THE LEVEL OF ANXIETY AND COPING ABILITIES AMONG PATIENTS WITH CANCER UNDERGOING RADIATION THERAPY AT MEENAKSHI MISSION HOSPITAL, MADURAI, TAMILNADU

A DISSERTATION SUBMITTED TO THE TAMILNADU DR. M. G. R MEDICAL UNIVERSITY, CHENNAI IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

MARCH - 2010

THE LEVEL OF ANXIETY AND COPING ABILITIES AMONG PATIENTS WITH CANCER UNDERGOING RADIATION THERAPY AT MEENAKSHI MISSION HOSPITAL, MADURAI, TAMILNADU

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MARCH – 2010

ACKNOWLEDGEMENT

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ABSTRACT

A study to determine the level of anxiety and coping abilities among patients with cancer who were receiving radiation therapy at Meenakshi Mission Hospital, Madurai, Tamilnadu was conducted in partial fulfillment of the requirement for the award of a degree of Master of Science in Nursing under the Tamilnadu Dr.M.G.R. Medical university, Chennai. The research design was descriptive design. Sample size was 60; purposive sampling technique was used to select the samples.

OBJECTIVES OF THE STUDY WERE:-

- ❖ To determine the level of anxiety among patients with cancer who are receiving radiation therapy
- ❖ To determine the level of coping abilities among patients with cancer who are receiving radiation therapy
- ❖ To assess the relationship between the level of anxiety and coping abilities among patients with cancer who are receiving radiation therapy
- ❖ To find out the association between the level of anxiety and selected demographic variables such as age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.
- ❖ To find out the association between the level of coping abilities and selected demographic variables such as age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of

cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

The study was based on the **ROSENSTOCK'S BECKER (1974) AND**

MAINMA'S (1975), HEALTH BELIEF MODEL.

HYPOTHESES:

- ✓ There will be a significant relationship between the level of anxiety and the coping abilities among cancer patients who are receiving radiation therapy
- ✓ There will be a significant association between the level of anxiety and the selected demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.
- ✓ There will be a significant association between the level of coping abilities and the selected demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

The aim of the researcher was to determine the level of anxiety and coping abilities among patients with cancer undergoing radiation therapy at Meeenakshi Mission Hospital, Madurai, Tamilnadu. A descriptive design was used for this study. The study population was 60 adult patients with cancer who fulfilled the

criteria. A purposive sampling technique was used to select the samples. In order to collect the data the tool was prepared which comprised of demographic variables, Modified Spielberger's State Anxiety Inventory to assess the level of anxiety, Jalowiec Coping Scale to assess the coping abilities of the samples.

The pilot study was carried out on 6 patients who fulfilled the criteria. The data collected during the data collection period were analyzed by means of descriptive and inferential statistics. The findings of the study have been discussed in terms of objectives and hypotheses of the study.

MAJOR FINDINGS OF THE STUDY WERE:-

- Majority of the samples were in the age group of 51 to 65 (65%).
- Males were affected more with cancer 35 (58.4%).
- Most of the samples were Hindus (80%)
- Most of the patients studied upto middle school level (23.4%)
- Majority of the samples were unemployed (55%)
- Most of the family's income (per month) was less than Rs. 5000 (48.3%)
- Maximum number of patients were married (93.4%)
- Majority of the samples(48%) were having more than two children
- Most of the patients belong to Nuclear family (55%)
- Maximum number of the patients were Non vegetarians (80%)
- Majority of the patients had no bad habits (78.3%)
- Most of the sample's hobby was watching movies (51.7%)
- Maximum number of patients had family history of no cancer (88.3%)
- Majority of the samples were having the cancer cervix (26.7%)

- ➢ Majority of the patient were suffering with cancer for 0 to 3 months (30%) and more than one year (30%)
- ➢ Majority of the samples were in the II stage (61.7%) of Disease
- ➢ Majority of the samples had undergone 0 to 1 month treatment (41.7%)
- ➢ Most of the patients had received radiation therapy for more than two times
- ➢ Majority of the cancer patients 36 (60%) had moderate level of anxiety, 14 (23.33%) patients had low level of anxiety, and 10 (16.67%) patients had high level of anxiety
- ➢ Majority of the 39 (65%) cancer patients had moderate level ofcoping abilities, 13 (21.67%) patients had maximum level of coping abilities, and 8 (13.33%) patients had minimal level of coping abilities
- ➢ The reports indicated that there was a negative correlation between the level of anxiety and coping abilities
- ➢ The results indicated that there was a significant association between anxiety and selected demographic variables such as Religion, Occupation, Family history of cancer, Duration of illness, and Number of radiation therapy attended
- ➢ The results confirmed that there was a significant association between coping abilities and selected demographic variables such as Dietary pattern, Hobbies, Family history, and Stage of disease

