

# A Quasi-Experimental Study to Assess the Effectiveness of Yog-Nidra on Improving Quality of Life Among Cancer Patients Undergoing Radiotherapy in Selected Cancer Hospitals at Raipur (Chhattisgarh)

Chandana Sahu\*

## Abstract

The present study aimed to evaluate the effectiveness of Yog-Nidra on improving the quality of life among cancer patients undergoing radiotherapy. The specific objectives were to assess pre-test and post-test scores before and after the Yog-Nidra intervention in both experimental and control groups, determine its effectiveness in enhancing quality of life, and identify any associations between pre-test scores and selected demographic variables. A pre-experimental one-group pre-test and post-test design was adopted. Using a purposive sampling technique, 60 cancer patients were selected from a hospital in Raipur, Chhattisgarh. Data were collected using a modified WHO Quality of Life-BREF scale after establishing the tool's validity and reliability. The demographic profile indicated that most participants were aged 31–40 years (33.33%) and 51–60 years (33.33%), with a majority being males (67%) and married (50%). The findings revealed that the mean pre-test score of the experimental group was 5.0 ( $SD=3.21$ ), while the post-test mean increased to 7.0 ( $SD=3.24$ ). A similar improvement was observed in the control group with pre-test and post-test means of 5.0 ( $SD=4.0$ ) and 7.0 ( $SD=2.91$ ), respectively. The chi-square values for both experimental and control groups ( $\chi^2=10.39$  and  $\chi^2=10.22$ ,  $df=4$ ,  $p<0.05$ ) indicated statistically significant improvements in the quality of life post-intervention. The study concludes that Yog-Nidra therapy effectively enhances the quality of life among cancer patients undergoing radiotherapy, demonstrating its value as a supportive complementary therapy in oncology care.

**Keywords:** Yog-Nidra, quality of life, cancer patients, radiotherapy, complementary therapy

## INTRODUCTION

Cancer remains a significant public health concern worldwide and is among the leading causes of both morbidity and mortality. According to the GLOBOCAN 2012 report, approximately 14.1 million new cancer cases were reported, and 8.2 million deaths were attributed to the disease. As a major cause of death, cancer profoundly impacts the lives of those affected, who often endure a range of distressing symptoms. For patients with terminal cancer, quality of life (QoL) becomes a critical concern, as these symptoms can severely diminish their overall well-being. Effective symptom management is essential, particularly for individuals undergoing radiotherapy, as it helps reduce distress and enhance QoL. Yog-Nidra, a form of guided meditation also referred to as “yogic sleep” or “effortless relaxation”, promotes a state of deep physical and mental balance, contributing positively to overall health and well-being. Yoga is a balanced state of emotions. Yoga is a balanced state of thoughts and intellect. Yoga is a balanced state of behavior [1].

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Complementary and alternative therapies, such as yoga, have gained considerable attention in recent years for their potential to improve the overall health and QoL of cancer patients. Yog-Nidra, a specific relaxation practice within the larger discipline of yoga, has shown promise in managing the psychological and physical burdens of cancer treatment. This study aims to assess the effectiveness of Yog-Nidra on improving the QoL among cancer patients undergoing radiotherapy in selected hospitals at Raipur, Chhattisgarh.

Cervical cancer remains a significant public health concern in developing countries, particularly in India, which accounts for nearly one-third of the global cases, making it the country with the highest incidence [1]. Similar to other cancers, the diagnosis and treatment of cervical cancer cause despair, and the fact that it involves a gynecological region entails severe psychological stress, such as anxiety, demoralization, and depression, in the affected women. In clinics, if appropriate care and interventions are not provided at the right time, the constant psychological stress reduces the QoL, increases emotional and physical distress, and impacts the treatment schedule, response, and survival [2]. Scientific research involving individuals with various health conditions has demonstrated that regular relaxation practices support healing and recovery. Yoga, an ancient holistic tradition from India, is a mind-body discipline that incorporates physical postures (asanas), breath regulation (pranayama), meditation (dhyana), and adherence to moral and ethical principles.

This exercise has been investigated for its beneficial effects in various health conditions, and myriad results pointed to its ability to increase strength, agility, and flexibility, and enhance cardio-respiratory functions; augment the ability to reduce mental and physiological stress and enhance the mood, well-being, mind-body awareness, attention, and emotions in adults. A cancer diagnosis, along with the cytotoxic treatments used to control its progression and the challenges of post-treatment life, presents a range of psychosocial and physical difficulties for the affected individual. Relaxation is an integral part of yoga, and various studies reported yoga to be conducive to mitigating physiological and psychological stress and improving both physical and mental health in women afflicted with lymphoma, lung, breast, and ovarian cancers. On the downside, performing asanas can be physically strenuous for cancer patients; therefore, it requires the direct supervision and complete attention of a trained yogi because any error/accident can severely impact the physical mobility of the patient. This becomes particularly important when yoga has to be practiced by women afflicted with cervical cancer, because physical movements of the pelvis, spine, and legs may cause pain and bleeding in the affected women. This practice guides individuals through a conscious transition in brainwave activity, from beta to alpha and ultimately to delta states, incorporating controlled breathing and a reduced respiratory rate. Yoga Nidra is simple to learn, carries no risk of physical injury, and is therefore accessible to individuals with limited mobility. Previous studies have clearly shown that cervical cancer has a profound psychological impact on affected women, significantly diminishing their QoL. Pain and bleeding are among the most common symptoms experienced by women with cervical cancer, often severely restricting their mobility and further impairing their well-being. These physical limitations can act as barriers to engaging in traditional yoga practices that involve movement and postures. From an interventional standpoint, such limitations highlight the importance of non-physical, tutor-guided mind-body therapies. Research has demonstrated that these approaches, including Yoga Nidra, are effective in alleviating psychological distress among cancer patients. With these factors in mind, the present study was undertaken to evaluate the effectiveness of Yoga Nidra in reducing distress among women undergoing curative radiotherapy for cervical cancer.

### **Patients and Methods**

**Patient population:** This was a prospective, unblinded, randomized two-arm study performed in the oncology wards at Father Muller Medical College Hospital, Mangalore, India, with women histopathologically confirmed to have been afflicted with cervical cancer and requiring curative chemoradiotherapy. The inclusion criteria were willing cervical cancer patients aged 19–65 years with definitive diagnosis of cervical cancer, who required curative radiation therapy, had no comorbidities, were able to understand Kannada or English, or Malayalam, and diagnosed with Stage I, Stage II, and

Stage III cervical cancer with Karnovsky's Y score of above 80 at the start of the study. The exclusion criteria were a history of mental illness, such as bipolar disorder, depression, and schizophrenia, prior to cancer diagnosis, Stage IV cervical cancer, a Karnovsky's score of less than 80, a history of neoadjuvant chemotherapy, hearing impairments, comorbidities, and unwillingness to participate. The study commenced following approval from the Ethics Committee and permission from the hospital authorities. Women diagnosed with cervical cancer were scheduled to receive external radiation therapy using a linear accelerator, delivering a maximum energy of 6 MV at a dose rate of 300 MU/min. The patients were planned to receive a curative target dose of 50 for 5 days a week (Monday to Friday), with no more than one fraction per day for five consecutive weeks. Patients also received cisplatin infusions (40–70 mg/m<sup>2</sup>/day intravenously) before their scheduled radiation treatments. Weekly assessments of complete blood counts, serum blood urea nitrogen, and creatinine levels were conducted to monitor chemotherapy-related toxicities. Based on the renal function test results, the cisplatin dosage was sometimes adjusted. The drug was discontinued if creatinine levels exceeded 1.1 mg/dl. Throughout the treatment, physicians and oncologists provided standard gynecological and general healthcare to all patients. Regarding Yoga Nidra, participants in the Yoga Nidra group were instructed by the principal investigator, a trained yogi, before the start of their radiation therapy. The volunteers were requested and encouraged by the investigator to perform the relaxation exercises in sleeping positions during the course of the radiation (Monday to Friday) at the same time of the day. The Yoga Nidra sessions were conducted from 8:00 to 8:45 pm for four consecutive weeks and included several structured steps. Cancer is a disease with a steadily increasing incidence worldwide. Both the diagnosis and treatment of cancer often trigger various psychological responses in patients [3].

#### NEED FOR STUDY

- Cancer refers to a broad category of diseases that can originate in nearly any organ or tissue in the body. It occurs when abnormal cells grow uncontrollably, invade surrounding tissues, and may spread to other parts of the body.
- In India, the estimated number of new cancer cases in 2022 was approximately 1,461,427, with a crude incidence rate of 100.4 per 100,000 population. Statistically, one in every nine individuals in India is likely to develop cancer during their lifetime. The number of cancer cases in the country is projected to increase from 1.4 million annually to 2 million by 2040. While the cancer incidence rate in India has not risen as quickly as in Western countries, the total number of new cases is increasing due to population growth and improvements in diagnostic capabilities (Data as of November 2023).
- Cancer research plays a vital role in transforming and saving lives. The primary goal of studying cancer is to develop safe and effective strategies for its prevention, early detection, diagnosis, treatment, and ultimately, cure.
- Numerous studies have demonstrated that Yoga Nidra is effective in reducing stress among cervical cancer patients undergoing curative radiation therapy. The result indicated that yoga has an immediate effect on relieving fatigue and sleep disturbances, attenuating depression and anxiety, and enhancing QoL during radiotherapy compared to the control group.

#### OBJECTIVES

1. To assess the pre-test score before Yog-Nidra on improving the QoL among cancer patients undergoing radiotherapy in the experimental and control groups.
2. To assess the effectiveness of Yog-Nidra on improving the QoL among cancer patients undergoing radiotherapy in the experimental group.
3. To assess the post-test level after Yog-Nidra on improving QoL in experimental and control groups among cancer patients undergoing radiotherapy.
4. To find out the association between pre-test scores before Yog-Nidra in the experimental group on improving QoL among cancer patients undergoing radiotherapy with selected demographic variables at selected cancer hospitals of Raipur (Chhattisgarh).

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## OPERATIONAL DEFINITIONS

*Assess:* In this study, assess refers to the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.

*Effectiveness:* In this study, effectiveness refers to significant differences in improving QoL in the experimental group among cancer patients undergoing radiotherapy.

*Yog-Nidra:* In this study, Yoga Nidra, a form of guided meditation also referred to as “yogic sleep” or “effortless relaxation”, was practiced by cancer patients undergoing radiotherapy.

*QoL:* In this study, QoL refers to different aspects of an individual’s overall sense of well-being and their ability to perform daily activities.

*Cancer patient:* In this study, a cancer patient refers to a person who is receiving radiotherapy in a selected cancer hospital.

