RADIOTHERAPY

Perceived Efficacy of Coping Strategies among Head and Neck Cancer Patients Undergoing Radiotherapy at a Nigerian Teaching Hospital

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Abstract

Documenting which coping strategies patients themselves perceive as helpful, rather than merely which they use, is essential for designing psychosocial interventions that patients will find valuable. This study determined the perceived effectiveness of coping mechanisms used by head and neck cancer (HNC) patients in reducing treatment-related distress during radiotherapy. A quantitative cross-sectional descriptive design was adopted, surveying a total-enumeration sample of 20 HNC patients receiving radiotherapy at the University of Nigeria Teaching Hospital (UNTH), Enugu (100% response rate). Perceived efficacy of five coping-strategy categories — Religious/Spiritual (RSS), Social Support (SS), Problem-Focused (PFS), Distraction/Avoidance (DA) and Complementary Strategies (CS) — was measured with the Coping Strategies and Efficacy Questionnaire (CSEQ) on a 3-point scale (1 = Not Helpful, 2 = A Little Helpful, 3 = Very Helpful), scored only for strategies a respondent reported using. The results showed that Problem-Focused Strategies were rated most helpful (M = 2.47, SD = 0.35), followed by Religious/Spiritual Strategies (M = 2.44, SD = 0.29). Distraction/Avoidance was rated least helpful (M = 1.48, SD = 0.28); half (50.0%) of respondents who used it rated it "Not Helpful" and none rated it "Very Helpful." The rank order of perceived efficacy closely mirrored the rank order of frequency of use reported in a companion analysis. Patients' choice of coping strategy was broadly aligned with what they perceived as most helpful, with problem-focused and religious/spiritual coping rated most beneficial and avoidance rated least beneficial. This alignment, and the specific case of under-used but favourably-rated social support, offer concrete targets for psychosocial intervention.

Keywords: coping strategies; head and neck cancer; Nigeria; perceived efficacy; radiotherapy

1 Introduction

According to the Transactional Model of Stress and Coping, whether a coping strategy is maintained and whether it leads to adaptive or maladaptive outcomes depends critically on how effective it is, as judged by the person using it (Folkman, 2013). Although an increasing amount of research has

The coping mechanisms that cancer patients employ have been studied, but much less focus has been placed on the coping mechanisms that patients believe are beneficial, especially for patients with head and neck cancer (HNC) receiving radiation therapy in sub-Saharan African settings (Asuzu and Elumelu, 2013).

Clinically, this distinction is important because a method that is often employed but thought to be ineffective or infrequently employed but thought to be very beneficial indicates a different intervention target than frequency data alone would imply. Particularly, avoidance and denial-based coping have been linked to inferior psychological outcomes and treatment compliance (Morris et al.,

2018), therefore patients' assessments of the effectiveness of these coping mechanisms have direct clinical importance.

The purpose of this study was to ascertain the perceived efficacy of coping strategies employed by HNC patients undergoing radiation therapy at the University of Nigeria Teaching Hospital (UNTH), Enugu, in mitigating treatment-related psychological and physical suffering.

2 Aim and objective of the study

This study aims to ascertain the perceived effectiveness of coping mechanisms employed by patients with head and neck cancer receiving radiation therapy at a teaching hospital in Nigeria. The specific objective was to ascertain the perceived efficacy of coping strategies employed by HNC patients in mitigating mental and physical discomfort associated with treatment. The research question was: how effective do HNC patients undergoing radiotherapy at UNTH perceive their coping mechanisms to be in reducing treatment-related distress?

By asking patients which strategies they believe to be truly effective rather than just which ones they adopt, this study expands on previous frequency-of-use research. This distinction has direct implications for how psychosocial support should be prioritized in an oncology setting with limited resources (Morris et al., 2018).

3 Materials and methods

3.1 Study area

This research was conducted at the Department of Oncology and Radiotherapy, University of Nigeria Teaching Hospital (UNTH), Ituku-Ozalla, Enugu State, Nigeria.

3.2 Research design

A descriptive cross-sectional approach was utilized, appropriate for testing patients' subjective appraisal of coping-strategy helpfulness at a specific moment in time (Balanay and Fajardo, 2025).

3.3 Population and sample

All twenty (20) eligible HNC patients receiving radiotherapy at UNTH during the study period were recruited via total enumeration, giving a 100% response rate.

3.4 Study instrument for data collection

The Coping Strategies and Efficacy Questionnaire (CSEQ) measured perceived efficacy for each of fifteen coping items, grouped into five categories (Religious/Spiritual, Social Support, Problem-Focused, Distraction/Avoidance, Complementary Strategies), on a 3-point scale (1 = Not Helpful, 2 = A Little Helpful, 3 = Very Helpful). Consistent with a contingency (skip) questionnaire format, efficacy items were scored only for strategies a respondent reported having used; a composite mean efficacy score was then computed for each category for every respondent, yielding a variable valid N of 10–15 across categories.