RECOMMENDATIONS:

On the basis of the present study following recommendations are made,

- ✓ A similar study can be done with large samples
- ✓ An experimental study can be done with structured teaching programme for strengthening the coping abilities
- ✓ A study can be done to assess the Quality of life of patients with cancer who are receiving radiation therapy
- ✓ A similar study can be done on a longitudinal basis
- ✓ A similar study may be conducted to find out the effectiveness of various coping strategies like Yoga, Music therapy in reducing the anxiety level

CONCLUSION:-

The nurses should take a key role in giving teaching to the patients with cancer who are undergoing radiation therapy about the therapy, it's importance, expected side effects and the coping strategies to adjust with the situation , can reduce the anxiety. Especially when giving these informations prior to the radiation therapy reduce the anxiety level much. So, it is a high time for the health members to formulate strategies to improve the coping abilities of cancer patients.

CHAPTER – I

INTRODUCTION:

The best sentence in the English language

Is not 'I love you' but its benign

- **Woody Allen (1935)**

Cancer is a group of more than 200 diseases characterized by uncontrolled and unregulated growth of cells. It is a major health problem that occurs in people of all ethnicities. Although cancer is often considered a disease of aging, with the majority of cases (76%) diagnosed in those over the age of 55 years, it occurs in people of all ages.

The diagnosis of cancer is viewed as a crisis. Common fears experienced by the patient with cancer include disfigurement, dependency, disruption of relationships, pain, emaciation, financial depletion, abandonment, and death. To cope with these fears, the patient with cancer may use and experience different behavioral patterns: shock, anger, denial, bargaining, anxiety, depression, helplessness, hopelessness, rationalization, acceptance, and intellectualization.

Adult cancer is uncommon and presents an exceptional anxiety for the patient and the family members. The emotional needs of adult patients with cancer receiving radiation therapy are a major factor in the recommendation for strengthening their coping abilities.

Most cancer patients experience a loss of energy and an impairment of physical performance in the course of the disease. It has been estimated that this problem affects up to 70% of cancer patients during chemotherapy and radiation therapy or after surgery. Anxiety may affect not only the physical performance but also the cognitive function. In fact, patients report anxiety as a combination of symptoms including

an inability to carry out physical exertion, tiredness, lack of interest, or motivation, impairment of short-term memory, and attention or concentration; these complaints are frequently associated with sleep disturbances (hyper or insomnia), and emotional reactivity. On the basis of its characteristics, it has been proposed that anxiety is a syndrome rather than an isolated complaint.

For many patients, anxiety is a severe and limiting problem. The impairment of physical and mental performance prevents from working or carrying out regular daily activities and hence results in a substantial reduction of the quality of life. In response to anxiety, patients are usually advised to take rest and regulate their level of daily activities. But since inactivity induces muscular catabolism, extended rest can actually help to regulate perpetuate fatigue. Furthermore, anxiety may be a persistent problem that continues for months after treatment, even in patients in complete remission. Several trials have evaluated different therapies for the treatment of cancer related anxiety. However, therapeutic options for this problem remain limited. Recent studies have shown the lack of effect of antidepressants (paraxetine) and psycho stimulants (methylphenidate) as treatment of cancer related anxiety.

Cognitive behavior therapies and psychotherapy may reduce anxiety in cancer patients. However, these interventions do not correct the impairment of physical performance frequently observed in this patient group. Using diversion therapy and supportive system like family have been proposed as a non-pharmacologic intervention for the treatment of cancer-related anxiety. When carried out during chemo or radiation therapy, the above mentioned therapies reduce the impairment of performance status related to treatment. It has been shown that they improve the quality of life in women treated for breast cancer.

Furthermore, some evidence suggests that religious factors may play a role to improve the coping abilities against anxiety related to cancer treatment.