*Radiotherapy:* In this study, radiotherapy refers to the use of high-energy radiation, such as X-rays, gamma rays, neutrons, protons, and other sources, to destroy cancer cells and reduce tumor size in cancer patients.

## Hypothesis

- *H01:* There will be no significant difference in QoL among cancer patients undergoing radiotherapy in experimental and control groups.
- *H02:* There will be no significant association between pre-test scores of QoL among cancer patients undergoing radiotherapy in the experimental group with selected demographic variables.
- *H1:* There will be a significant difference in the QoL between cancer patients undergoing radiotherapy in the experimental group compared to those in the control group.
- *H2:* There will be a significant association between the pre-test QoL scores of cancer patients undergoing radiotherapy in the experimental group and selected demographic variables.

## Assumption

1. Quality of life is multi-factorial.
2. Yoga Nidra can improve the quality of life.

## Limitations

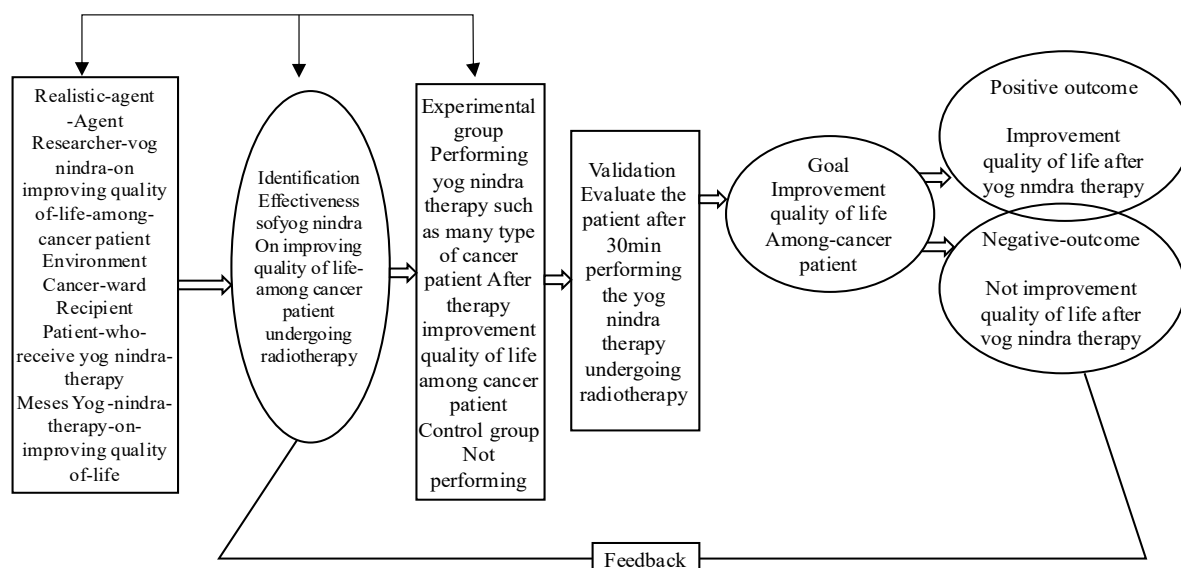
1. A limited time was available for data collection.
2. The sample was selected only from the cancer hospital in Raipur.
3. The study was limited to cancer patients who consented to participate.

## Delimitations

1. This study is limited to cancer patients undergoing radiotherapy in selected cancer hospitals at Raipur (Chhattisgarh).
2. The data collection period is limited to 4 weeks.

## CONCEPTUAL FRAMEWORK

A conceptual framework is a network of interrelated concepts that provides a structure for organizing and describing the phenomenon of interest. Research studies are grounded in a theoretical or conceptual framework that helps in understanding the problem and in logically organizing the variables involved (Figure 1).



**Figure 1.** Conceptual framework.

The conceptual framework for this study is based on the prescriptive theory developed by Ernestine Wiedenbach (1969). According to Wiedenbach, nursing practice consists of three key components: (1) identification: recognizing the client's need for health; (2) ministration: providing the necessary assistance; and (3) validation: confirming that the client's need for help has been fulfilled. The aim of the present study is to find out the effectiveness of Yog-Nidra on improving the QoL among cancer patients undergoing radiotherapy.

1. **Realistic agent**
  - *Agent-researcher:* Yog-Nidra on improving the QoL among cancer patients.
  - *Environment:* Cancer ward.
  - *Recipient:* Patient who receives Yog-Nidra therapy.
  - *Means:* Yog-Nidra therapy for improving the QoL.
2. *Identification:* Effectiveness of Yog-Nidra in improving the QoL among cancer patients.
3. *Experimental group:* Performing Yog-Nidra therapy such as many types of cancer patients. After therapy, improvement in the QoL among cancer patients.
4. *Control group:* Not performing.
5. *Validation:* Evaluate the patient after 30 min of performing the Yog-Nidra therapy, undergoing radiotherapy.
6. *Goal:* Improvement QoL among cancer patients.
7. *Positive outcome:* Improvement in QoL after Yog-Nidra therapy.

## REVIEW OF LITERATURE

### **Hsueh *et al.*: Effects of Yoga on Improving Quality of Life in Breast Cancer Patients: A Meta-Analysis of Randomized Controlled Trials [4]**

Complications arising from breast cancer treatment often led to both physical and psychosocial distress for patients. Yoga has shown considerable promise as a supportive therapy for individuals with breast cancer. This study aims to perform a meta-analysis of randomized controlled trials to assess the effectiveness of yoga in improving the QoL among breast cancer patients [4].

### **Nuzhath *et al.*: A Randomized Controlled Trial on Pranayama and Yoga Nidra for Anxiety and Depression in Patients with Cervical Cancer Undergoing Standard of Care [5]**

Cervical cancer can significantly increase psychological distress in patients, largely due to the impact of diagnosis and treatment. As a result, levels of depression and anxiety tend to be higher among these patients. Yog-Nidra and Pranayama are believed to help alleviate the side effects of chemotherapy and

radiotherapy. Therefore, this study employed these techniques to assess their effects on cervical cancer patients receiving standard medical care. Cervical cancer might intensify the psychological distress among patients with cervical cancer and the distress caused by the diagnosis and treatment. So, depression and anxiety are at higher levels in patients with cervical cancer [5].

Yoga Nidra and Pranayama are thought to reduce the aftereffects of chemotherapy and radiotherapy, potentially. So, in this study, we used the techniques of Yog-Nidra and Pranayama to evaluate their effect on patients with cervical cancer undergoing standard care.

### **Selvaraj *et al.*: The Role of Yoga in Patients Undergoing Radiotherapy: A Review of Current Literature [6]**

The use of yoga for patients receiving radiotherapy (RT) as part of cancer treatment has gained growing attention recently. Radiotherapy can cause significant side effects, including fatigue, sleep disturbances, and reduced physical functioning. Yoga has demonstrated promise in helping to alleviate these symptoms. This narrative review aims to summarize the potential benefits of yoga as a supportive care approach for patients undergoing anticancer radiotherapy. It highlights findings from relevant randomized studies and evidence supporting yoga's effectiveness in reducing stress, improving mood, managing symptoms, and enhancing overall well-being. Integrating yoga into cancer treatment plans may allow healthcare providers to offer more holistic care and potentially improve patient outcomes [6].

### **Prakash *et al.*: Effectiveness of Yoga on Quality of Life of Breast Cancer Patients Undergoing Chemotherapy: A Randomized Controlled Clinical Study [7]**

Breast cancer is the most common cancer among women in India as well as in many countries worldwide. Women undergoing chemotherapy for breast cancer often experience side effects that negatively impact their QoL. To evaluate the effectiveness of yoga in improving QoL for these patients, a randomized controlled study using a quantitative research approach and time series design was conducted [7].

### **George *et al.*: Yoga Nidra on Quality of Sleep Among Cancer Patients [8]**

Cancer is a significant health issue affecting individuals across all races and cultures. However, there is limited research on the use of non-pharmacological methods to enhance sleep quality in cancer patients. This study aimed to evaluate sleep quality among cancer patients and examine the effectiveness of Yoga Nidra in improving sleep, using the Pittsburgh Sleep Quality Index (PSQI) as a measurement tool. In Phase I, a survey involving 25 participants assessed sleep quality with the PSQI. Phase II employed a one-group pre-test post-test design with 19 participants who reported poor sleep quality and received the Yog-Nidra intervention. The majority of participants were aged 41–50 years (44%), with 48% males and 52% females. About 32% had education below the 10th grade, 48% were agriculturists, 84% were married, and 16% were widowed. Breast cancer was the most common diagnosis (24%), with 40% of patients in Stage I and another 40% in Stage II. Most participants (75%) were undergoing combined chemotherapy and radiation therapy. A paired t-test revealed a significant improvement in PSQI scores following the Yoga Nidra intervention ( $t=3.720$ ,  $p=0.002$ ) [8].

### **Jain *et al.*: Long-Term Yogic Intervention Decreases Serum Interleukins IL-10 and IL-1 $\beta$ and Improves Cancer-Related Fatigue and Functional Scale During Radiotherapy/Chemotherapy in Breast Cancer Patients: A Randomized Control Study [9]**

Yoga has shown promise as an alternative therapy by reducing fatigue and improving the immune profile in cancer survivors. While treatments for breast cancer continue to advance, managing their side effects remains important. This study examined the impact of a yogic intervention administered at different time points during radiotherapy and chemotherapy on pro- and anti-inflammatory interleukins, as well as on cancer-related fatigue and functional status, in patients with Stage II/III breast cancer [9].

**Jain *et al.*: Long-Term Yogic Intervention Improves Symptomatic Scale and Quality of Life by Reducing Inflammatory Cytokines and Oxidative Stress in Breast Cancer Patients Undergoing Chemotherapy and/or Radiotherapy: A Randomized Control Study [10]**

Inflammation has been associated with tumor proliferation and metastasis in breast cancer. Yoga, an ancient therapeutic practice, is known to reduce inflammation and enhance patients' QoL while alleviating fatigue. In this study, we explored the effects of a long-term yogic intervention administered at various time points on inflammatory cytokine levels, oxidative stress, symptom severity, and QoL in patients with Stage II/III breast cancer [10].

A study was conducted among cancer patients on the Yog-Nidra among undergoing radiation therapy practice for cancer screening. A total of 400 pre-test questionnaires were administered to those who gave their verbal consent to participate in the study. The result showed that 86 (26.85%) of the respondents were aware of cancer screening 36 (67.85%) of the aware group knew that the test was an improving test for cancer.