3.5 Ethical considerations

Ethical clearance was obtained from the UNTH ethical clearance committee, with informed consent, voluntary participation and confidentiality (numerical participant coding) observed throughout.

3.6 Data analysis

Data were analysed in IBM SPSS Statistics version 25 using descriptive statistics (means, standard deviations, frequencies and percentages) for the composite efficacy score of each coping category.

4 Results

This section presents results addressing the study's research question. The sample was predominantly older (60.0% aged 61 years and above), evenly split by gender, and mostly married (70.0%); full demographic detail is reported in a companion analysis of the same dataset.

4.1 Perceived efficacy by coping strategy category

Problem-Focused Strategies were rated most helpful (M = 2.47, SD = 0.35), closely followed by Religious/Spiritual Strategies (M = 2.44, SD = 0.29). Social Support (M = 2.10, SD = 0.25) and Complementary Strategies (M = 2.04, SD = 0.50) were rated as moderately helpful, while Distraction/Avoidance recorded the lowest mean efficacy score (M = 1.48, SD = 0.28) (Table 1 and Figure 1). The banded distribution of the composite scores is given in Table 2, and the distribution of the individual composite scores in Figure 3.

Table 1. Descriptive statistics of perceived efficacy scores by coping strategy category.

Category	N (valid)	Min	Max	Mean	SD
Problem-Focused (PFS)	15	1.67	3.00	2.47	0.352
Religious/Spiritual (RSS)	13	2.00	3.00	2.44	0.285
Social Support (SS)	13	1.67	2.67	2.10	0.250
Complementary (CS)	14	1.50	3.00	2.04	0.499
Distraction/Avoidance (DA)	10	1.25	2.00	1.48	0.275

Source: Field survey data (2026).

Table 2. Frequency distribution of composite perceived-efficacy scores (banded).

Category	Not Helpful 1.00–1.49 n (%)	A Little Helpful 1.50–2.49 n (%)	Very Helpful 2.50–3.00 n (%)	Total N
Religious/Spiritual	0 (0.0)	8 (61.5)	5 (38.5)	13
Social Support	0 (0.0)	12 (92.3)	1 (7.7)	13
Problem-Focused	0 (0.0)	8 (53.3)	7 (46.7)	15
Distraction/ Avoidance	5 (50.0)	5 (50.0)	0 (0.0)	10
Complementary	0 (0.0)	11 (78.6)	3 (21.4)	14

Source: Field survey data (2026).

