







# The impact of spirituality on coping with head and neck cancer: a systematic review

## *Impactos da espiritualidade no enfrentamento do câncer de cabeça e pescoço: uma revisão sistemática*

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**Summary Purpose:** To synthesize scientific evidence on the relationship between spirituality and psychosocial coping outcomes in adults with head and neck cancer. **Methods:** A systematic review was conducted according to PRISMA 2020 guidelines and registered in PROSPERO. Observational studies evaluating spirituality, religiosity, or spiritual coping in individuals with head and neck cancer were included. Searches were performed in PubMed, Web of Science, Virtual Health Library, Cochrane Library, SciELO, and ScienceDirect. Risk of bias was assessed using Joanna Briggs Institute (JBI) tools, and certainty of evidence was evaluated using the GRADE approach. Due to methodological heterogeneity, results were synthesized narratively. **Results:** Three studies met the eligibility criteria. Overall, higher levels of spirituality or religiosity were associated with better perceived quality of life, greater acceptance of illness, and more adaptive coping experiences. However, the studies were observational, presented methodological variability, and had moderate risk of bias, resulting in low to very low certainty of evidence. **Conclusion:** Available evidence suggests that spirituality is related to psychosocial aspects of coping in head and neck cancer. Nevertheless, limitations of the existing studies preclude causal inferences. Further longitudinal research and studies exploring structured spiritual care approaches are needed to strengthen the evidence base.

**Keywords:** spirituality; head and neck neoplasms; quality of life; coping skills.

**Resumo Objetivo:** Sintetizar as evidências científicas sobre a relação entre espiritualidade e desfechos psicossociais de enfrentamento em adultos com câncer de cabeça e pescoço. **Método:** Foi realizada uma revisão sistemática de acordo com as diretrizes PRISMA 2020 e registrada no PROSPERO. Foram incluídos estudos observacionais que avaliaram espiritualidade, religiosidade ou *coping* espiritual em indivíduos com câncer de cabeça e pescoço. As buscas foram realizadas nas bases PubMed, Web of Science, Biblioteca Virtual em Saúde, Cochrane Library, SciELO e ScienceDirect. O risco de viés foi avaliado por meio dos instrumentos do Joanna Briggs Institute (JBI), e a certeza das evidências foi analisada utilizando a abordagem GRADE. Devido à heterogeneidade metodológica, os resultados foram sintetizados de forma narrativa. **Resultados:** Três estudos atenderam aos critérios de elegibilidade. De modo geral, níveis mais elevados de espiritualidade ou religiosidade estiveram associados a melhor qualidade de vida percebida, maior aceitação da doença e experiências de enfrentamento mais adaptativas. Contudo, os estudos eram observacionais, apresentaram variabilidade metodológica e risco de viés moderado, resultando em certeza da evidência baixa a muito baixa. **Conclusão:** As evidências disponíveis sugerem que a espiritualidade está relacionada a aspectos psicossociais do enfrentamento no câncer de cabeça e pescoço. No entanto, as limitações dos estudos existentes impedem inferências causais. São necessários estudos longitudinais e pesquisas que explorem abordagens estruturadas de cuidado espiritual para fortalecer a base de evidências.

**Descritores:** espiritualidade; neoplasias de cabeça e pescoço; qualidade de vida; habilidades de enfrentamento.

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## Introduction

Cancer remains one of the most prevalent diseases worldwide and continues to pose a major public health challenge. Beyond its biological burden, the diagnosis and treatment of cancer are associated with substantial physical, emotional, and psychosocial consequences that significantly affect patients' quality of life. Among oncological conditions, head and neck cancers (HNC) present particular challenges due to their impact on speech, swallowing, breathing, appearance, and social interaction, which often lead to psychological distress, anxiety, depression, and social isolation<sup>1</sup>.

Coping with HNC therefore extends beyond biomedical management and involves psychosocial and existential dimensions. In this context, spirituality and religiosity have been described as potential coping resources that may help individuals find meaning, maintain hope, and adapt to illness-related suffering. Studies involving patients with head and neck cancer indicate that spiritual and religious dimensions may be associated with quality of life and emotional adjustment<sup>2-4</sup>. However, spirituality may also involve negative coping processes, such as spiritual struggle, guilt, or feelings of abandonment, indicating that its influence on health outcomes is complex and multidimensional.

