. Discrepancies were resolved through discussion or consultation with a third reviewer. This approach allowed for the consolidation of recurring concepts into well-defined thematic categories.

3.10. Limitations

The review faced several limitations: (1) Variability in study design, sample sizes, and outcome measures prevented a meta-analysis; (2) the quality of evidence varied, with some studies presenting moderate to high risk of bias; (3) geographic and technological constraints limited the applicability of certain interventions; and (4) relatively few studies directly addressed parental psychosocial issues. While this represents a methodological gap, it also emphasizes the need for further dedicated research in this area.

4. Results

In total, thirteen studies met the eligibility criteria and were included in this review following a rigorous screening process. The initial database search yielded a large number of records exploring how spiritual care enhances quality of life in children with leukemia. The study selection pathway is illustrated in [Figure 1](#), which presents a PRISMA-compliant flow diagram showing the number of records identified, screened, assessed for eligibility, and finally included, along with reasons for exclusion at each stage. Detailed characteristics of the included studies are summarized in [Table 1](#).

4.1. Summary of Results

This systematic review provides compelling evidence that spiritual care positively influences multiple aspects of quality of life in children with leukemia. Beyond reducing psychological distress, spiritual care supports the reconstruction of spiritual identity, fosters hope, encourages the search for meaning within the illness experience, and enhances interpersonal relationships.

5. Discussion

Spiritual health is characterized by two central components: Religious health, which relates to an individual's connection with a higher power, and existential health, which concerns personal adaptation to life circumstances, social engagement, and the management of psychosocial difficulties (25). The adjustment process following a cancer diagnosis is gradual and requires changes in daily routines as well as thoughtful planning. These plans must address shifting life contexts and help patients cultivate effective coping mechanisms (26). Integrating spirituality into care can support individuals in managing their illness, especially as it progresses (27). Although spiritual care plays a vital role in supporting recovery, enhancing spiritual well-being, and alleviating symptoms of anxiety and

Table 1. Characteristics and Thematic Classification of Included Studies ^a

Years	Authors	Study Type	Sampling Method	Participate	Conclusion	Risk of Bias Tool	Bias Level
2014	Musarezaie et al. (11)	Clinical trial	Randomized	64	The provision of spiritual care has been associated with reduced levels of depression in individuals diagnosed with leukemia.	Cochrane RoB 2	Moderate
2024	Torabi et al. (12)	Clinical trial	Randomized	94	Integrating spiritual support into the comprehensive care of leukemia patients is recommended for nursing practice.	Cochrane RoB 2	Moderate
2015	Musarezaie et al. (13)	Clinical trial	Randomized	64	Nurses are advised to adopt a holistic care framework that emphasizes spirituality-centered interventions.	Cochrane RoB 2	Moderate
2020	Mansurifard et al. (14)	Pre-experimental	Convenient	35	Incorporating spiritual care into nursing plans is encouraged, as it represents a simple, accessible, safe, and cost-effective method to promote patients' spiritual well-being.	ROB 2	Moderate
2018	Torabi et al. (15)	Quasi-experimental	Convenient	32	Nurse-led programs focusing on spirituality have shown positive outcomes in improving adolescents' coping abilities when facing cancer, thereby strengthening their overall resilience.	ROB 2	Moderate
2024	Yaghoobi Beglar et al. (16)	Clinical trial	Randomized	60	Spiritual support can play a vital role in enhancing the well-being of those nearing end of life by providing comfort and helping them find deeper meaning and purpose.	ROB 2	Moderate
2018	Abdulah and Abdulla (17)	Clinical trial	Randomized	60	Engagement in art therapy, such as painting and crafts, has been found to improve health-related quality of life in children with cancer.	Cochrane RoB 2	Moderate
2017	Baljani et al. (18)	Clinical trial	Randomized	76	It is essential for nurses to address the spiritual needs of patients by taking into account each individual's unique situation and preferences.	ROB 2	Moderate
2021	Sun et al. (19)	Clinical trial	Purpose	100	Spiritual care for individuals with advanced cancer has been demonstrated to improve both spiritual well-being and overall quality of life, while also reducing negative mental health symptoms.	Cochrane RoB 2	Low to moderate
2017	Sankhe et al. (20)	Cohort	Non-randomized	107	The use of the MATCH framework in spiritual care has resulted in improved spiritual well-being and quality of life for patients and their primary caregivers.	ROB 2	Moderate
2022	Khezri et al. (21)	Controlled clinical trial	Consecutive	72	Implementing a supportive, spiritually oriented nursing care model has been effective in increasing hope among breast cancer patients.	Cochrane RoB 2	Moderate
2022	Karimi et al. (22)	Quasi-experimental	Convenience	64	The spiritual care intervention evaluated in this study proved beneficial in raising self-esteem among individuals with cancer.	ROB 2	Moderate
2021	Afrasiabifar et al. (23)	Controlled trial	Randomized	74	Overall, spiritual interventions have been shown to foster greater hope and enhance spiritual well-being in cancer patients.	Cochrane RoB 2	Low to moderate

