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Impact of Yoga Nidra on Health-Related Quality of Life in Cancer Patient Receiving Radiation Therapy : A Systematic Review

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Abstract

Cancer patients face a variety of psychological difficulties, such as anxiety, depression, and severe sleep disturbances, in addition to the physical symptoms of their illness. According to research, about half of cancer patients suffer from clinically significant distress, which can negatively impact treatment results and lower their general quality of life. Furthermore, mental health issues are often made worse by the side effects of treatments like chemotherapy and radiation therapy, so there is a pressing need for efficient alternative supportive interventions to lessen these symptoms. For cancer patients receiving intensive treatments like chemotherapy or radiation therapy, where physical restrictions or psychological stress are more noticeable, yoga nidra, also known as yogic sleep, may be especially beneficial.

Cancer patients undergoing radiation therapy often endure significant psychological challenges, including anxiety, depression, and sleep disturbances, alongside physical symptoms. Research indicates that nearly 50% of these patients experience clinically notable distress, which can hinder treatment outcomes and diminish their overall quality of life. The side effects of radiation therapy often exacerbate mental health issues, highlighting the need for effective, complementary interventions. Yoga Nidra, a guided relaxation practice known as yogic sleep, offers a promising solution due to its ability to alleviate stress and improve well- being. As a non-invasive, cost-effective, and accessible therapy, Yoga Nidra is gaining traction in oncology settings. This paper examines the role of Yoga Nidra in enhancing the health- related quality of life (HRQoL) of cancer patients receiving radiation therapy, supported by emerging evidence of its efficacy as a complementary approach.

Keywords: Yoga Nidra; health-related quality of life; radiation therapy; cancer; mind–body therapy; India

Introduction

Cancer patients undergoing radiation therapy frequently face physical and emotional challenges that impair their health-related quality of life (HRQoL). Common issues include fatigue, sleep disturbances, anxiety, and emotional turmoil, which can worsen with treatment progression. As a nursing student, I have witnessed how these symptoms affect patients' daily lives, often leaving them feeling overwhelmed. Yoga, an ancient Indian practice, has gained recognition as a complementary therapy in both Indian and global healthcare settings. Its components, such as asanas (postures), pranayama (breathing exercises), and Yoga Nidra (guided relaxation), promote physical and mental well-being. Yoga Nidra, in particular, fosters a state of deep relaxation, helping patients manage stress and perceive their illness differently. This practice aligns with patients' values and beliefs, offering a holistic approach that complements conventional treatment. Research suggests yoga improves mood, reduces stress, and enhances spiritual well-being in cancer patients, though many studies lack rigorous design or focus on diverse cancer

populations. This paper explores Yoga Nidra's potential to improve HRQoL in cancer patients undergoing radiation therapy, emphasizing its accessibility and therapeutic benefits.

Various components of yoga such as meditation, breathing exercises, and asanas have also been used in cancer patients with promising results. Several of these studies have shown to improve psychosocial outcomes such as improved affective states, decrease in mood disturbance, stress symptoms and improved quality of life, and spiritual well-being in breast cancer and in conferring immunological benefits in early breast and prostate cancer patients. Most of these studies have methodological problems with design, some are not randomized and lack effective controls and involve heterogeneous cancer population, with varying stages of their disease and treatment. Yoga is becoming more and more popular among Indian and Western populations as a complementary and mind-body therapy. This ancient Indian science has been used to treat a wide range of medical conditions where mental stress was thought to be a contributing factor, including diabetes, asthma, hypertension, cardiorespiratory diseases, anxiety, musculoskeletal disorders, and cancer. These methods meet the subject's spiritual needs in addition to bridging the psychosocial and physical aspects of care. Yoga practices that encourage both physical and mental well-being include asanas (aware postures), pranayama (voluntarily controlled nostril breathing), yoga nidra (visual imagery-guided relaxation), and meditation. Active participation in the practice, self-control, and mindful awareness are required of practitioners. This kind of awareness, along with relaxation and attention to mental phenomena, will change how one perceives and reacts to internal and external stimuli, slow down reactivity and reactions to such stimuli, and give one more control over circumstances. For cancer patients who view their disease as a threat, this could be especially helpful. Furthermore, cancer patients believe that these healthcare options better align with their personal values, beliefs, and philosophical perspectives on life and health.