A study in Tampa found that considerable variation in anxiety levels. With some patients beginning radiation therapy had relatively high levels of anxiety and for those with relatively high levels of baseline anxiety, anxiety decreased during treatment. The patient's baseline anxiety level was predicted by marital status, diagnosis, gender, educational level, and income range. In addition, cancer type, income, and educational level predicted changes in anxiety levels over radiation therapy.**(Krischer. M. M, Xu 2008)**

The intensity of anxiety and coping abilities were related to the underlying exposure to radiation or to the level of disease burden rather than the different anxiety profiles, such as the relationship between physical and mental aspects. **(Lundh Hagelin. C, Wengstrhm. Y, Furst. C. J 2009)**

NEED FOR THE STUDY

'We boil at different degrees'

-Ralph Wald Emerson (1803-82)

<u>**World Scenario**</u>:

The occurrence of Cancer Disease is high in men than women. However, in people less than 85 years of age, cancer is the leading cause of death. In 2006, it was estimated that 5,64,830 Americans died as a result of cancer, which is more than 1500 people per day. More than 10 million Americans are alive today who have a history of cancer.

Cancer is a disease that entails inquiries and a wide range of problems. Anxiety which is part of human life, is a relevant problem of

cancer patients during and after treatment. Cancer related anxiety is subjectively experienced symptom that is multidimensional and multifactorial which leads to depression in their lives. Several studies have shown that coping strategies can improve the quality of life and functional status of cancer patients undergoing radiation therapy.

An anxiety and depression were common in cancer patients and reduced their quality of life. **(Rolke. H. B, Bakke P. S., Gallefoss. F-2008)**

The quality of life was slightly higher in all patients after the completion of radiation therapy than before start of radiation therapy. In all palliative radiation therapy groups, quality of life was significantly affected by the treatment. Anxiety and the depression were reduced after the radiation therapy. **(Takahashi. T et al - 2008)**

A study in Omaha suggested that considerable inter-individual variability in the trajectories of evening and morning fatigue. While evaluating the care givers, they found that the presence of anxiety, poor family support, as well as high levels of patient fatigue showed that the family care givers were at highest risk for sustained fatigue trajectories. **(Fletcher. B. A et al - 2008)**

Provision of relevant and accurate information is an important factor not only for the patient's satisfaction but also to develop and strengthen the coping strategies. A study in Austria conducted to assess the anxiety and social desirability among four groups and the coping methods like repressive, sensitive, anxious, non-defensive or non-anxious. Among the four groups using different methods of coping, the repressive group wanted least information and the female patients felt better informed than the male patients. **(Pour-Haring. H. F, Volleritsch. C, Roth. R - 2009)**

A study in Korea proved that the cognitive-behavioral intervention (2 hours per week), which included the counseling, education about treatment choices, possible side effects and the management strategies applied by nurses were effective to reduce anxiety and the depression among the cancer patients undergoing radiation therapy. (**Yoo. M. S., Lee. H. S, Yoon. J. A. - 2009**)

The religious faith seems to play an important role in coping strategies of the radiation therapy patients. (**Becker. G et al - 2006**)

An individual art therapy provided by a trained art therapist in a clinical setting could give beneficial support to the women with the primary cancer undergoing radiation therapy, as it can improve their coping resources. (**Oster. I et al - 2006**)

A study in Portuguese proved that the radiation therapy patients have elaborated coping strategies, based on their emotion as well as their problems. (**Lorencetti. A, Simonetti. J. P - 2005**)

Indian Scenario:

A study in Bangalore among the cancer patients who were receiving radiation therapy showed that ineffective coping mechanisms such as, helplessness and fatalism were leading to incomplete resolution. Interventions to minimize these concerns and handle the associated anxiety, depression would improve their quality of life. (**Santosh. K et al - 2005**)

A study in Bangalore proved that relaxation techniques, divertional therapies and yoga were important to strengthen the coping abilities of the patients with cancer undergoing radiation therapy. (**Rao. M et al - 2007**)

Tamilnadu Scenario:

A study in Chennai proved that no significant difference was observed in the preference of emotion oriented coping in relation to age, site of malignancy, treatment, and educational level and also they showed the significant differences in the preference of problem oriented coping. **(Vidhubala et al - 2005)**

Prior information regarding cancer, radiation therapy and the side effects of radiation therapy which enabled the family members to go for periodical review and aided in early identification of cancer. She also proved that these prior information had reduced the level of anxiety and strengthen the coping abilities. **(Chandra. P - 2003)**