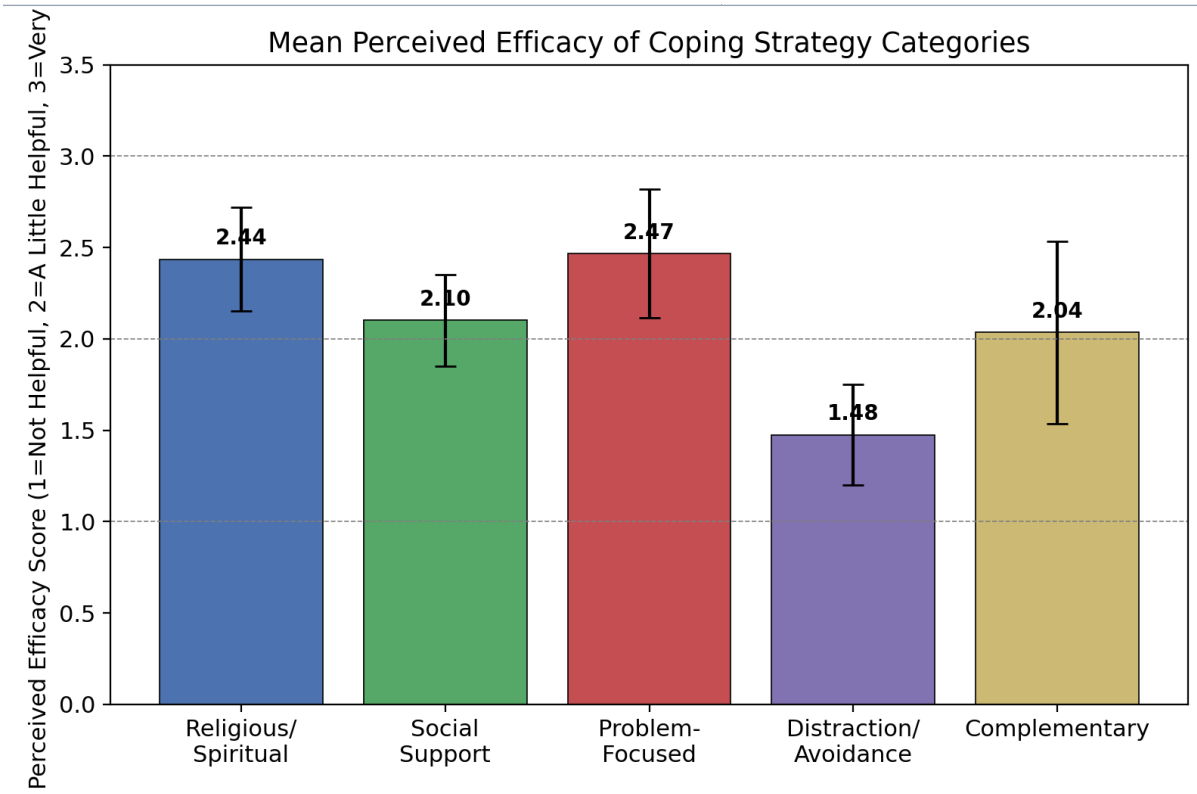


Figure 1. Mean perceived efficacy of coping strategy categories (error bars = SD).

4.2 Comparison of frequency of use and perceived efficacy

On all frequency and efficacy metrics, the strategies' rank order was nearly the same: Distraction/ Avoidance scored lowest on both, while Problem-Focused and Religious/Spiritual Strategies scored highest (Figure 2).

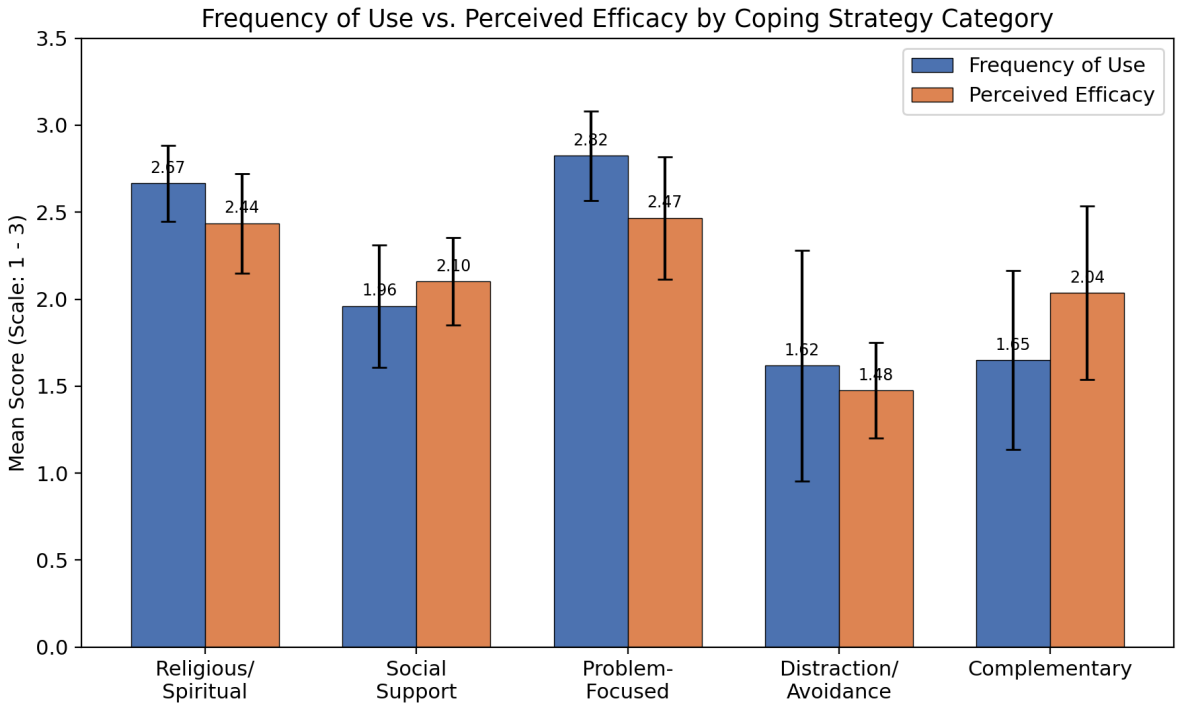


Figure 2. Frequency of use versus perceived efficacy by coping strategy category.