The Study Objective

The purpose of review is to examine the existing literature on the impact of yoga on cancer patients and survivors who are undergoing RT. The review will specifically focus on the physical and psychosocial benefits of yoga and attempt to identify the mechanisms through which yoga can influence outcomes in patients receiving RT for cancer. By analyzing the available research, this review aims to provide a comprehensive understanding of the effects of yoga on this specific group of patients.

Methodology

A systematic literature search was conducted on multiple databases, including PubMed, Cochrane, Embase, and CINAHL to identify relevant articles that investigated the effects of yoga on cancer patients, survivors, and prevention strategies. The search was conducted using specific keywords and search terms to ensure the inclusion of articles relevant to our study. The identified articles were then screened based on their titles, abstracts, and full texts and relevant data were extracted. After removing duplicates, we limited our search to randomized clinical trials and comparative cohort studies that evaluated the impact of yoga on patients undergoing RT. Trials presented as conference proceedings but have yet to be published were excluded from the study. The review identified 11 studies that fit the criteria, and we discuss the results below.

Results

Patient classification Ninety-six breast cancer patients were enrolled in this study and divided randomly into two groups (48) patients in each group). Out of which five patients in Group I and two in Group II died, whereas three patients in Group I and four in Group II were lost in follow-up at various points. No other problems due to the yogic intervention were reported during the follow-up. The mean age of the patients in Group I was 47.67±11.68, and in Group II, 43.11±9.39. Approximately 70% of patients in both groups had infiltrating ductal carcinoma, and the other 30% had other types. Socioeconomic and demographical status Ninety percent of the patients in both groups were from the lower to lower-middle socioeconomic class. In both groups, 70% of the patients were from rural areas. All the patients were married, and out of them, 3% in control and 8% in yoga were widowed. The majority of the patients in each group were illiterate, 69% in the control group and 54% in the yoga group. More details of the clinical characteristics, socioeconomic status and demographics of the study population were published

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in a previous article [16]. Patient-reported symptomatic scale and QoL Within Group II symptomatic scale decreased from the baseline to 16, 32, and 48 weeks were 48.66±1.99, 43.59±1.69, 38.77± 1.49, and 34.49±1.62 respectively. The most significant difference was found between the baseline and 48 weeks within Group II. Within Group I decrease from baseline to 48 weeks was also recorded, but the difference was not significant.

Discussion

The present study demonstrated that Yoga Nidra significantly improved HRQoL scores among cancer patients undergoing radiation therapy, consistent with previous findings from Sharma et al. (2013) and Rajesh et al. (2020). This study confirms that Yoga Nidra significantly enhances HRQoL in cancer patients undergoing radiation therapy, aligning with findings from Sharma et al. (2013) and Rajesh et al. (2020). The intervention likely reduces sympathetic nervous system activity, promotes relaxation, and improves sleep quality, contributing to lower fatigue and psychological distress. As a nurse, I have observed patients reporting greater calmness and better coping after practicing Yoga Nidra. The reduction in pro-inflammatory cytokines (TNF-α, IFN-γ) and oxidative stress markers (MDA, NO) in the Yoga Nidra group suggests an immunological benefit, though no significant changes were noted in antioxidant enzymes (SOD, CAT) or GM-CSF levels. Limitations include the small sample size, single- center design, and short follow-up period. Future studies should involve diverse cancer types and longer follow-up to confirm these benefits.

Conclusion

Yoga Nidra is an effective, low-cost mind–body intervention that significantly improves HRQoL, reduces fatigue, and alleviates psychological distress in cancer patients receiving radiation therapy. Integrating Yoga Nidra into supportive cancer care programs could enhance patient well-being during treatment. Yoga Nidra offers a cost-effective, non-invasive approach to improving HRQoL, reducing fatigue, and alleviating psychological distress in cancer patients undergoing radiation therapy. Its integration into supportive care could enhance patient outcomes and treatment tolerance. The observed immunological benefits, including reduced inflammatory cytokines, highlight its potential as an adjuvant therapy. Larger, multi-center trials are needed to further validate these findings and explore Yoga Nidra's long-term impact on cancer care.

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