A study at Madurai showed that the coping abilities were depending on the individual's acceptance level, previous experience and the supporting system. **(Jasline. J - 2003)**

In Meenakshi Mission Hospital:

In Meenakshi Mission Hospital, the Oncology ward consists of 30 beds and nearly 50 to 60 patients are receiving radiation therapy per day as out-patient as well as in-patient basis. They are receiving radiation therapy mainly for brain tumors, ophthalmic cancers, oral cancers, esophageal cancers, and cervical cancers. The statistical report of cancer patients getting treatment from Meenakshi Mission Hospital from the year of 2000 to till now is as follows:

Year	Census
2000	1053
2001	1330
2002	1087
2003	569
2004	643
2005	596
2006	660
2007	660
2008	594

Distribution according to the site of cancer:
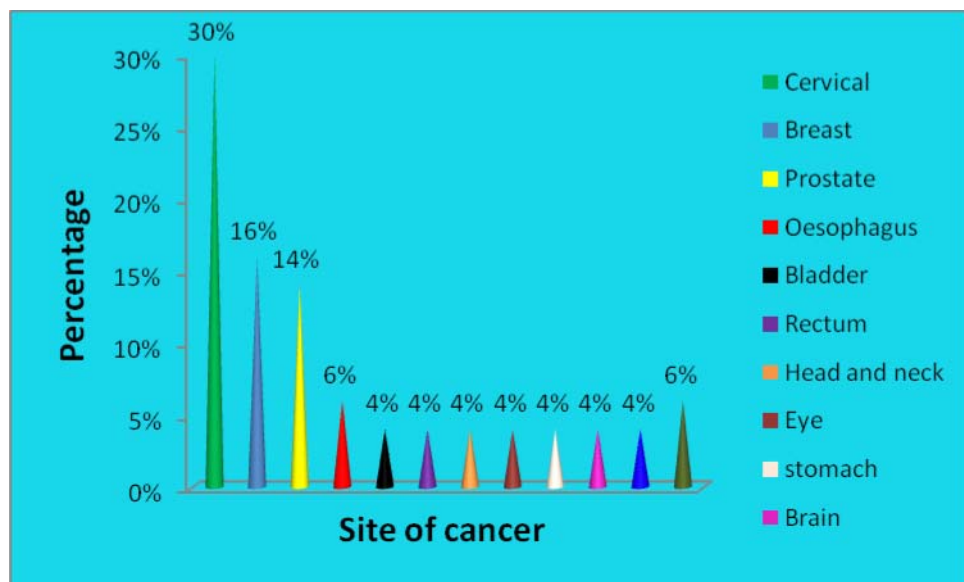
When the investigator was posted in Oncology ward during the first year, she saw so many patients with anxiety before attending the radiation therapy and the patients asked so many questions regarding radiation therapy. They are in need of close and competent nursing care

during this period. The patients who got adequate information regarding radiation therapy had less anxiety and good coping abilities during the radiation therapy when compared to others who have not received adequate information. So the investigator was interested to select this topic.

PROBLEM STATEMENT:

A study to determine the level of anxiety and coping abilities among patients with cancer undergoing radiation therapy at Meenakshi Mission Hospital, Madurai, Tamilnadu.

OBJECTIVES:

❖ To determine the level of anxiety among patients with cancer who are receiving radiation therapy

❖ To determine the level of coping abilities among patients with cancer who are receiving radiation therapy

❖ To find out the relationship between the level of anxiety and coping abilities among patients with cancer who are receiving radiation therapy

❖ To find out the association between the level of anxiety and selected demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

❖ To find out the association between the level of coping abilities and selected demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children,

type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

HYPOTHESES:

- ✓ There will be a significant relationship between the level of anxiety and the coping abilities among cancer patients who are receiving radiation therapy

- ✓ There will be a significant association between the level of anxiety and the selected demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

- ✓ There will be a significant association between the level of coping abilities and the selected demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

OPERATIONAL DEFINITION:

Determine

It refers to find out or establish the anxiety and coping abilities of the cancer patients undergoing radiation therapy.

Anxiety

It refers to the expected psychological responses of the patient due to the the radiation therapy

Coping Abilities

It refers to how patients are effectively dealing or managing with the disease condition and adverse reactions of radiation therapy

Cancer Patients

It refers to patients who are diagnosed and confirmed as having malignant tumors by an Oncologist.