Despite growing interest in spirituality within oncology, the available evidence is heterogeneous. Many investigations combine different cancer types, use varied definitions and instruments to measure spirituality, and employ predominantly cross-sectional designs<sup>1</sup>. As a result, the specific role of spirituality in coping among patients with head and neck cancer remains unclear. The unique functional and psychosocial burden of HNC may lead to distinct spiritual needs and coping patterns that cannot be fully extrapolated from studies involving other cancer populations.

Therefore, a focused synthesis of the evidence is necessary to clarify the association between spirituality and psychosocial coping outcomes in individuals with head and neck cancer. The aim of this systematic review was to synthesize the available scientific evidence regarding the relationship between spirituality and psychosocial outcomes, including quality of life, psychological distress, and coping, in adults diagnosed with head and neck cancer.

## Methods

This systematic review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020)<sup>5</sup> guidelines and prospectively registered in the PROSPERO<sup>6</sup> database (CRD420251019736). The review aimed to identify and synthesize evidence regarding the relationship between spirituality and psychosocial coping outcomes in individuals with head and neck cancer.

The guiding question was structured using the PICO strategy<sup>7</sup>: Population (P): Adults diagnosed with head and neck cancer; Exposure (I/E): Spirituality, religiosity, or spiritual coping; Comparison (C): Lower levels or absence of spirituality, or comparison across levels of spiritual engagement; Outcomes (O): Psychosocial outcomes, including quality of life, psychological distress, coping strategies, resilience, and spiritual needs. Accordingly, the review question was: *What is the association between spirituality and psychosocial coping outcomes in adults with head and neck cancer?*

A systematic search was performed in PubMed, Web of Science, Virtual Health Library (VHL), Cochrane Library, SciELO, and ScienceDirect. Controlled vocabulary (MeSH/DeCS) and free-text terms were combined using Boolean operators. The search strategy included terms related to spirituality and head and neck cancer, as well as psychosocial outcomes.

The core search expression used in PubMed was ("Spirituality"[MeSH] OR spirituality OR religiosity OR "spiritual coping") AND ("Head and Neck Neoplasms"[MeSH] OR "head and neck cancer" OR "oral cancer" OR "oropharyngeal cancer") AND ("Quality of Life"[MeSH] OR coping OR distress OR resilience OR "psychological adaptation"). Equivalent strategies were adapted for the other databases. The final search was conducted on February 21, 2025. Although broader anatomical terms were included to increase sensitivity, only studies exclusively reporting head and neck cancer populations were retained.

Studies were considered eligible if they Included adults diagnosed with head and neck cancer; Evaluated spirituality, religiosity, or spiritual coping using a defined measure or conceptual framework; Investigated at least one psychosocial outcome (e.g., quality of life, distress, coping, resilience, or spiritual needs); Used observational or mixed-methods designs; Were published between January 1, 2015, and February 21, 2025; Were available in English.

Studies were excluded if they Involved mixed cancer populations without separate data for head and neck cancer; Focused solely on biomedical or clinical outcomes without psychosocial or spiritual dimensions; Were reviews, editorials, case reports, dissertations, or book chapters; Lacked sufficient methodological information.

All references were exported to Rayyan software<sup>8</sup>. Duplicates were removed, and titles and abstracts were independently screened by two reviewers. Potentially eligible studies underwent full-text assessment. Disagreements were resolved through discussion and, when necessary, consultation with a third reviewer.

Data were extracted using a structured form that included: author, year, country, study design, sample characteristics, instruments used to assess spirituality and outcomes, main findings, and conclusions related to psychosocial coping.

Methodological quality of the included observational studies was evaluated using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist<sup>9</sup>. This tool examines aspects such as clarity of inclusion criteria, validity of exposure and outcome measurement, identification and management of confounding factors, and appropriateness of statistical analysis. Each study was independently assessed by two reviewers. Risk of bias was categorized as low, moderate, or high based on the overall appraisal.

The certainty of the body of evidence for each outcome was assessed using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach<sup>10</sup>. As the included studies were observational, the initial level of certainty was considered low and could be downgraded further based on risk of bias, inconsistency, indirectness, imprecision, or publication bias.