**Selvan *et al.*: Systematic Review of Yoga for Symptom Management During Conventional Treatment of Breast Cancer Patients [11]**

Breast cancer is among the most frequently diagnosed cancers in women in the US, with its treatments often leading to considerable physical and psychological side effects as well as long-term complications that contribute to morbidity and reduced QoL. Integrative medicine approaches, such as yoga, have been shown to alleviate these side effects without disrupting the conventional treatments, while also enhancing QoL. This systematic review focuses specifically on evaluating yoga as a supportive option for managing symptoms in patients undergoing standard breast cancer therapies [11].

**Rao *et al.*: Effects of a Yoga Program on Mood States, Quality of Life, and Toxicity in Breast Cancer Patients Receiving Conventional Treatment [12]**

The purpose of this study is to compare the impact of a yoga program versus supportive therapy counseling on mood, treatment-related symptoms, toxicity, and QoL in patients with Stage II and III breast cancer undergoing conventional treatment [12].

**Huang *et al.* Health Benefits of Yoga for Cancer Survivors: An Updated Systematic Review and Meta-Analysis [13]**

This systematic review and meta-analysis of randomized controlled trials (RCTs) conducted over the past 5 years examines the effects on physical function, mental health, and overall QoL among cancer survivors across various cancer types [13].

**Giridharan *et al.*: The Impact of Yoga on the Immune System of Cancer Patients: A Scoping Review of Current Evidence [14]**

Cancer continues to be an increasing global health challenge, highlighting the need for innovative management and treatment approaches. The immune system is vital in both cancer development and treatment response. Recent research has shown that yoga practice can have beneficial effects on immune function. This review focuses on exploring the influence of yoga on immune parameters in cancer patients [14].

**Danhauer *et al.*: Review of Yoga Therapy During Cancer Treatment [15]**

Reviews of yoga research that distinguish results of trials conducted *during* (versus after) cancer treatment are needed to guide future research and clinical practice. We therefore conducted a review of non-randomized studies and RCTs of yoga interventions for children and adults undergoing treatment for any cancer type [15].

**Kumari and Karunaratne: Therapeutic Effects of Yoga Nidra: A Review [16]**

Yoga Nidra is a relaxation technique whose name comes from the Sanskrit words "Yoga", meaning union, and "Nidra", meaning sleep. It is a guided meditation practice that leads to a state of conscious

awareness similar to deep sleep. From a modern perspective, Yog-Nidra influences the autonomic nervous system. The general objective of this study was to evaluate the clinical effects of Yog-Nidra, with specific aims to identify its therapeutic benefits for both psychological and physical conditions. The methodology involved conducting literature searches using the term “Yog-Nidra” on popular search engines like Google and Google Scholar over a six-month period to explore its therapeutic effects. The study found that Yog-Nidra helps reduce mental health issues such as stress, anxiety, insomnia, post-traumatic stress disorder, and psychosomatic disorders. It also showed benefits for physical ailments, including hormonal imbalances, pain, migraines, and chronic non-communicable diseases like diabetes, hypertension, and cardiovascular conditions. The study concluded that Yog-Nidra has therapeutic value, improving physical, mental, and social well-being, and can be used as a preventive, promotive, and curative practice [16].

## MATERIAL AND METHODS OF STUDY

Methodology is a part of any study that enables the researcher to project the research undertaken. Research methodology is a way to systematically solve the research problem. It is a science of studying how research is done scientifically.

In this section, the researcher discusses the research approach, research design, setting of study, variables, population, sample size, sampling technique, criteria for selection of sample, description of the tool, testing of the tool, pilot study, data collection procedure, and plan for data analysis.

### Research Approach

Quantitative approach was used for the present study.

### Research Design

Quasi-experimental non-equivalent pre-test and post-test control group design was adopted to assess the effectiveness of Yog-Nidra therapy (Table 1 and Figure 2).

*Setting of the study:* The study will be conducted in Bhim Rao Ambedkar Hospital, Raipur (Chhattisgarh), which is situated 20 km away from Columbia College of Nursing.

*Population:* Cancer patients.

*Sample size:* The sample size is 60 undergoing radiotherapies. 30 in the experimental group and 30 in the control group.

*Sampling technique:* Non-probability convenient sampling technique, and then randomly allocated to the experimental and control group (30 each).

**Table 1.** The systematic representation of the research design.

Group	Pre-test	Intervention	Post-test
Experimental	O1	X	O2
Control	O3	-	O4

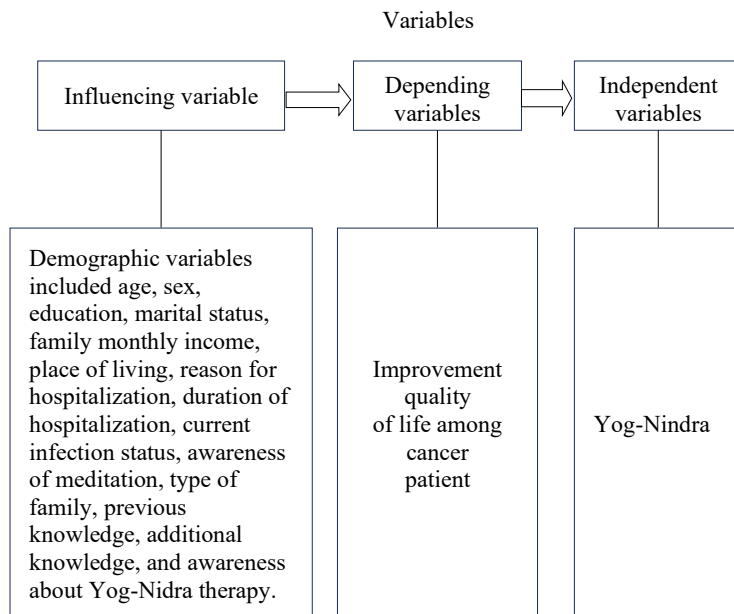
*Note: The symbols used*

*O1: Pre-test level improving the quality of life of cancer patients undergoing radiotherapy in the experimental group.*

*O2: Post-test level improving the quality of life of cancer patients undergoing radiotherapy in the experimental group.*

*O3: Pre-test level improving the quality of life of cancer patients undergoing radiotherapy in the control group.*

*O4: Post-test level improving the quality of life of cancer patients undergoing radiotherapy in the control groups.*



**Figure 2.** The systematic representation of the variables.

### Inclusion Criteria

- Cancer patients.
- Admitted to a selected cancer hospital.
- Undergoing radiotherapy.
- Who understand and speak Hindi and English.
- Who has given verbal consent to participate in the study.
- Age criteria, cancer patients undergoing radiotherapy, all ages.

### Exclusion Criteria

- Who are critically ill.
- Who cannot sit in Yoga position.
- Who is not willing.

### Description of the Tool

The tool used for the data collection procedure was the modified WHO Quality of Life-BREF scale to assess the QoL among cancer patients undergoing radiotherapy.

### Section A: Demographic Variables

Demographic variables include age, sex, education, marital status, Family monthly income, place of living, Reason for hospitalization, duration of hospitalization, has current infection, meditation awareness type of family, education, previous knowledge, additional knowledge, about Yog-Nindra (Figure 3).

### Section B: Modified WHO Quality of Life-BREF Scale

A modified WHO Quality of Life-BREF scale is useful to assess the QoL; it is measured from 26–130 equal divisions (Table 2).

### Validity

The tool was given to five experts in the field of nursing for content validity. All comments and suggestions given by the experts were duly considered, and corrections were made after discussion with the research guide.

**Table 2.** BREF scale.

Interpretation of the tool	Scoring interpretation
Very poor quality of life	26–46
Poor quality of life	47–67
Average quality of life	68–88
Good quality of life	89–109
Very good quality of life	110–130

*Minimum score: 26, maximum score: 130.*

### RELIABILITY OF THE INSTRUMENT

The tool is highly reliable because the scale used was standard. The reliability of the tool was determined using the Spearman split-half technique. The reliability of the BREF scale to assess the QoL was 0.05. Hence, the reliability of the tool was satisfactory.

### Pilot Study

To verify the relevance and practicability of the study, a pilot study was conducted among 20 participants—10 in the experimental group and 10 in the control group—at a cancer hospital in Raipur, Chhattisgarh, from June 6, 2024, to June 13, 2024. The results indicated that the tool was appropriate and feasible for conducting the main study.

### Method of Data Collection

- Steps of data collection.
- Ethical consideration.
- Written permission was obtained from the authorities of the selected cancer hospitals.
- Informed verbal consent was taken from those who were willing to participate in the study.
- Period of data collection.
- Data was collected over a period of 4 weeks.

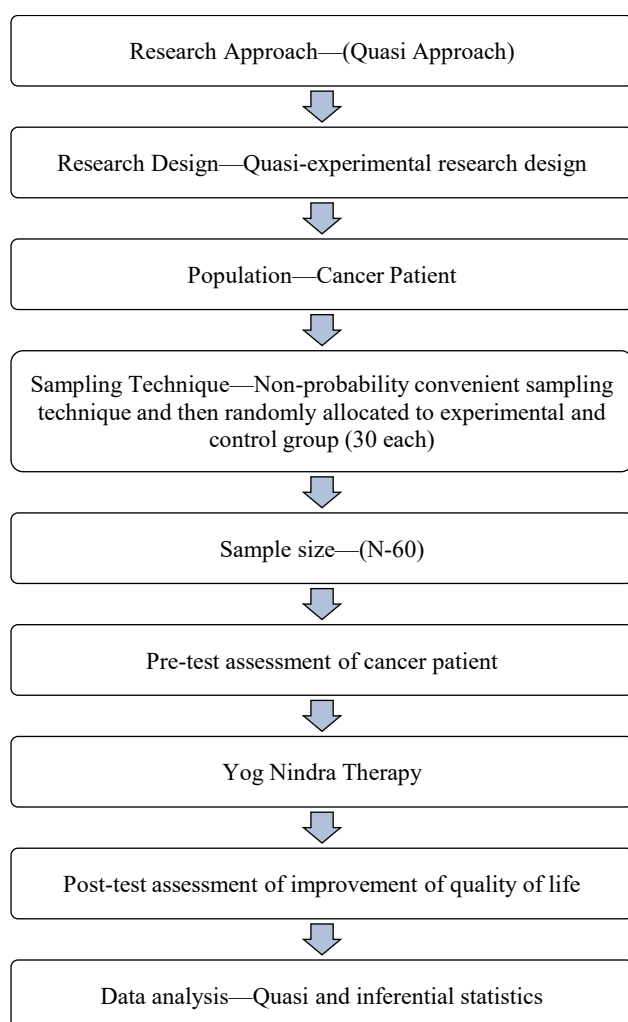
### DATA COLLECTION PROCEDURE

Formal permission was obtained from the Bhim Rao Ambedkar hospital, Raipur (Chhattisgarh). We take consent from the cancer patient to conduct the study. The purpose, nature of the study, and duration of the study were explained, and their consent was obtained.