Radiation Therapy

It is one type of treatment for cancer by using gamma rays.

ASSUMPTION:

- The newly diagnosed cancer patients, who are receiving radiation therapy for the first time, will have more anxiety when comparing to the patients who are receiving second time and so on.

- The coping abilities are more in the cancer patients who are receiving radiation therapy for the second, third time and so on.

- The selected demographic variables may influence the anxiety and coping abilities among the cancer patients who are receiving radiation therapy.

- The prior adequate information regarding the radiation therapy, adverse reaction and coping mechanism may help to reduce the anxiety.

LIMITATION:

- ❖ The study is limited to patients with cancer who were admitted in Oncology ward at Meenakshi Mission Hospital, Madurai

- ❖ Patients who are willing to participate in this study
- ❖ Patients who are available during the data collection period
- ❖ Data collection period is limited to 6 weeks

PROJECTED OUTCOME:

- ✓ The results of the study will enable the researcher for better understanding of the level of anxiety and the coping abilities among the cancer patients receiving radiation therapy.
- ✓ This study will help nurses to give necessary information and counsel the patients with cancer who are receiving radiation therapy to strengthen their coping abilities.
- ✓ This study will help patients with cancer who are receiving radiation therapy to understand and strengthen their coping abilities.

CONCEPTUAL FRAMEWORK

A conceptual framework can be defined as a set of concepts and assumptions that integrate them into a meaningful configuration.

Conceptual framework of this study is based on **ROSENSTOCK'S BECKER (1974) and MAINMA'S (1975), HEALTH BELIEF MODEL**. It addresses the relationship between a person's beliefs and behaviors. It provides a way of understanding and predicting how clients will comply with their health care therapies. It includes the following components.

> ➢ Individual perception
> ➢ Modifying factors
> ➢ Likelihood of action

INDIVIDUAL PERCEPTION:

According to the author the first component in this model involves the individual's perception of susceptibility to an illness.

In this study individual perception refers to demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, Stage of the disease, duration of treatment, and the number of radiation therapy attended.

MODIFYING FACTORS:

According to the author the second component modifying factors refers to, nursing intervention which focuses on factors that can be modified and commitment to plan of action.

The researcher has planned to use modified Spielberger's state anxiety inventory to assess the level of anxiety and standard Jalowiec coping scale to assess the level of coping abilities of cancer patients

undergoing radiation therapy. In this study, modifying factor refers to the anxiety and the coping abilities. The level of anxiety is graded as low, moderate, and High levels; and the coping abilities are graded as minimum, moderate and Maximum levels.

LIKELIHOOD OF ACTION:

According to the author the third component refers to the preventive or teaching action and it includes modifying life style, increase adherence to medical therapies or a search of medical advice or treatment.

In this study the individual perception and modifying factors together influence the perceived threat of complications due to radiation therapy which directs the patients to strengthen their coping abilities.

In this study likelihood of action refers to providing self instructional module on strengthening the coping abilities to reduce the level of anxiety.

FIGURE – I   CONCEPTUAL FRAMEWORK BASED ON MODIFIED HEALTH BELIEF MODEL (ROSENSTOCKE'S AND BECKER-1974 & MAINMA(1975)

Individual perception action

Modifying factors

Likelihood of

Demographic variables

Age
Sex
Religion
Education
Occupation
Income
Marital status
Number of children
Type of family
Dietary Pattern
Hobbies
Habits
Site of cancer
Duration of illness
Stage of disease
Duration of treatment
Number of radiation therapy

Assessment of level of anxiety

Assessment of level of coping abilities

Low level of Anxiety

Moderate level of Anxiety

High level of Anxiety

Minimum level of coping

Moderate level of coping

Maximum level of coping

Nursing action focus on providing self instructional module

CHAPTER-II

REVIEW OF LITERATURE

"Everything hinges on the matter of evidence"

- **Carl Sagan**

The review of literature entails systemic identification; location and scrutiny of written material that contains relevant information pertaining to the study.

Section A – Studies related to anxiety

Section B – Studies related to coping abilities

SECTION – A

Studies related to anxiety:

Chen. A. M. et al (2009) conducted a study in Sacramento about psychosocial distress among 40 patients (25 women and 15 men) patients undergoing radiation therapy for head and neck cancer. All the patients completed the Hospital Anxiety and Depression Scale (HADS) and Beck Depression Inventory –II (BDI-II) instrument before radiation therapy, during the last day of radiation therapy, and at the follow-up visit. They found that the variables like employment status (working at enrollment), younger age (<55 years), single marital status and living alone were playing a major role in the level of anxiety.