Abbreviation: RoB 2, risk of bias 2.

^aThis table presents the key features of the 13 studies included in the review, alongside their thematic classifications as determined during the synthesis process.

depression, patients' spiritual needs are frequently neglected during treatment. Engagement in spiritual practices can help individuals manage stress and illness more effectively by fostering a sense of meaning, purpose, and connection to a higher power or greater reality (28). Therefore, addressing spiritual needs is a crucial component of care for children with cancer, as it promotes the development of adaptive coping strategies (29). Recognizing the importance of spirituality is fundamental to delivering effective spiritual care (30). Nurses with a solid understanding of spiritual principles are better equipped to provide comprehensive support. To strengthen this aspect of care, nurses should expand their knowledge of spiritual issues, integrate these insights into clinical practice, and improve communication with both patients and their families (31). Recent studies have further highlighted the positive impact of spiritual care on the quality of life of adolescents with leukemia, particularly in psychological, social, and existential domains (32). For

instance, Rossato et al. (2021) reported that adolescents who engaged in spiritual interventions demonstrated improved social and emotional functioning, as well as better overall mental health. Spirituality was also associated with the development of psychological resources such as resilience, hope, and a sense of meaning, all of which contributed to enhanced quality of life (33). Similarly, Alvarenga et al. (2021) found a positive correlation between spiritual well-being and increased happiness, life satisfaction, and general quality of life in this population. These findings underscore the importance of integrating spiritual care as a fundamental component of holistic patient management (34). Systematic identification and continuous support of spiritual needs should be incorporated as standard practice in the care of adolescents with leukemia (35). Beyond improving the patient experience, such care provides essential support to families during difficult periods (36). By addressing spiritual dimensions, children are able to view their