The samples were selected by using non-probability convenience sampling technique. In the pre-test, we assessed the improvement in QoL among cancer patients undergoing radiotherapy by using the BREF scoring scale and then the awareness of Yog-Nidra therapy. The therapy given for 10 to 40 min is continued for 7th days. In the post-test, we assessed the improvement of QoL among cancer patients on the 7th day of intervention by using the same scale to find out the effectiveness of Yog-Nidra therapy in improving QoL. The effectiveness was assessed in both the control group and the experimental group.

After obtaining informed consent, the investigator introduced herself and explained the purpose and significance of the study to the cancer patients undergoing radiotherapy. The 30 experimental and 30 control groups of cancer patients will be selected. The investigator will implement Yog-Nidra for the cancer patients to improve the QoL in the experimental group undergoing radiotherapy. The participants were requested and encouraged by the investigator to perform the relaxation exercises in sleeping positions during the course of the radiation (Monday to Friday) at the same time of the day (8.00 to 8.45 PM), for four consecutive weeks.

The QoL was assessed using the modified WHO Quality of Life-BREF scale for cancer patients undergoing radiotherapy. In the experimental group, the scale was administered during the procedure, whereas the control group received no intervention during the procedure. Additionally, QoL was assessed using the DEMO scale during the procedure.



**Figure 3.** The overall view of research design.

### DATA ANALYSIS AND INTERPRETATION

Analysis is the process of organizing and synthesizing data to address the research questions and test the hypotheses. It is a crucial phase of the research process that involves calculating specific measures and identifying patterns or relationships within the data. This section presents the analysis and interpretation of data collected from cancer patients at a hospital in Raipur (Chhattisgarh), focusing on assessing the effectiveness of Yog-Nidra in improving the QoL among cancer patients undergoing radiotherapy. The study findings are reported using both descriptive and inferential statistical analyses.

The collected data was analyzed by:

*Descriptive statistics:* Frequency and percentage distribution were used to describe the data measured during the invasive procedure.

*Inferential statistics* and standard deviation to analyze the demographic data among cancer patients undergoing radiotherapy.

Paired ‘t’-test was used to assess the pre-test and post-test to assess the cancer patients undergoing radiotherapy.

Chi-square test was used to assess the association between pre-test score, and cancer patients undergoing radiotherapy selected demographic variables.

The analyzed data have been presented in the form of tables, diagrams, and graphs based on the findings.

*Section I:* Distribution of demographic variables of cancer patients.

*Section II:* Overall analysis of improvement in QoL pre-test and post-test among cancer patients undergoing radiotherapy, in the experimental group and the control groups.

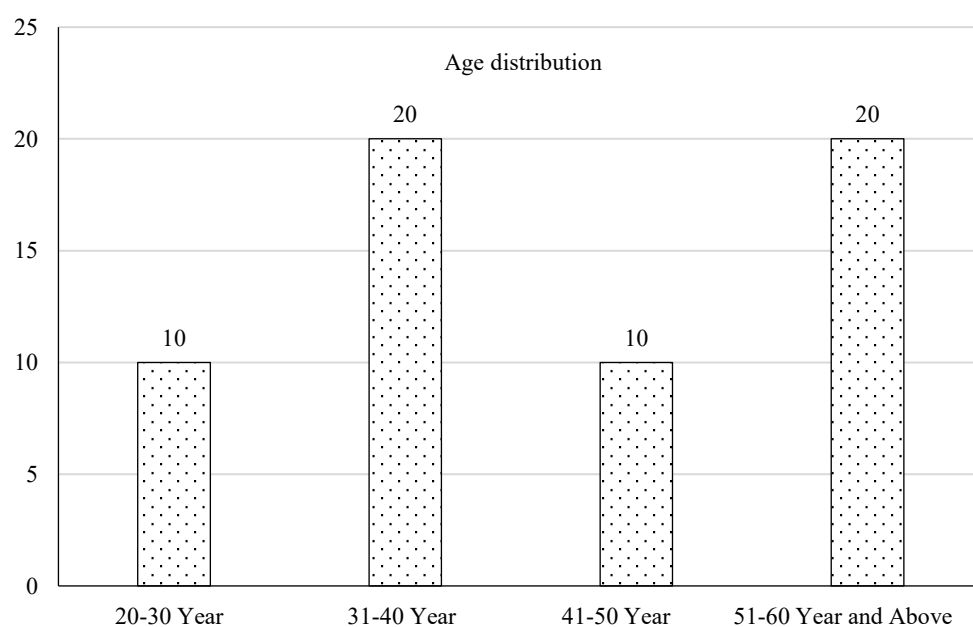
*Section III:* Paired 't'-test was used to analyze the pre-test and post-test to assess the cancer patients undergoing radiotherapy.

*Section IV:* Association between demographic variables with pre-test and post-test scores of cancer patients.

### Section I: Distribution of Demographic Variables of Cancer Patients

Table 3 presents the frequency and percentage distribution of demographic variables among 60 cancer patients undergoing radiotherapy. The data reveal that the majority of participants were aged between 31 and 40 years (33.33%) and 51 and 60 years (33.33%), with males constituting a higher proportion (67%) compared to females (33%). In terms of education, 33% were illiterate, and an equal proportion (33%) had completed higher secondary education. Most participants were married (50%) and had a monthly family income above ₹15,000 (50%). The majority resided in rural areas (50%), and the predominant reason for hospitalization was oncology-related disorders (83%). Regarding hospitalization duration, 33.33% stayed for 10 days, and another 33.33% for 15 days. Current infections were mostly respiratory tract-related (33.33%). Notably, 67% of the participants had no prior awareness of meditation, while only 34% practiced it daily or weekly. These findings indicate that most cancer patients in the study were middle-aged, rural residents with limited educational backgrounds and minimal exposure to meditation practices, highlighting the need for awareness programs like *Yog-Nidra* interventions to improve overall QoL.

The graph in Figure 4 and Table 4 show age-wise distribution regarding the study to assess the response of cancer patients undergoing radiotherapy to *Yog-Nidra* on improving QoL.



**Figure 4.** Graph showing the distribution of demographic variables according to age.

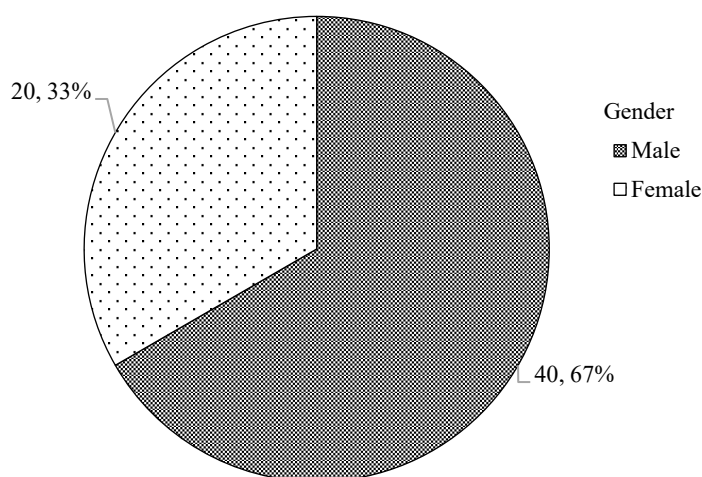
**Table 3.** Frequency and percentage distribution of demographic variables of cancer patients (N=60).

S.N.	Demographic variable	Frequency (f)	Percentage %
1	<i>Age of cancer patient</i>		
	a. 20–30 years	10	17%
	b. 31–40 years	20	33.33%
	c. 41–50 years	10	17%
	d. 51–60 years/above	20	33.33%
2	<i>Gender</i>		
	a. Male	40	67%
	b. Female	20	33%
	c. Transgender	0	
3.	<i>Education</i>		
	a. Illiterate	20	33%
	b. High school	10	17%
	c. Higher Secondary	20	33%
	d. Graduation	10	17%
4.	<i>Marital status</i>		
	a. Unmarried	10	17%
	b. Married	30	50%
	c. Widow	11	18.33%
	d. Divorced	9	15%
5.	<i>Family monthly income</i>		
	a. Less than Rs. 10000	10	17%
	b. Rs. 10001–15000	20	33%
	c. Above Rs. 15000	30	50%
6.	<i>Place of living</i>		
	a. Urban	20	33%
	b. Rural	30	50%
	c. Semi-urban area	10	17%
7.	<i>Reason for hospitalization</i>		
	a. Gastrointestinal disorder	4	7%
	b. Vascular disorder	2	3.33%
	c. Oncology disorder	50	83%
	d. Other disorder	4	7%
8.	<i>Duration of hospitalization</i>		
	a. <1 week	5	8%
	b. 10 days	20	33.33%
	c. 15 days	20	33.33%
	d. >15 days	15	25%
9.	<i>Has current infection</i>		
	a. Urinary tract	10	17%
	b. Respiratory tract	20	33.33%
	c. Wound/cellulites	10	17%
	d. Other	20	33%
10	<i>Meditation awareness</i>		
	a. No	40	67%
	b. If yes		
	• Daily	10	17%
	• Weekly	10	17%

As you can see from Figure 4, the frequency of the 20–30 years of age is 10 (17%) out of 60, the frequency of the age 31–40 years is 20(33.33%) out of 60, and the frequency of the age 41–50 years is 10 (17%) out of 60 and frequency of the age 51–60 years and above is 20 (33.33%) out of 60.

**Table 4.** Distribution of demographic variables according to age.

Age (years)	Frequency	Percentage
20–30 years	10	17
31–40 years	20	33
41–50 years	10	16.333
51–60 years and above	20	33
Total	60	100%



**Figure 5.** Distribution of demographic variables according to gender.

**Table 5.** Frequency and percentage distribution of cancer patients according to gender.

Gender	Frequency	Percentage
Male	40	67
Female	20	33.33
Total	60	100%

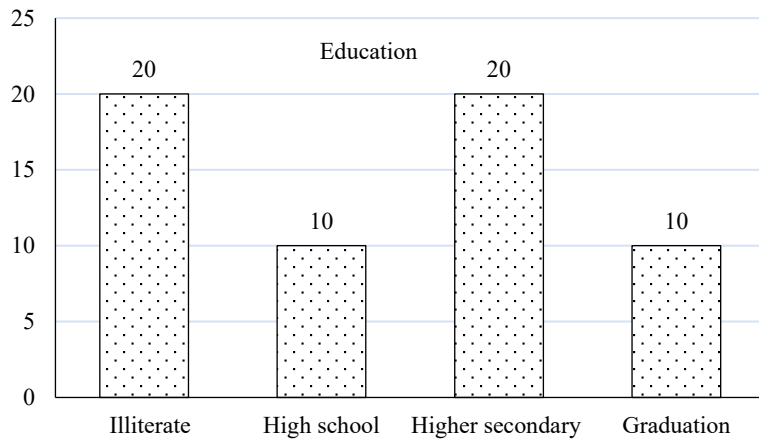
The graph in Figure 5 and Table 5 show gender distribution regarding the study assessing the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.