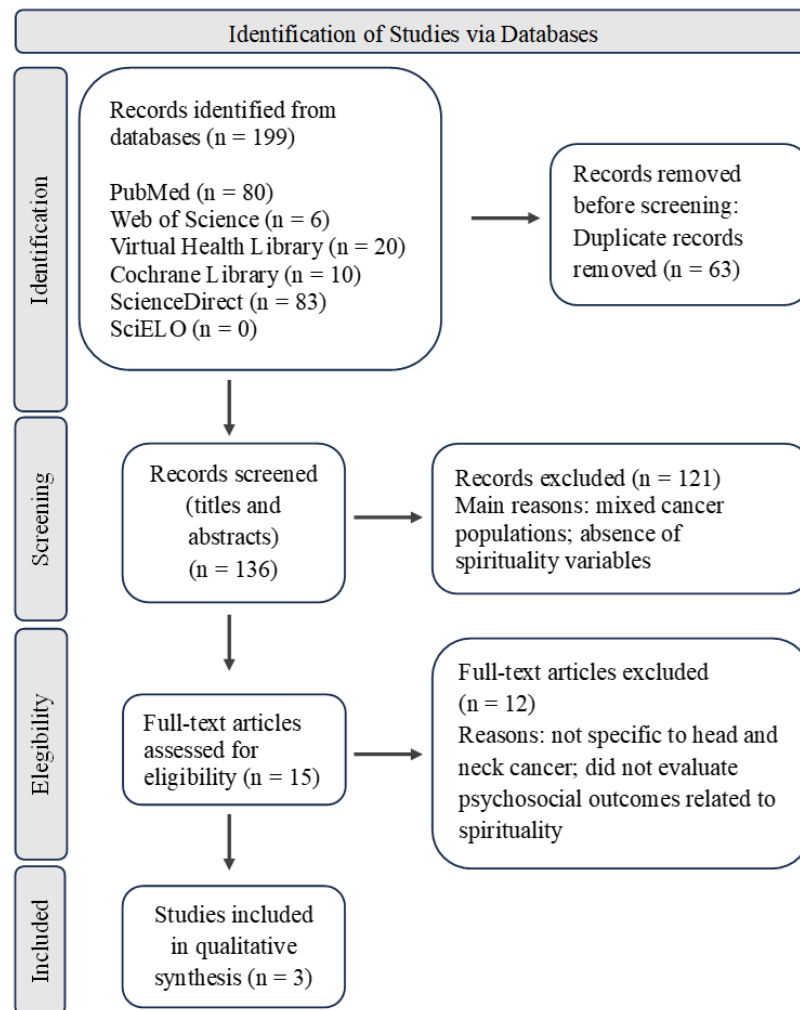
A meta-analysis was not performed due to heterogeneity in study designs, populations, and measurement instruments. Therefore, findings were synthesized narratively following the Synthesis Without Meta-analysis (SWiM) recommendations<sup>11</sup>. Studies were grouped according to outcome domains, and patterns of association between spirituality and psychosocial variables were described.

## Results

The database search identified 199 records: PubMed (n = 80), Web of Science (n = 6), Virtual Health Library (n = 20), Cochrane Library (n = 10), ScienceDirect (n = 83), and none in SciELO. After removal of duplicates (n = 63), 136 titles and abstracts were screened. Of these, 121 were excluded for not meeting eligibility criteria, primarily due to mixed cancer populations or absence of spiritual variables. Fifteen full-text articles were assessed for eligibility. Twelve studies were excluded at this stage because they did not present data specific to head and neck cancer or did not evaluate psychosocial outcomes related to spirituality. Three studies met all inclusion criteria and were included in the qualitative synthesis (Figure 1).

The included studies were published between 2016 and 2022 and conducted in Brazil, Taiwan, and India. All used observational designs, two with cross-sectional approaches and one qualitative study. Sample sizes ranged from 75 to 155 participants, all adults diagnosed with head and neck cancer at different stages of treatment or follow-up. Further information on the characteristics of the studies screened, as well as their results and conclusions, is included in Tables 1 and 2, respectively.

Spirituality and religiosity were assessed using validated instruments such as the FACIT-Sp12 and DUREL, while psychosocial outcomes included quality of life, emotional distress, coping strategies, and spiritual needs. Quality of life was frequently measured using oncology-specific tools such as EORTC QLQ-C30 and FACT-HN.