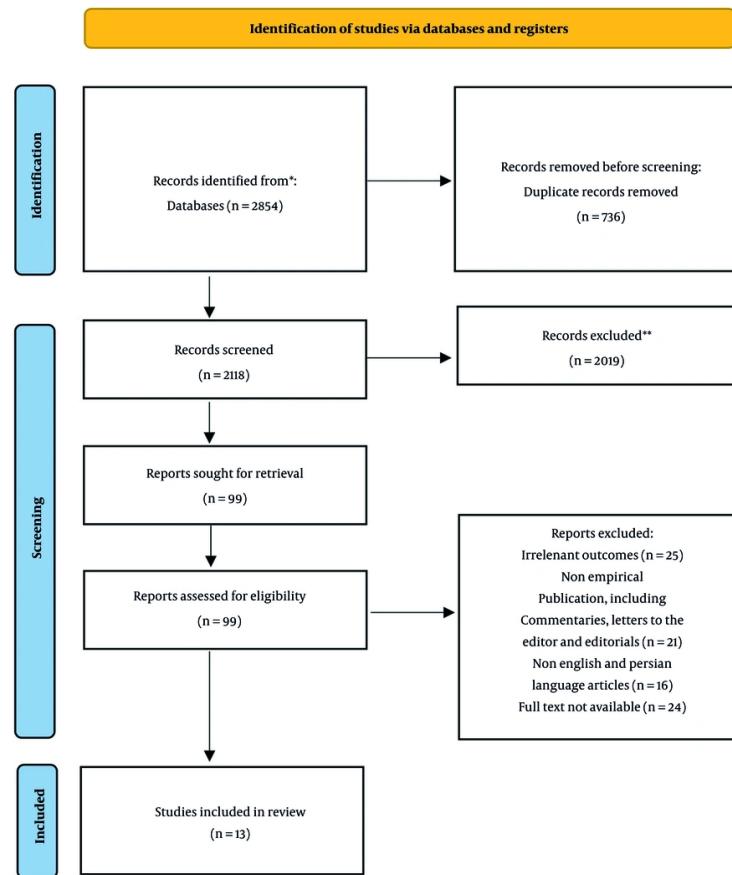


Figure 1. PRISMA flow diagram (24)

illness not solely from a medical perspective but as an opportunity for personal growth, self-reflection, and deeper connections (37). This approach fosters disease acceptance and strengthens their ability to cope with related challenges (38).

The involvement of family members, support networks, and healthcare professionals is crucial. Spiritual interventions achieve optimal outcomes when they engage parents, nurses, counselors, and palliative care teams (39). Incorporating a spiritual nurse or religious counselor into the care process can strengthen patient-provider relationships while also supporting psychological well-being. Evidence demonstrates that spirituality plays a key role in enhancing quality of life and is linked to reduced levels of anxiety and depression among individuals with cancer (40). Since spiritual well-being is often grounded in personal religious beliefs

and values, integrating spiritual dimensions into the management of chronic illnesses may help lower the prevalence of anxiety disorders in adolescents (41). Furthermore, research highlights that spiritual care can mitigate symptoms such as anxiety, depression, loneliness, and fear of death in young patients undergoing cancer treatment (42). Spiritual interventions, including discussions on spirituality, meditation, prayer, and self-reflection, foster adaptive coping strategies such as hope, finding meaning in adversity, and strengthening faith (43). Nonetheless, several barriers hinder the effective provision of spiritual care, most notably the limited availability of specialized training for healthcare professionals in this field (44). Evidence further indicates that spiritual care can meaningfully improve the quality of life for patients with advanced-stage leukemia (45). In light of these findings, integrating spiritual care as a core component

of comprehensive treatment for adolescents with leukemia is strongly recommended. Such an approach should include targeted training for healthcare providers, routine assessment of patients' spiritual needs, and the provision of continuous support throughout the course of treatment.

5.1. Conclusions

Providing spiritual support has been shown to play a vital role in improving the overall quality of life for children living with leukemia. When spiritual and emotional needs are addressed in parallel with medical treatment, outcomes include reduced levels of anxiety and depression, greater satisfaction with care, enhanced resilience, and, in some cases, improved survival prospects. Children dealing with chronic illnesses such as leukemia often face a combination of physical, psychological, and spiritual challenges; thus, incorporating spirituality into their care can assist them in coping more effectively and foster stronger connections with healthcare providers and their surroundings. Therefore, it is essential to establish spiritual care as an integral part of comprehensive treatment protocols, particularly within pediatric and adolescent healthcare contexts. Moreover, healthcare practitioners, including nurses, psychologists, social workers, and physicians, should receive dedicated training to better recognize and address the spiritual needs of patients, while considering individual cultural backgrounds, values, and circumstances. Adopting this holistic model not only enhances patient well-being but also ensures a more empathetic and humane treatment experience.

5.2. Limitations of the Study

This review was targeted at studies in Persian and English, so some influential and high-quality studies may have been missed.