As you can see from Figure 5, the frequency of males is 40 (67%) out of 60, and the frequency of females is 20 (33%) out of 60. So, the maximum population of males is 40 out of 60.

**Table 6.** Frequency and percentage distribution of cancer patients according to educational status.

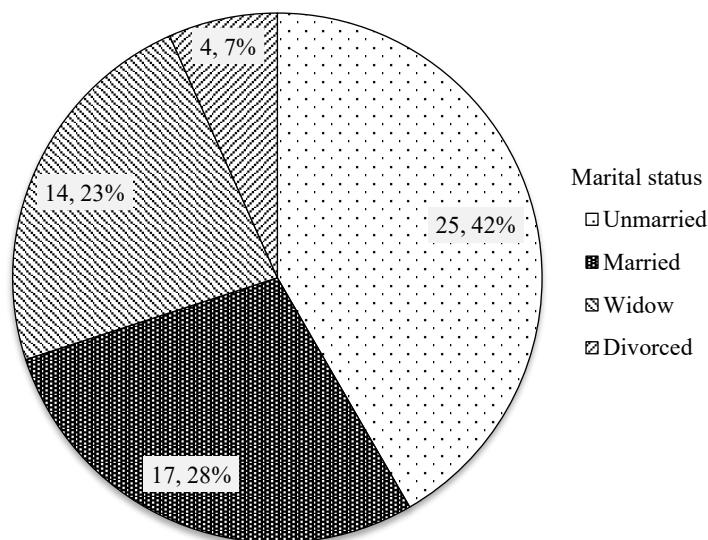
Education	Frequency	Percentage
Illiterate	20	33.333
High school	10	17
Higher secondary	20	33.333
Graduation	10	17
Total	60	100%

The graph in Figure 6 and Table 6 show educational status distribution regarding the study to assess the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.



**Figure 6.** Distribution of demographic variables according to education.

As you can see from Figure 6, the frequency of the illiterate is 20 (33%) out of 60, the frequency of the high school is 10 (17%) out of 60, the frequency of the higher secondary is 20 (33%) out of 60, and frequency of the graduation is 10 (17%) out of 60.



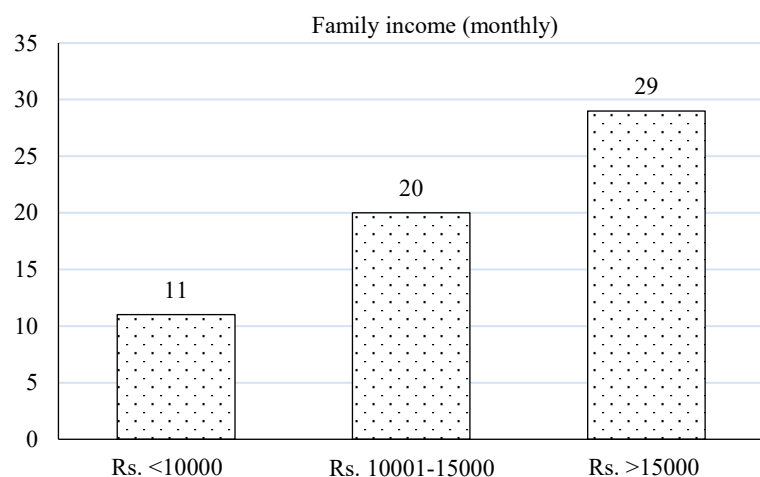
**Figure 7.** Distribution of demographic variables according to marital status.

**Table 7.** Frequency and percentage distribution of cancer patients according to marital status.

Marital status	Frequency	Percentage
Unmarried	25	42
Married	17	28.33
Widow	14	23.33
Divorced	4	7
Total	60	100%

The graph in Figure 7 and Table 7 show marital status distribution regarding study assessment of the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.

As you can see from Figure 7, the frequency of unmarried is 25 (42%) out of 60, the frequency of the married is 17 (28%) out of 60, the frequency of the widow is 14 (23%) out of 60, and the frequency of the divorced is 4 (7%) out of 60.



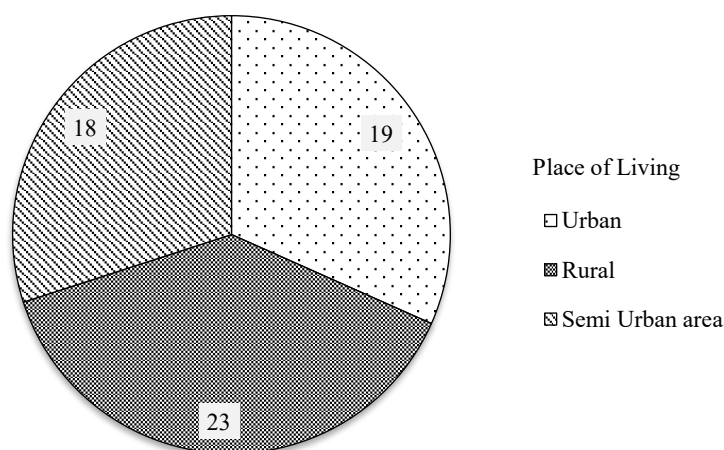
**Figure 8.** Distribution of demographic variables according to family income.

**Table 8.** Frequency and percentage distribution of cancer patients according to monthly family income.

Family income	Frequency	Percentage
<Rs. 10000	11	18.33
Rs. 10001–15000	20	33.33
>Rs. 15000	29	48.33
Total	60	100%

The graph in Figure 8, and Table 8 show monthly family income distribution regarding a study assessing the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.

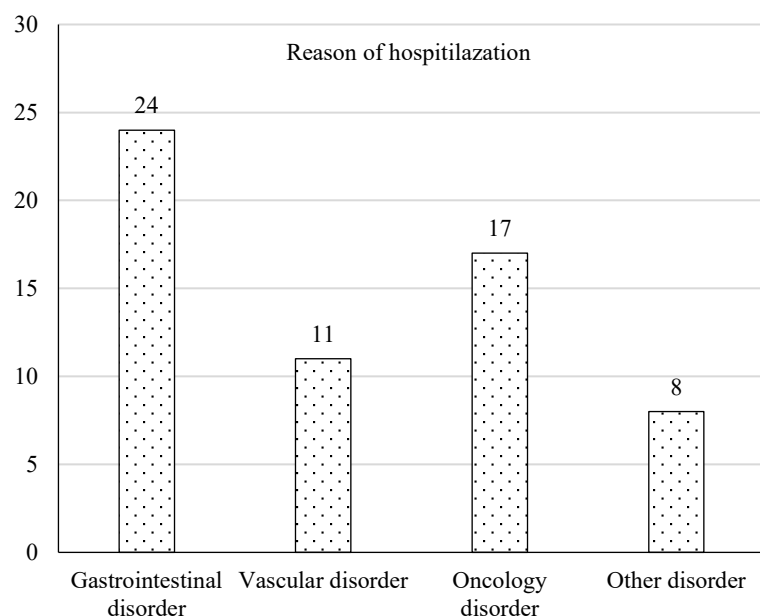
As you can see from Figure 8, the frequency of <Rs. 10000 is 11 (18.33%) out of 60, the frequency of the Rs. 10001–15000 is 20 (33%) out of 60, and the frequency of the >Rs. 15000 is 29 (48%) out of 60.



**Figure 9.** Distribution of demographic variables according to place of living.

**Table 9.** Frequency and percentage distribution of cancer patients according to place of living.

Place of living	Frequency	Percentage
Urban	20	33
Rural	30	50
Semi-urban area	10	17
	60	100%



**Figure 10.** Distribution of demographic variables according to the reason for hospitalization.

The graph in Figure 9 and Table 9 show according to place of living distribution regarding the study assessing the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.

As you can see from Figure 9, the frequency of urban is 20 (33%) out of 60, the frequency of rural is 30 (50%) out of 60, and the frequency of the semi-urban area is 10 (17%) out of 60.

**Table 10.** Frequency and percentage distribution of cancer patients according to reason for hospitalization.

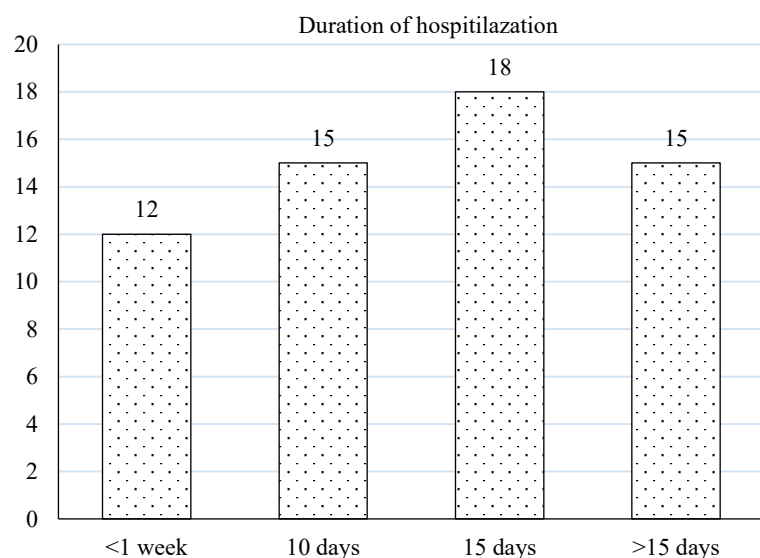
Reason	Frequency	Percentage
Gastrointestinal disorder	24	40
Vascular disorder	11	18.33
Oncology disorder	17	28.33
Other disorder	8	13.33
Total	60	100%

The graph in Figure 10 and Table 10 show reason for hospitalization distribution regarding the study assessing the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.

As you can see from Figure 10, the frequency of gastrointestinal disorder is 24 (40%) out of 60, the frequency of the vascular disorder is 11 (18.33%) out of 60, the frequency of the oncology disorder is 17 (28.33%) out of 60, and frequency of the other disorder is 8 (13.33%) out of 60.