**Figure 1.** PRISMA bibliographic screening flow diagram of studies identified through the search and selection process.

Across studies, higher levels of spiritual well-being or positive spiritual coping were generally associated with better perceived quality of life and lower levels of psychological distress. Participants who reported stronger spiritual resources tended to describe greater acceptance of illness, hope, and meaning-making. In the qualitative study, spirituality emerged as a central element in patients' narratives of coping, often intertwined with family support and trust in treatment.

However, the findings were not entirely uniform. One study highlighted that negative spiritual coping, characterized by feelings of punishment or abandonment, was linked to greater emotional suffering. These differences suggest that the role of spirituality in coping is not homogeneous and may vary according to individual beliefs and interpretations.

All included studies presented methodological limitations typical of observational research. Common issues included reliance on self-reported measures, limited control of confounding variables, and cross-sectional designs that preclude temporal inference. Based on JBI appraisal, the overall risk of bias was considered moderate across studies (Table 3).

Using the GRADE approach, the overall certainty of evidence for the association between spirituality and psychosocial outcomes in head and neck cancer was rated as low to very low. This assessment reflects the observational nature of the evidence, methodological heterogeneity, and imprecision due to small sample sizes (Table 4).

**Table 1.** Characteristics of the included studies between 2015 and 2025.

Author (Year)	Title	Sample	Population	Objective	Instruments	Main Findings
Chang et al. <sup>4</sup>	Demoralization in oral cancer inpatients and its association with spiritual needs, quality of life, and suicidal ideation	155	Adults with oral/head and neck cancer	To explore associations between demoralization, spiritual needs, quality of life, and suicidal ideation	DS-MV; C-SpIRIT; EORTC QLQ-C30	Lower spiritual satisfaction associated with poorer quality of life and higher demoralization
Jagannathan & Juvva <sup>2</sup>	Emotions and coping of patients with head and neck cancers after diagnosis: qualitative content analysis	75	Adults with head and neck cancer (post-surgery)	To understand emotional responses and coping mechanisms following diagnosis	Qualitative semi-structured interviews	Spirituality emerged as a key coping strategy alongside family and social support
Reis et al. <sup>3</sup>	Religiosity, spirituality, and quality of life of patients with sequelae of head and neck cancer	Not specified	Patients with head and neck cancer sequelae	To assess the relationship between religiosity/spirituality and quality of life	DUREL; FACIT-Sp12; FACT-HN; UW-QOL	Higher religiosity/spirituality associated with better quality of life scores

Source: Prepared by the authors (2026).

**Table 2.** Author, year, main results and conclusions of the included studies between 2015 and 2025.

Author (Year)	Main Results	Conclusions
Chang et al. <sup>4</sup>	Lower levels of spiritual satisfaction were associated with poorer quality of life, higher demoralization, and greater suicidal ideation among patients with oral/head and neck cancer	Spiritual needs are closely related to psychological well-being, and insufficient spiritual support may be linked to worse psychosocial outcomes
Jagannathan & Juvva <sup>2</sup>	Patients described spirituality as a central element in coping with diagnosis, contributing to acceptance, hope, and emotional balance alongside family and social support	Spirituality represents an important subjective coping resource, integrated with interpersonal and treatment-related trust
Reis et al. <sup>3</sup>	Higher levels of religiosity and spiritual well-being were significantly associated with better quality of life among individuals with sequelae of head and neck cancer	Spiritual and religious dimensions appear to contribute positively to perceived quality of life in patients facing functional and aesthetic consequences of the disease

Source: Prepared by the authors (2026).

**Table 3.** JBI risk of bias assessment for observational studies.

Study	Clear inclusion criteria	Participants described	Exposure measured validly	Outcome measured validly	Confounders identified	Strategies for confounders	Appropriate statistics	Overall Risk
Chang et al. <sup>4</sup>	Yes	Yes	Yes	Yes	Unclear	No	Yes	Moderate
Jagannathan & Juvva <sup>2</sup>	Yes	Yes	Yes	Yes	No	No	Yes	Moderate
Reis et al. <sup>3</sup>	Yes	Yes	Yes	Yes	Unclear	Unclear	Yes	Moderate

Yes: criterion met; No: criterion not met; Unclear: insufficient information.