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Footnotes

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N. and M. N. R.; Resources: F. Gh. and M. N. R.; Software: J. N. and M. N. R.; Supervision: F. Gh.; Validation: J. N. and M. L.; Visualization: M. N. R. and M. L.

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References

1. Gotesman M, Raheel S, Panosyan EH. Chronic Myeloid Leukemia in Children and Adolescents. *Adv Pediatr*. 2023;70(1):145-55. [PubMed ID: 37422292]. <https://doi.org/10.1016/j.yapd.2023.04.002>.
2. Nourmohammadi J, Lotfi M, Nazari Rad M, Ghajaei F. Psychosocial Challenges of Parents of Children Undergoing Chemotherapy: A Systematic Review. *J Compr Pediatr*. 2025;16(4). <https://doi.org/10.5812/jcp-163837>.
3. Khalife H, Al Khazen A, Khalife H, Hemade A, Chamoune C, Fayyad-kazan H, et al. Acute lymphoid leukemia in Lebanese children: A retrospective study. *Clin Epidemiol Global Health*. 2022;13. <https://doi.org/10.1016/j.cegh.2021.100932>.
4. Aguiar TF, da Conceicao Barbosa T, Maciel ALT, Blunck CB, Sellos-Laclette J, de Melo AC, et al. Outcome of adolescents and young adults with acute lymphoblastic leukemia in a single center in Brazil. *Hematol Transfus Cell Ther*. 2023;45 Suppl 2(Suppl 2):S108-12. [PubMed ID: 35989249]. [PubMed Central ID: PMC10433312]. <https://doi.org/10.1016/j.hctc.2022.06.006>.
5. Wang Y, Xue YJ, Jia YP, Zuo YX, Lu AD, Zhang LP. Outcomes of Adolescent Patients with Acute Lymphoblastic Leukemia: Long-term Follow-up of 335 Patients. *Clin Lymphoma Myeloma Leuk*. 2021;21(8):e658-65. [PubMed ID: 33941506]. <https://doi.org/10.1016/j.clml.2021.03.008>.
6. Malinakova K, Madarasova Geckova A, van Dijk JP, Kalman M, Tavel P, Reijneveld SA. Adolescent religious attendance and spirituality-Are they associated with leisure-time choices? *PLoS One*. 2018;13(6). e0198314. [PubMed ID: 29912957]. [PubMed Central ID: PMC6005561]. <https://doi.org/10.1371/journal.pone.0198314>.
7. Selman LE, Brighton LJ, Sinclair S, Karvinen I, Egan R, Speck P, et al. Patients' and caregivers' needs, experiences, preferences and research priorities in spiritual care: A focus group study across nine countries. *Palliat Med*. 2018;32(1):216-30. [PubMed ID: 29020846]. [PubMed Central ID: PMC5758929]. <https://doi.org/10.1177/0269216317734954>.
8. Carey LB, Hodgson TJ. Chaplaincy, Spiritual Care and Moral Injury: Considerations Regarding Screening and Treatment. *Front Psychiatry*. 2018;9:619. [PubMed ID: 30568605]. [PubMed Central ID: PMC6290645]. <https://doi.org/10.3389/fpsyg.2018.00619>.
9. Superdock AK, Porter AS, Spears W, Baker JN, Mack JW, Kaye EC. Spiritual Communication Between Pediatric Oncologists, Caregivers, and Patients With Brain Tumors. *Pediatr Blood Cancer*. 2025;72(7). e31721. [PubMed ID: 40259532]. [PubMed Central ID: PMC12101940]. <https://doi.org/10.1002/pbc.31721>.
10. Arutyunyan T, Odetola F, Swieringa R, Niedner M. Religion and Spiritual Care in Pediatric Intensive Care Unit: Parental Attitudes Regarding Physician Spiritual and Religious Inquiry. *Am J Hosp Palliat Care*. 2018;35(1):28-33. [PubMed ID: 27940902]. <https://doi.org/10.1177/1049909116682016>.
11. Musarezaie A, Moeini M, Taleghani F, Mehrabi T. Does spiritual care program affect levels of depression in patients with Leukemia? A randomized clinical trial. *J Educ Health Promot*. 2014;3:96. [PubMed ID:

25250362]. [PubMed Central ID: PMC4165101]. <https://doi.org/10.4103/2277-9531.139678>.