**Table 11.** Frequency and percentage distribution of cancer patients according to duration of hospitalization.

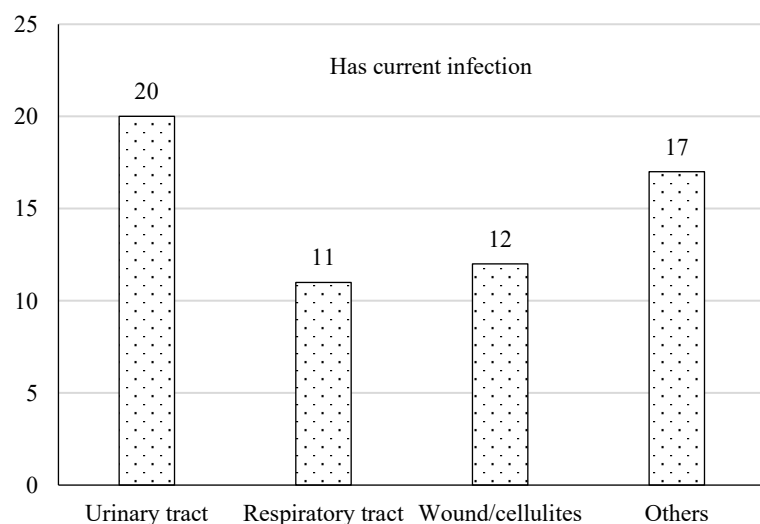
Duration	Frequency	Percentage
<1 week	12	20
10 days	15	25
15 days	18	30
>15 days	15	25
Total	60	100%



**Figure 11.** Distribution of demographic variables according to duration of hospitalization.

The graph in Figure 11 and Table 11 show duration of hospitalization distribution regarding the study to assess the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.

As you can see from Figure 11, the frequency of <1 week is 12 (20%) out of 60, the frequency of the 10 days is 15 (25%) out of 60, the frequency of the 15 days is 18 (30%) out of 60, and frequency of the >15 days is 15 (25%) out of 60.

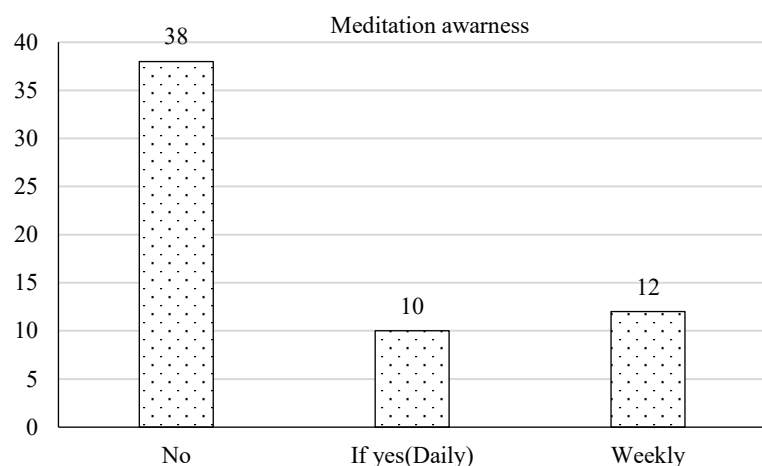


**Figure 12.** Distribution of demographic variables according to has a current infection.

**Table 12.** Frequency and percentage distribution of cancer patients according to current infection.

Infection	Frequency	Percentage
Urinary tract	20	33.33
Respiratory tract	11	18.33
Wound/cellulites	12	20
Others	17	28.33
Total	60	100%

The graph in Figure 12 and Table 12 show current infection distribution regarding the study assessing the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.



**Figure 13.** Distribution of demographic variables according to meditation awareness.

**Table 13.** Frequency and percentage distribution of cancer patients according to meditation awareness.

Awareness	Frequency	Percentage
No	38	63.33
If yes (daily)	10	17
Weekly	12	20
Total	60	100%

As you can see from Figure 12, the frequency of the Urinary tract is 20 (33.33%) out of 60, the frequency of the respiratory tract is 11(18.33%) out of 60, the frequency of the wound/cellulites is 12 (20%) out of 60, and frequency of the others is 17 (28%) out of 60.

The graph in Figure 13 and Table 13 shows meditation awareness distribution regarding study assess to the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.

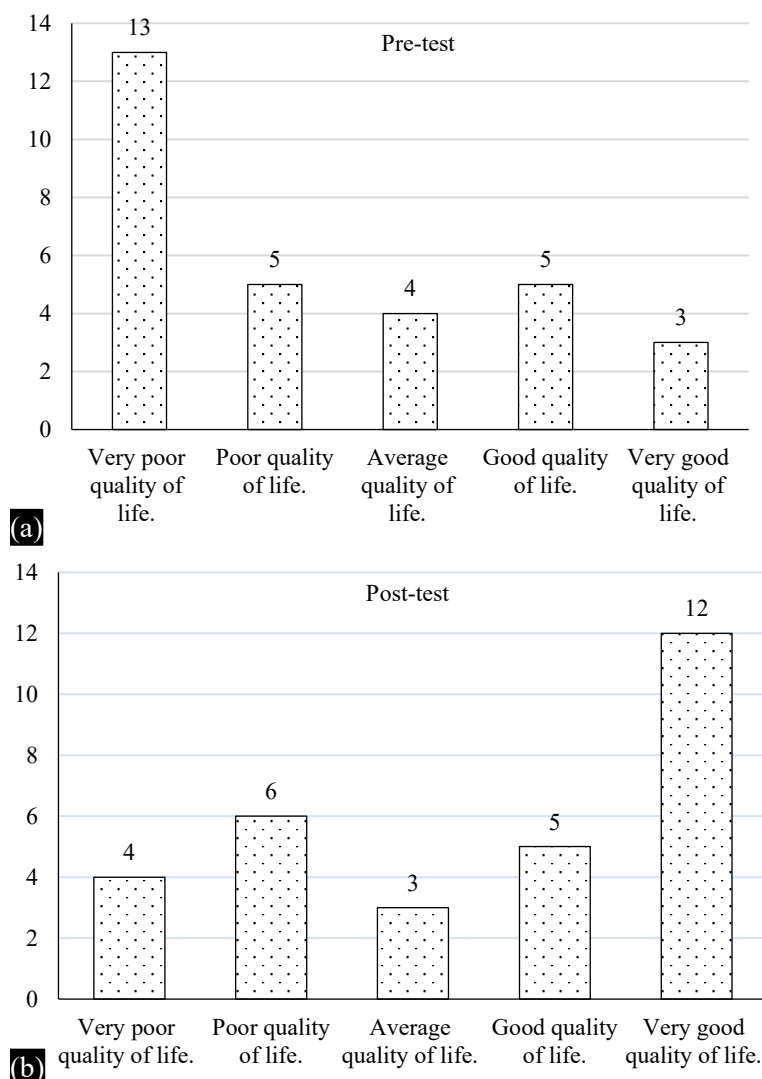
As shown in the graph 13, the frequency of ‘No’ is 38 (63%) out of 60. Among those who responded ‘Yes,’ none reported ‘Daily,’ 10 (17%) reported ‘Monthly,’ and 12 (20%) reported ‘Weekly.’

## Section II: Overall Analysis of Improvement in QoL Pre-test and Post-Test Among Cancer Patients Undergoing Radiotherapy, Experimental Group and Control Group

Table 14 presents the pre-test and post-test distribution of QoL among cancer patients undergoing Yog-Nidra therapy. The findings indicate a notable improvement in QoL after the intervention. Participants reporting “very poor” QoL decreased from 13 to 4, while those reporting “very good” quality increased from 3 to 12.

**Table 14.** Pre-test and post-test distribution of QoL among cancer patients undergoing Yog-Nidra therapy.

S.N.	Improving quality of life	Pre-test	Post-test	Chi-square	p-value
1	Very poor QoL.	13	4	10.39	p<0.05
2	Poor QoL.	5	6		
3	Average QoL.	4	3		
4	Good QoL.	5	5		
5	Very good QoL.	3	12		



**Figure 14.** (a) and (b) Pre-test and post-test experimental group study, (a) pre-test experimental group study, (b) post-test experimental group study.

The chi-square value ( $\chi^2=10.39$ ,  $p<0.05$ ) suggests that the improvement in QoL post-intervention is statistically significant, indicating the effectiveness of Yog-Nidra in enhancing overall well-being among cancer patients.

**Table 15.** Pre-test and post-test distribution of QoL scores in the experimental group of cancer patients undergoing Yog-Nidra therapy.

S.N.	Quality of life	Pre-test (f)	Post-test (f)
1	Very poor	13	4
2	Poor	5	6
3	Average	4	3
4	Good	5	5
5	Very Good	3	12

Chi-square ( $\chi^2=10.39$ ,  $df=4$ ,  $p<0.05$ ).

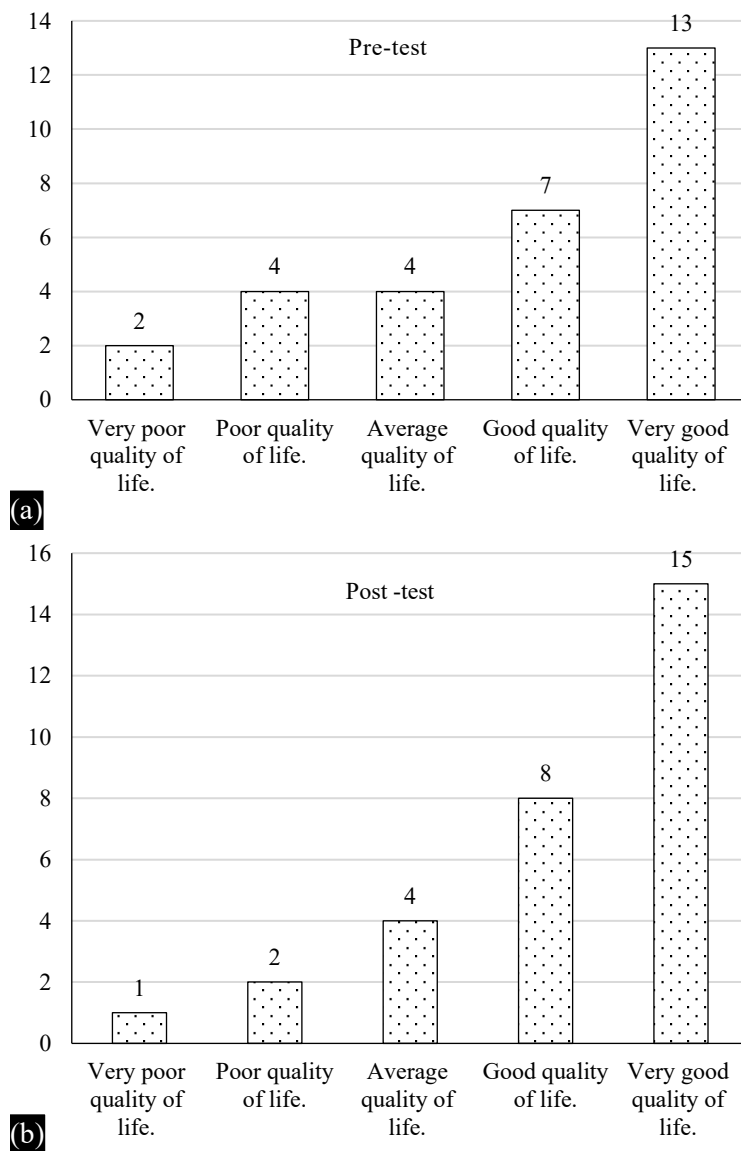
Figure 14 (a) and (b) and Table 15 show the pre-test and post-test experimental group study chi-square value =10.39, degrees of freedom 4, and p-value  $p<0.05$ .