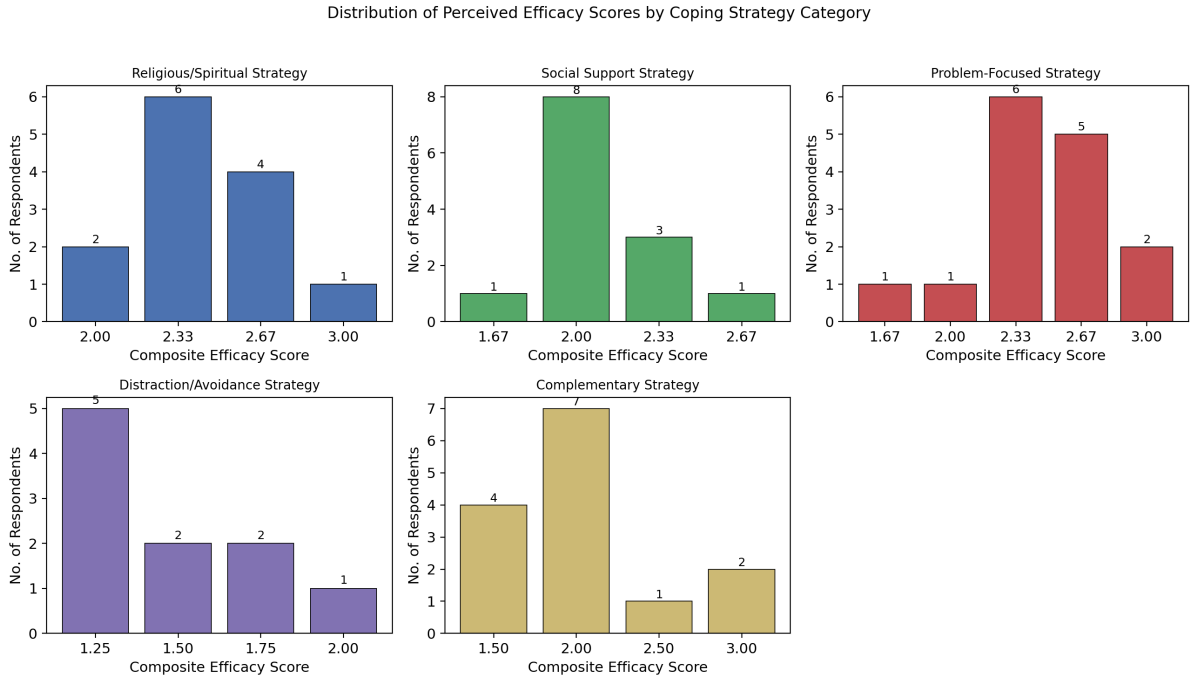


Figure 3. Distribution of perceived efficacy scores by coping strategy category.

5 Discussion

According to this study, HNC patients undergoing radiation therapy ranked Religious/Spiritual and Problem-Focused techniques as the most beneficial, while Distraction/Avoidance was evaluated as the least beneficial, with half of respondents rating avoidance as "Not Helpful" and none as "Very Helpful." This result provides empirical evidence in favor of the theoretical position derived from the Transactional Model of Stress and Coping, which holds that strategies that either directly manage the stressor (problem-focused appraisal and action) or reframe its meaning through faith (a form of positive secondary appraisal) are generally perceived as more effective than strategies that simply deny or postpone the stressor (Folkman, 2013).

The nearly identical rank ordering of frequency and efficacy indicates that patients in this group were generally rather adept at evaluating their own coping mechanisms, favoring tactics they believed to be truly beneficial. However, in contrast to their relatively low frequency of use, social support and complementary strategies were rated as helpful, suggesting a potential untapped opportunity: patients who did seek social support found it to be fairly helpful, but they did not do so as frequently as they used problem-focused or religious coping. This aligns with demands for structured peer and family support therapies in the larger psycho-oncology research (Morris et al., 2018).

6 Conclusion

The most common and effective coping mechanisms among HNC patients receiving radiation therapy at this Nigerian facility were problem-focused and religious/spiritual coping, while avoidance was the least common and least effective. Because efficacy items were only scored when a method was reported as used due to the contingency-format questionnaire, the valid N for several composite scores was reduced to as low as 10, which restricts the accuracy of these estimations. The small sample size (N = 20) and single-center, cross-sectional design restrict generalizability and make it

impossible to draw conclusions about the direction of the association between frequency and perceived efficacy.

7 Recommendations

7.1 Recommendations for health policy makers and radiotherapy centres

1. In order to expand the use of social-support techniques, which patients regarded to be relatively beneficial but underutilized, clinical services should take into account structured interventions.
2. Given avoidance-based coping's persistently low efficacy rating, patients who significantly rely on it should be checked for and offered alternate, more effective coping mechanisms.

7.2 Recommendation for future research

To determine if perceived efficacy causes subsequent frequency of coping-strategy use or vice versa, longitudinal research is advised.

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