12. Torabi M, Yousofvand V, Mohammadi R, Karbin F, Ranjbaran H. Effectiveness of Group Spiritual Care on Leukemia Patients' Hope and Anxiety in Iran: A Randomized Controlled Trial. *J Relig Health*. 2024;63(2):1413-32. [PubMed ID: 37432586]. <https://doi.org/10.1007/s10943-023-01866-9>.

13. Musarezaie A, Ghasemipoor M, Momeni-Ghaleghasemi T, Khodaee M, Taleghani F. A Study on the Efficacy of Spirituality-Based Intervention on Spiritual Well Being of Patients with Leukemia: A Randomized Clinical Trial. *Middle East J Cancer*. 2015;6(2):97-105.

14. Mansurifard F, Ghaljaei F, Navidian A. The Effect of Spiritual Care on the Spiritual Health of Adolescents with Cancer: A Pre-Experimental Study. *Med-Surg Nurs J*. 2020;8(4). <https://doi.org/10.5812/msnj.100567>.

15. Torabi F, Rassouli M, Nourian M, Borumandnia N, Shirinabadi Farahani A, Nikseresht F. The Effect of Spiritual Care on Adolescents Coping With Cancer. *Holist Nurs Pract*. 2018;32(3):149-59. [PubMed ID: 29642129]. <https://doi.org/10.1097/HNP.00000000000000263>.

16. Yaghoobi Beglar N, Rezaei F, Izadipour E, TabaTabaei SM. Impact of Spiritual End-of-Life Support on the Quality of Life for Leukemia Patients. *Iran J Psychiatry*. 2024;19(1):107-18. [PubMed ID: 38420282]. [PubMed Central ID: PMC10896757]. <https://doi.org/10.18502/ijps.v19i1.14346>.

17. Abdulah DM, Abdulla BMO. Effectiveness of group art therapy on quality of life in paediatric patients with cancer: A randomized controlled trial. *Complement Ther Med*. 2018;41:180-5. [PubMed ID: 30477836]. <https://doi.org/10.1016/j.ctim.2018.09.020>.

18. Baljani E, Azimpour A, Babaloo T, Rahimi J, Cheraghi R. [The impact of spiritual counseling in hope of patients with cancer]. *Nurs Midwifery J*. 2017;15(9):696-703. FA.

19. Sun XH, Liu X, Zhang B, Wang YM, Fan L. Impact of spiritual care on the spiritual and mental health and quality of life of patients with advanced cancer. *World J Psychiatry*. 2021;11(8):449-62. [PubMed ID: 34513607]. [PubMed Central ID: PMC8394693]. <https://doi.org/10.5498/wjp.v11.i8.449>.

20. Sankhe A, Dalal K, Agarwal V, Sarve P. Spiritual Care Therapy on Quality of Life in Cancer Patients and Their Caregivers: A Prospective Non-randomized Single-Cohort Study. *J Relig Health*. 2017;56(2):725-31. [PubMed ID: 27853982]. [PubMed Central ID: PMC5320005]. <https://doi.org/10.1007/s10943-016-0324-6>.

21. Khezri E, Bagheri-Saveh MI, Kalhor MM, Rahnama M, Roshani D, Salehi K. Nursing care based on the Support-Based Spiritual Care Model increases hope among women with breast cancer in Iran. *Support Care Cancer*. 2022;30(1):423-9. [PubMed ID: 34302544]. <https://doi.org/10.1007/s00520-021-06413-4>.