So, we can say that statistically significant difference between pre-test and post-test scores regarding the effectiveness of the study assessing the response of cancer patients undergoing radiotherapy to Yog-Nidra in improving QoL.

**Table 16.** Pre-test and post-test control group study.

S.N.	Improving quality of life	Pre-test	Post-test	Chi-square	p-value
1	Very poor QoL.	2	1	10.22	p<0.05
2	Poor QoL.	4	2		
3	Average QoL.	4	4		
4	Good QoL.	7	8		
5	Very good QoL.	13	15		

Table 15 shows that a chi-square test was conducted on 60 samples to evaluate the pre-test knowledge and post-test knowledge score regarding the effectiveness of the study, assessed by the response of cancer patients undergoing radiotherapy to Yog-Nidra on improving QoL.



**Figure 15.** (a) and (b) Graph showing pre-test and post-test control group study, (a) pre-test control group study, (b) post-test control group study.

Figure 15(a) and (b) and Table 16 show a pre-test and post-test control group study chi-square value =10.22, degrees of freedom 4, and a p-value of  $p<0.05$ . So, we can say that statistically significant difference between pre-test and post-test scores regarding the effectiveness of the study assessing the response of cancer patients undergoing radiotherapy to Yog-Nidra in improving QoL.

### Section III: Paired t-test will be Used to Analyze the Pre-test and Post-test to Assess the Cancer Patient Undergoing Radiotherapy

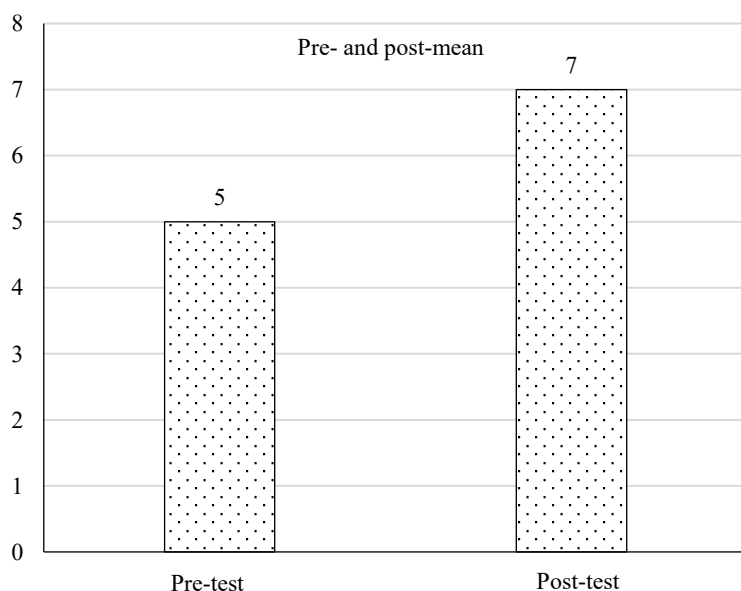
Paired 't'-test was used for mean and SD analysis of the pre-test and post-test to assess the improvement in QoL among cancer patients undergoing radiotherapy.

#### Experimental and Control Group

Table 17 and Figure 16 show: Pre-mean =5.0, Std. Deviation =3.21 and Post-Mean =7.0, Std. Deviation =3.24.

**Table 17.** Pre-test and post-test mean scores in the experimental group study.

S.N.	Test	Mean	SD	t-value	df	Critical value	Inference
1	Pre-test	5.0	3.21	0.72	59	$p<0.05$	S
2	Post-test	7.0	3.24				



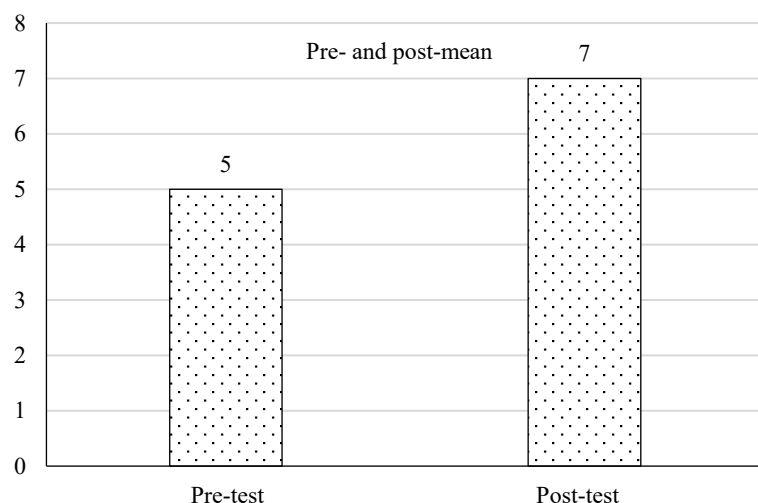
**Figure 16.** Graph showing the difference between pre-test and post-test mean scores in the experimental group study.

So, we can say that statistically significant difference between pre-test and post-test scores regarding the effectiveness of the study assessing the response of cancer patients undergoing radiotherapy to Yog-Nidra in improving QoL.

The results show a significant ( $p<0.05$ ) increase in the pre-test knowledge and post-test knowledge before ( $M=5.0$ ,  $SD=3.21$ ) to after ( $M=7.0$ ,  $SD=3.24$ ),  $t(59)=0.72$ .

**Table 18.** Pre-test and post-test mean scores in the control group study.

S.N.	Test	Mean	SD	t-value	df	Critical value	Inference
1	Pre-test	5.0	4.0	0.67	59	$p<0.05$	S
2	Post-test	7.0	2.91				



**Figure 17.** Graph showing the difference between pre-test and post-test mean scores in the control group study.

Table 18 and Figure 17 show pre-mean =5.0, std. deviation =4.0 and post-mean =7.0, std. deviation = 2.91.

So, we can say that statistically significant difference between pre-test and post-test scores regarding the effectiveness of the study assessing the response of cancer patients undergoing radiotherapy to *Yog-Nidra* in improving QoL.

The results show a significant ( $p<0.05$ ) increase in the pre-test knowledge and post-test knowledge before ( $M=5.0$ ,  $SD=4.0$ ) to after ( $M=7.0$ ,  $SD=3.24$ ),  $t(59)=0.67$ .

#### **Section IV: Association Between Demographic Variables with Pre-Test and Post-Test Scores Among Cancer Patients**

Association between demographic variables with pre-test and post-test scores among cancer patients. Table 19 shows the chi-square analysis with multiple demographic variables.

### **DISCUSSION**

#### **Section I: Demographic Characteristics of Participants**

The study included 60 cancer patients undergoing radiotherapy to evaluate the effect of *Yog-Nidra* on improving their QoL. The demographic distribution of participants indicated that a considerable proportion belonged to the age groups of 31–40 years and 51–60 years, suggesting that middle-aged adults were more commonly represented. A higher percentage of participants were males, indicating a predominance of male patients in the study population.

In terms of educational status, a nearly equal proportion of participants were illiterate and had completed higher secondary education, while smaller groups had studied up to high school or graduation. Regarding marital status, half of the participants were married, while the remaining were unmarried, widowed, or divorced.

When considering family income, most participants belonged to higher income brackets, earning more than ₹15,000 per month, whereas a smaller proportion reported lower income levels. The majority of participants were hospitalized for oncological disorders, reflecting the study's focus on cancer patients receiving radiotherapy. Most respondents came from rural areas, followed by those from urban and semi-urban regions, suggesting wider participation from non-urban populations.

**Table 19.** Chi-square analysis between demographic variables with pre-test and post-test scores among cancer patients.

Demographic variables	Pre-test	Post-test	Chi-square	Table value	p-value	d.f.	Inference
<i>Age (years)</i>							
20–30 years	3	7	8.4	7.815	p<0.05	3	S
31–40 years	9	11					
41–50 years	3	7					
51–60 years and above	15	5					
<i>Gender</i>							
Male	15	25	7.5	3.841	p<0.05	1	S
Female	15	5					
<i>Education</i>							
Illiterate	5	15	17.2	7.815	p<0.05	3	S
High school	8	2					
Higher secondary	15	5					
Graduation	2	8					
<i>Marital status</i>							
Married	9	8	1.41	7.815	p>0.5	3	NS
Unmarried	11	14					
Widow	7	7					
Divorced	3	1					
<i>Family income</i>							
<Rs. 10000	5	6	1.20	5.991	p>0.05	2	NS
Rs. 10001–15000	12	8					
>Rs. 15000	13	16					
<i>Place of living</i>							
Urban	14	5	12.65	5.991	p<0.05	2	S
Rural	13	10					
Semi-urban area	3	15					
<i>Reason for hospitalization</i>							
Gastrointestinal disorder	15	9	2.62	7.815	p>0.5	3	NS
Vascular disorder	5	6					
Oncology disorder	7	10					
Other disorder	3	5					
<i>Duration of hospitalization</i>							
<1 week	9	3	20.73	7.815	p<0.05	3	S
10 days	5	10					
15 days	3	15					
>15 days	13	2					
<i>Has current infection</i>							
Urinary tract	7	13	4.94	7.815	p>0.05	3	NS
Respiratory tract	6	5					
Wound/cellulites	9	3					
Others	8	9					
<i>Meditation awareness</i>							
No	20	18	5.03	5.991	p>0.05	2	NS
(If yes) daily	2	8					
Weekly	8	4					

Note: NS= Not Significant,  
S= Significant,  
Hypothesis H1 or H2 are accepted.