Tian. J., Chen. Z. C., Hang. L. F. (2007) conducted a study in China about the effects of nutritional and psychological status in gastro intestinal cancer patients on the tolerance of treatment. They conducted among 182 cancer patients for the period of 14 months. Food frequency survey method, state-trait anxiety inventory (STAI) and depression status inventory (DSI) were used to obtain information about the diet and

psychological status. The adjusted relative risk (RR) for Albumin, protein intake and anxiety was 3.30(95% CI: 1.08, 10.10, P=0.03), 3.25 (95% CI: 1.06, 9.90, P= 0.04) and 1.48 (95% CI: 1.29, 1.70, P < 0.0001), respectively. So, they confirmed that both poor nutritional status and psychological status were the independent risk factors for severe side effects of cancer treatment (chemo therapy and radiation therapy), and have an impact on the recovery of physical performance status in patients after the treatment.

Lee. P. W. et al (2007) conducted a study in Hong Kong about the impact of naso-pharyngeal cancer and radiation therapy on the psychosocial condition among 70 Chinese patients (46 men and 24 women). Physical and psychological adjustments were measured by Rotterdam symptom checklist, Beck Anxiety Inventory, Perceived stress scale and the 36-Item short form health survey (Survey-36). The percentage of fear of dying and anxiety were reduced from 28% from pre radiotherapy to 2% at one year. So they proved that the period from the diagnosis to two months of post radiation therapy was a high risk period both physically and emotionally.

Korfage. I. J. et al (2006) conducted a study in Netherlands about anxiety and depression among prostate cancer patients. They conducted this study among 299 patients and follow-up was done for five years. Respondents completed four assessments (pretreatment, at 6 and 12 months, and at 5-year follow-up). Among men treated by radiation therapy, 27% reported clinically significant levels of anxiety while 20% was expected in a general population. So they predicted that the anxiety levels were high in pre-radiation therapy patients and were gradually decreased according to the duration of treatment.

Burgess. C. et al (2005) conducted a study in London about depression and anxiety in women with early breast cancer. They conducted this study among 222 patients and follow-up was done for five years. They

identified that 50% of the women with early breast cancer had depression and anxiety or both in the year of diagnosis, 25% in the second, third, fourth years, and 15% in the fifth year. They concluded that the longer term anxiety and depression were associated with previous psychological treatment, lack of an intimate relationship, younger age and severely stressful life experiences. It also confirmed that clinical factors were not associated with anxiety and depression at any time; and lack of intimate confiding support also predicted more protracted episodes of anxiety and the depression.

Brans. B. et al (2003) conducted a study in Belgium among 48 patients about depression and anxiety during isolation and radiation therapy. The patients were requested to complete series of questionnaires to assess anxiety (Spielberger state anxiety inventory), depression (Beck depression inventory), Hopelessness (Beck hopelessness scale), personality characteristics (Temperament and character inventory) and coping strategies (Utrecht's coping list). Patients who experienced a high level of state anxiety showed higher level of depression and hopelessness. Surprisingly the nature of the disease (malignant vs. nonmalignant) did not affect the anxiety level nor there was a difference between female and male, age, years of education, or the duration of hospitalization. Moreover, he found that the isolation with radiation therapy, sub groups such as, women, elderly cancer patients or lower educated people exhibited a higher state of anxiety level

Allen. R., Newman. S. P., Souhami. R. L. (2000) conducted a study in London about anxiety and depression in adolescent cancer patients as well as in parents at the time of diagnosis. They conducted among 42 cancer patients at the time of diagnosis and also among 34 mothers and 27 fathers of cancer patients. They used Beck depression Inventory and State anxiety inventory scale. They predicted that the girls (p< 0.011) were significantly

more anxious (p<0.0001) and depressed than the boys (p<0.038); and also the mothers were the most anxious family member than the fathers.

Vidhubala (2005) conducted a study in Chennai about the coping preferences of Head and Neck cancer patients. She conducted among 178 Head and Neck cancer patients. The age group of the patients were ranged from 19 to 87 years. The questionnaire used for assessing coping preferences was Jalowiec coping preference scale. She proved that there was no significant difference between the Emotion Oriented Coping (EOC) and age, treatment, site, education and survival. Treatment, site of Cancer, education and gender showed significant differences in the preference of Problem Oriented Coping (POC).