22. Karimi R, Mousavizadeh R, Mohammadirizi S, Bahrami M. The Effect of a Spiritual Care Program on the Self-Esteem of Patients with Cancer: A Quasi-Experimental Study. *Iran J Nurs Midwifery Res*. 2022;27(1):71-4. [PubMed ID: 35280191]. [PubMed Central ID: PMC8865238]. https://doi.org/10.4103/ijnmr.ijnmr_118_21.

23. Afrasiabifar A, Mosavi A, Jahromi AT, Hosseini N. Randomized Controlled Trial Study of the Impact of a Spiritual Intervention on Hope and Spiritual Well-Being of Persons with Cancer. *Invest Educ Enferm*. 2021;39(3). [PubMed ID: 34822235]. [PubMed Central ID: PMC8912157]. <https://doi.org/10.17533/udea.iee.v39n3e08>.

24. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*. 2021;372:n71. [PubMed ID: 33782057]. [PubMed Central ID: PMC8005924]. <https://doi.org/10.1136/bmj.n71>.

25. Hu X, Gao J, Liang S, Yue Z, Zheng R. Status and influential factors of spiritual well-being in cancer patients with drug clinical trials: a cross-sectional study. *Support Care Cancer*. 2023;31(12):646. [PubMed ID: 37855931]. <https://doi.org/10.1007/s00520-023-08112-8>.

26. Nissen RD, Viftrup DT, Hvidt NC. The Process of Spiritual Care. *Front Psychol*. 2021;12:674453. [PubMed ID: 34557128]. [PubMed Central ID: PMC8453153]. <https://doi.org/10.3389/fpsyg.2021.674453>.

27. Rezaei Kahkhaei F, Ghaljaei F, Abrari Romanjan K. The Effects of Sandplay Therapy on Anxiety and Sleep Habits of Children with Cancer Undergoing Chemotherapy: A Quasi-Experimental Study. *J Pediatr Perspectives*. 2023;11(5):17721-8. <https://doi.org/10.22038/jp.2023.71134.5221>.

28. Harorani M, Jadidi A, Zand S, Khoshkhoutabar T, Rafiee F, Beheshti SZ. Spiritual Care in Hospitalized Patients in Iran: An Action Research Study. *J Relig Health*. 2022;61(5):3822-39. [PubMed ID: 34136966]. <https://doi.org/10.1007/s10943-021-01302-w>.

29. Viftrup DT, Rosenbaek F, Damgaard HH, Hemdrup M, Nielsen M, Nissen RD. Caring Spiritually: A Study on Spiritual Care Training in a Hospice Setting. *J Hosp Palliat Nurs*. 2023;25(3):156-64. [PubMed ID: 37040374]. <https://doi.org/10.1097/NJP.00000000000000947>.

30. Klimasiński MW, Baum E, Wieczorowska-Tobis K. Spiritual care model in the Pain Treatment Clinic. How to understand non-religious aspects of spirituality? *Palliative Med*. 2023;15(3):110-8. <https://doi.org/10.5114/pm.2023.132902>.

31. Veloza-Gomez M, Munoz de Rodriguez L, Guevara-Armenta C, Mesa-Rodriguez S. The Importance of Spiritual Care in Nursing Practice. *J Holist Nurs*. 2017;35(2):118-31. [PubMed ID: 26873925]. <https://doi.org/10.1177/0898010115626777>.

32. Hawthorne DM, Gordon SC. The Invisibility of Spiritual Nursing Care in Clinical Practice. *J Holist Nurs*. 2020;38(1):147-55. [PubMed ID: 31777306]. <https://doi.org/10.1177/0898010119889704>.

33. Rossato I, Ullan AM, Scorsolini-Comin F. Religious and Spiritual Practices Used by Children and Adolescents to Cope with Cancer. *J Relig Health*. 2021;60(6):4167-83. [PubMed ID: 33871781]. <https://doi.org/10.1007/s10943-021-01256-z>.