## Discussion

This review sought to synthesize the available evidence regarding the relationship between spirituality and psychosocial coping in individuals with head and neck cancer. Although the number of eligible studies

**Table 4.** Description of the certainty of evidence according to the GRADE tool.

Outcome	Study Design	Risk of Bias	Inconsistency	Indirectness	Imprecision	Publication Bias	Certainty of Evidence
Quality of Life	Observational	Serious	Serious	Not serious	Serious	Undetected	Low
Psychological Distress	Observational	Serious	Serious	Not serious	Serious	Undetected	Very Low
Coping/Resilience	Observational	Serious	Serious	Not serious	Serious	Undetected	Very Low

Initial certainty for observational studies starts as Low and may be downgraded based on methodological limitations.

was limited, the findings suggest that spiritual dimensions are closely linked to how patients experience illness and interpret the challenges imposed by the disease.

Among the included investigations, higher levels of spirituality or religiosity were associated with more favorable perceptions of quality of life and emotional adaptation. Reis *et al.*<sup>3</sup> observed that patients living with functional and aesthetic sequelae of head and neck cancer reported better quality of life when they described stronger spiritual or religious engagement. Similarly, Chang *et al.*<sup>4</sup> identified associations between spiritual needs and psychosocial outcomes, showing that lower spiritual satisfaction was related to poorer quality of life and greater emotional vulnerability. These findings indicate that spiritual experience may influence how individuals evaluate their well-being in the context of illness.

The qualitative study by Jagannathan and Juvva<sup>2</sup> adds depth to these observations, highlighting how spirituality is embedded in patients' narratives of coping. Participants described faith, personal beliefs, and existential reflections as part of the process of accepting the diagnosis and making sense of their situation. Spirituality appeared as one component within a broader network of coping resources, including family support and trust in treatment.

At the same time, spirituality should not be viewed as uniformly protective. Evidence from broader oncological contexts indicates that negative forms of spiritual coping, such as feelings of punishment or abandonment, may be associated with increased suffering<sup>1</sup>. This reinforces the notion that spiritual experience can either support or complicate adjustment, depending on how it is interpreted and integrated into the individual's life context.

These findings can be interpreted within a biopsychosocial perspective, in which illness affects not only biological functioning but also emotional, social, and existential dimensions<sup>12</sup>. In head and neck cancer, where communication difficulties, visible changes, and functional losses are common, questions related to identity, meaning, and purpose may become particularly salient. Spirituality may represent one of the frameworks through which patients attempt to reorganize their life narrative in the face of these disruptions.

However, these interpretations must be made cautiously. All included studies used observational designs, most were cross-sectional, and sample sizes were limited. Variability in instruments and restricted control of confounding factors reduce comparability and prevent causal inference. Therefore, the associations observed should be interpreted as indicative rather than definitive.

Future investigations using longitudinal designs and more standardized measures may help clarify how spiritual dimensions evolve over time and how they interact with psychosocial adaptation in individuals with head and neck cancer.

## Conclusion

The findings of this review indicated that spirituality is related to psychosocial aspects of coping among individuals with head and neck cancer, particularly in terms of perceived quality of life, emotional adjustment, and the way patients make sense of their illness experience. Across the included studies, spiritual dimensions appeared intertwined with acceptance, hope, and personal meaning, suggesting that they may constitute one element within the broader framework through which patients navigate the challenges imposed by the disease.

At the same time, the available evidence is limited in scope and methodological robustness. The predominance of observational and cross-sectional designs, small samples, and variability in measurement approaches restricts the interpretation of these associations and does not allow causal conclusions. The overall certainty of evidence was therefore considered low to very low.

Taken together, the results highlight spirituality as a relevant dimension in the lived experience of head and neck cancer, while also underscoring the need for further research. Longitudinal studies and investigations evaluating structured approaches to spiritual care may contribute to a more consistent understanding of how this dimension interacts with psychosocial outcomes in this population.

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KSC, and KSA: conceptualization; data curation; methodology; writing – original draft. NGAS, and GNM: conceptualization; methodology; writing – original draft. SMS: methodology; writing – original draft. RCSO: conceptualization; methodology; writing – review & editing.

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