The duration of hospitalization varied, with a considerable number of patients admitted for 10 to 15 days, indicating moderate hospital stays during radiotherapy. A portion of the participants also reported current infections, most commonly respiratory and urinary tract infections. In terms of meditation awareness, a large percentage had no prior exposure to meditation practices, while a smaller group reported engaging in meditation either daily or weekly.

Overall, the demographic findings suggest that the *Yog-Nidra* intervention was tested across a diverse group of participants differing in age, gender, education, and background, ensuring a broad understanding of its effectiveness across various subgroups.

### **Section II: Effect of Yog-Nidra on QoL (Experimental and Control Groups)**

The results of the study demonstrated a statistically significant improvement in the QoL among cancer patients in the experimental group who received *Yog-Nidra* intervention, as compared to the control group. The chi-square analysis confirmed a significant difference between pre-test and post-test scores, indicating that *Yog-Nidra* had a positive effect on the emotional, physical, and psychological well-being of the participants.

The observed improvement among patients undergoing radiotherapy suggests that *Yog-Nidra* effectively reduced treatment-related stress and promoted better adaptation to hospital care. The findings align with existing evidence that meditative and relaxation-based practices contribute to improved mental health and overall QoL among cancer patients.

### **Section III: Comparison of Pre-Test and Post-Test Scores**

The paired *t*-test analysis revealed a significant increase in post-test mean scores compared to pre-test mean scores among patients in the experimental group. This statistical difference indicates that the *Yog-Nidra* program was effective in enhancing the QoL of patients undergoing radiotherapy.

The improvement from pre-test to post-test suggests that regular practice of *Yog-Nidra* helped participants achieve better emotional balance, mental relaxation, and coping ability during treatment. The positive outcomes also highlight the potential of *Yog-Nidra* as a supportive, non-pharmacological approach to improve patient well-being in oncology care settings.

The findings further validate the study hypothesis that the *Yog-Nidra* intervention significantly enhances the QoL among cancer patients undergoing radiotherapy.

### **Section IV: Association Between Demographic Variables and Study Outcomes**

Chi-square analysis was carried out to determine the association between demographic variables and both pre-test and post-test scores. The results indicated that there was a significant association between post-test outcomes and certain variables, such as educational qualification and duration of hospitalization, suggesting that patients with higher education and longer hospital stays might have better receptivity and engagement with the *Yog-Nidra* practice.

However, no significant association was observed with other variables such as age, gender, family income, or residential area. This implies that the effectiveness of *Yog-Nidra* was consistent across different demographic groups and was not limited to any specific category of participants.

Hence, the improvement in QoL can be attributed to the intervention itself rather than demographic differences. Based on these findings, the formulated hypotheses H1 and H2 are accepted, indicating that *Yog-Nidra* significantly improves the QoL among cancer patients undergoing radiotherapy, while its effectiveness is not influenced by demographic factors.

## **CONCLUSION**

The findings of the study revealed that there was a statistically significant difference between the pre-

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test and post-test scores in both the experimental and control groups, indicating the effectiveness of *Yog-Nidra* in improving the QoL among cancer patients undergoing radiotherapy. The results demonstrate that participants who practiced *Yog-Nidra* showed notable improvements in their physical, psychological, and emotional well-being compared to their initial condition.

The observed statistical significance suggests that *Yog-Nidra* served as an effective complementary therapy, helping patients cope better with stress, anxiety, and discomfort associated with radiotherapy. Overall, the intervention contributed positively to enhancing patients' overall QoL, thereby supporting its inclusion as a supportive therapeutic approach in cancer care settings.

### **Nursing Implications**

The study's findings have important implications for medical-surgical nursing practice, nursing administration, nursing education, and nursing research.

#### ***Medical-Surgical Nursing Practice***

- The medical-surgical nurse can demonstrate *Yog-Nidra* therapy for a cancer patient.
- Encourage nursing students to plan and organize the nursing intervention to manage the improvement of QoL through *Yog-Nidra* therapy.
- The findings of the study indicate that the medical-surgical nurse should be made aware of *Yog-Nidra* therapy for the improvement of the QoL among cancer patients.
- The present study helps to draw the attention of nurses to build up sound knowledge in this area.

#### ***Nursing Administration***

- The nurse administrators should be able to motivate and initiate the health personnel in organizing and participating in various educational programs and improve their knowledge and skills.
- The nurse administrator can support the nurses in conducting research on *Yog-Nidra* therapy for various exercises.
- An in-service education program should be organized for nurses to develop up-to-date knowledge regarding *Yog-Nidra* therapy.

#### ***Nursing Education***

- The curriculum of nursing education should enable the student nurses to equip themselves with treatment for improving the QoL among cancer patients.
- In-service education can be conducted to update nurses' knowledge and skills on the management of improving the QoL among cancer patients.
- Periodic conferences, workshops, symposiums, and seminars can be arranged regarding alternative and complementary therapies to make nursing professionals competent enough to meet over-changing needs of society.

#### ***Nursing Research***

The nursing researcher should be aware of new trends in the existing health care system. Emphasis should be placed on conducting research in hospitals focused on non-pharmacological methods to improve the QoL. This study will be a valuable reference material for future researchers.

### **Limitations**

1. A limited time was available for data collection.
2. The sample was selected only from the cancer hospital in Raipur.
3. The study was limited to cancer patients who were willing to participate in the study.

### **Recommendations**

1. The same study can be replicated with a large sample size.
2. A similar study can be done by using a structured teaching program.
3. A similar study can be done by video teaching.

## REFERENCES

1. Andersen BL, Karlsson JA, Anderson B, Tewfik HH. Anxiety and cancer treatment: response to stressful radiotherapy. *Health Psychol.* 1984; 3(6): 535–51. doi: 10.1037//0278–6133.3.6.535. PMID: 6536502; PMCID: PMC2719957.
2. Dodd MJ, Ahmed N. Preference for type of information in cancer patients receiving radiation therapy. *Cancer Nurs.* 1987 Oct 1; 10(5): 244–51.
3. Guadagnoli E, Rosenstein RB. Cancer patients' unmet support needs as a quality-of-life indicator. In: Osoba D, editor. *Effect of Cancer on Quality of Life.* Boca Raton (FL): CRC Press; 2021. p. 155–167.
4. Hsueh EJ, Loh EW, Lin JJA, *et al.* Effects of yoga on improving quality of life in patients with breast cancer: a meta-analysis of randomized controlled trials. *Breast Cancer.* 2021; 28: 264–276. <https://doi.org/10.1007/s12282-020-01209-6>.
5. Nuzhath FJ, Patil NJ, Sheela SR, Manjunath GN. A Randomized Controlled Trial on Pranayama and Yoga Nidra for Anxiety and Depression in Patients with Cervical Cancer Undergoing Standard of Care. *Cureus.* 2024 Mar 9; 16(3): e55871. doi: 10.7759/cureus.55871. PMID: 38595893; PMCID: PMC11002714.
6. Selvaraj Giridharan, *et al.* The Role of Yoga in Patients Undergoing Radiotherapy: A Review of Current Literature. *Int Res J Ayurveda Yoga.* 2023 Nov; 6(11): 42–48.
7. Prakash K, Saini SK, Pugazhendi S. Effectiveness of Yoga on Quality of Life of Breast Cancer Patients Undergoing Chemotherapy: A Randomized Clinical Controlled Study. *Indian J Palliat Care.* 2020 Jul–Sep; 26(3): 323–331. doi: 10.4103/IJPC.IJPC\_192\_19. Epub 2020 Aug 29. PMID: 33311874; PMCID: PMC7725186.
8. Anand Divya N, George Linu Sara, Raj Anil. Effectiveness of Yoganidra on quality of sleep among cancer patients. *Manipal J Nurs Health Sci.* 2015; 1(1): 30–33. Available at: <https://impressions.manipal.edu/mjnhs/vol1/iss1/8>
9. Jain M, Mishra A, Yadav V, *et al.* Long-term yogic intervention decreases serum interleukins IL-10 and IL-1 $\beta$  and improves cancer-related fatigue and functional scale during radiotherapy/chemotherapy in breast cancer patients: a randomized control study. *Support Care Cancer.* 2023; 31: 6. <https://doi.org/10.1007/s00520-022-07487-4>
10. Jain M, Mishra A, Yadav V, Shyam H, Kumar S, Mishra SK, Ramakant P. Long-Term Yogic Intervention Improves Symptomatic Scale and Quality of Life by Reducing Inflammatory Cytokines and Oxidative Stress in Breast Cancer Patients Undergoing Chemotherapy and/or Radiotherapy: A Randomized Control Study. *Cureus.* 2023 Jan 5; 15(1): e33427. doi: 10.7759/cureus.33427. PMID: 36751235; PMCID: PMC9899326.
11. Selvan P, Hriso C, Mitchell J, Newberg A. Systematic review of yoga for symptom management during conventional treatment of breast cancer patients. *Complement Ther Clin Pract.* 2022 Aug; 48: 101581. doi: 10.1016/j.ctcp.2022.101581. Epub 2022 Apr 6. PMID: 35398542.
12. Rao RM, Raghuram N, Nagendra HR, Kodaganur GS, Bilimagga RS, Shashidhara HP, Diwakar RB, Patil S, Rao N. Effects of a Yoga Program on Mood States, Quality of Life, and Toxicity in Breast Cancer Patients Receiving Conventional Treatment: A Randomized Controlled Trial. *Indian J Palliat Care.* 2017 Jul–Sep; 23(3): 237–246. doi: 10.4103/IJPC.IJPC\_92\_17. PMID: 28827925; PMCID: PMC5545947.
13. Niu N, Huang R, Zhao J, Zeng Y. Health benefits of yoga for cancer survivors: An updated systematic review and meta-analysis. *Asia Pac J Oncol Nurs.* 2023 Oct 13; 11(3): 100316. doi: 10.1016/j.apjon.2023.100316. PMID: 38426042; PMCID: PMC10904170.
14. Selvaraj Giridharan, *et al.* The Impact of Yoga on the Immune System of Cancer Patients: A Scoping Review of Current Evidence. *Int Res J Ayurveda Yoga.* 2024 Mar; 7(2): 33–40.
15. Danhauer SC, Addington EL, Sohl SJ, Chaoul A, Cohen L. Review of yoga therapy during cancer treatment. *Support Care Cancer.* 2017 Apr; 25(4): 1357–1372. doi: 10.1007/s00520-016-3556-9. Epub 2017 Jan 7. PMID: 28064385; PMCID: PMC5777241.
16. Kumari MGWR, Karunaratne HKBMS. Therapeutic effects of Yoga Nidra: a review. *Int J Health Sci Res.* 2022; 12(12): 148–153. DOI: <https://doi.org/10.52403/ijhsr.20221224>