34. Alvarenga WA, Leite A, Menochelli AA, Ortiz La Banca R, De Bortoli PS, Neris RR, et al. How to Talk to Children and Adolescents With Cancer About Spirituality? Establishing a Conversation Model. *J Pediatr Oncol Nurs*. 2021;38(2):116-30. [PubMed ID: 33269629]. <https://doi.org/10.1177/1043454220975703>.

35. Saari CZ, Syed Muhsin SB, Zainal Abidin MS, Ahmad SS, Rahman SMHSA, Musa S, et al. Spiritual Growth Aspects among Caregivers of Children with Cancer. *J Akidah & Pemikiran Islam*. 2022;24(1):311-42. <https://doi.org/10.22452/afkar.vol24no1.9>.

36. Kilicarslan Toruner E, Altay N, Ceylan C, Arpacı T, Sari C. Meaning and Affecting Factors of Spirituality in Adolescents. *J Holist Nurs*. 2020;38(4):362-72. [PubMed ID: 32418472]. <https://doi.org/10.1177/0898010120920501>.

37. Shirinabadi Farahani A, Ashrafizadeh H, Akbari ME, Motefakker S, Khademi F, Ebrahimloee S, et al. The Mediating Role of Spiritual Health in Adherence to Treatment in Patients with Cancer. *Int J Cancer Manag*. 2022;15(5). <https://doi.org/10.5812/ijcm-127820>.

38. Nguyen HTK, Terao MA, Green DM, Pui CH, Inaba H. Testicular involvement of acute lymphoblastic leukemia in children and adolescents: Diagnosis, biology, and management. *Cancer*. 2021;127(17):3067-81. [PubMed ID: 34031876]. [PubMed Central ID: PMC9677247]. <https://doi.org/10.1002/cncr.33609>.

39. Jamali A, Ghaljaei F, Keikhaei A, Jalalodini A. Effect of Peer Education on the Resilience of Mothers of Children with Leukemia: A Clinical Trial. *Med-Surg Nurs J*. 2019;8(2). <https://doi.org/10.5812/msnj.92686>.

40. Urtiga LMPC, Lins GAN, Slongo A, Ventura ALF, Cabral AKGD, Parente LB, et al. Spirituality and religiosity: influence on cancer therapy and well-being. *Revista Bioética*. 2022;30(4):883-91. <https://doi.org/10.1590/1983-80422022304578en>.

41. King SDW, Macpherson CF, Pfluegisen BM, Johnson RH. Religious/Spiritual Coping in Young Adults with Cancer. *J Adolesc Young Adult Oncol.* 2021;10(3):266-71. [PubMed ID: 33147093]. <https://doi.org/10.1089/jayao.2020.0148>.
42. Nejat N, Rahbarian A, Shykhan R, Ebrahimpour S, Moslemi A, Khosravani M. Assessment of spiritual needs in cancer patients: A cross-sectional study. *J Family Med Prim Care.* 2023;12(5):894-901. [PubMed ID: 37448916]. [PubMed Central ID: PMC10336942]. https://doi.org/10.4103/jfmpc.jfmpc_989_22.
43. Brand EAJ, Shaw M, Galo J. Implementing Spiritual Care in the Pediatric Complex Care Clinic. *J Pastoral Care Counsel.* 2023;77(1):27-33.
44. Bozek A, Nowak PF, Blukacz M. The Relationship Between Spirituality, Health-Related Behavior, and Psychological Well-Being. *Front Psychol.* 2020;11:1997. [PubMed ID: 32922340]. [PubMed Central ID: PMC7457021]. <https://doi.org/10.3389/fpsyg.2020.01997>.
45. Riklikiene O, Kaseliene S, Spriegiene L, Karosas L, Fisher JW. Spiritual Wellbeing of Cancer Patients: What Health-Related Factors Matter? *J Relig Health.* 2020;59(6):2882-98. [PubMed ID: 32537692]. <https://doi.org/10.1007/s10943-020-01053-0>.