Couper. J. W. et al (2009) conducted a study in Australia about anxiety, depression, and quality of life among 193 prostate cancer patients over the 12 months following the diagnosis. Depression and anxiety levels were assessed by the Brief symptom inventory physical and psychological aspects of health related Quality of life. 211 patients with Prostate cancer were recruited; 193 completed the time1 questionnaires and 172 completed the time2 questionnaires. They predicted that the radiation therapy appeared to be associated with good health related quality of life when comparing with other medical therapies like chemotherapy and hormonal therapies. They also had less anxiety 12 months after commencing the treatment.

De Vries. J., Van Der Steeg. A. F., Roukema. J. A. (2009) conducted a study in Netherlands about the trait anxiety and the determination of fatigue and depressive symptoms among the 169 women with breast cancer. A state trait anxiety was used to assess the anxiety level. They concluded that the anxiety played a role in experiencing depressive symptoms and the fatigue over time.

Jennel. R. L. et al (2009) conducted a study in Sacramento about psychosocial distress among 40 patients undergoing radiation therapy. All the patients completed the hospital anxiety and depression scale and Beck depression Inventory –II instrument before radiation therapy during the last day of treatment, and at the follow up visit. They have shown that alarming number of patients undergoing radiation therapy had symptoms suggestive of anxiety even before beginning the treatment and this proportion was increased significantly during radiation therapy.

Pamuk. G. E. et al (2008) conducted a study in Turkey about the anxiety and depression of hematological malignancies among 140 patients. The respondents completed the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire-30(EORTC-30), Hospital Anxiety and Depression Scale (HADS), and the General Health Questionnaire. Patients with higher anxiety scores were more frequently inpatients, had higher EORTC General symptom scores, and they had lower cognitive, emotional, social functioning and global Quality of life (QOL) scores (all p values <0.05). Patients with higher depression scores had more frequently active disease and were inpatients; they had higher mean, EORTC gastrointestinal system and general symptom scores, and significantly lower physical role, emotional, social and cognitive functioning and global QOL scores(all p values <0.01). So they found that the anxiety and the depression were frequent in cancer patients and associated with the poor quality of life and performance status. In addition, self-reported anxiety and depression might have a predictive value for poor prognosis.

Frick. E., Tyroller. M., Panzer. M. (2007) conducted a study in Germany about the anxiety, depression and quality of life of cancer patients undergoing radiation therapy among 93 patients. The participants completed

the European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire core-30 and the Hospital Anxiety and Depression Scale (HADS). In total 9.5% of the examined patients suffered from clinically relevant anxiety and depression (total HADS score less than 19). There was a weak positive correlation between performance status and QOL. So they concluded that the anxiety was significantly correlated with poor or impaired quality of life. Conversely, patients who reported anxiety and difficulties in accepting the help had a significantly lower quality of life.

Nunes. D. F. et al (2007) conducted a study in Brazil about the effectiveness of relaxation and guided imagery program in patients with breast cancer undergoing radiation therapy. They used the relaxation and visualization therapy (RVT) on psychological distress among 20 patients. The results shown RVT was very effective to reduce stress, anxiety and depression scores (all p values, 0.05). They concluded that the psychological intervention like relaxation and visualization therapies were capable to attenuate the emotional distress, anxiety and depression appeared during the radiation therapy.

Karasawa. K. et al (2005) conducted a study in Japan about psychological responses among 94 cancer patients during radiation therapy. Psychological status was assessed by a psychiatrist, based on the interview about the type of anxiety related to cancer or radiation therapy as well as self-rating questionnaires and they found the incident of mental disorders was 20%. They concluded that the anxiety like mood disturbances and the mental disorders among patients could not be neglected in oncology practice.

Matygia. A. et al (2005) conducted a study in Szczecin about anxiety and depression in patients with laryngeal and hypolaryngeal cancer among 76 patients. Patients were examined three times by using

questionnaires: Spielberger's Trait Anxiety Inventory, Beck Depression Inventory (BDI). They predicted that the greatest intensity of anxiety was observed before treatment, especially in patients who fit for surgery and the intensity of anxiety was lower in patients treated with radiation therapy.

Hirota et al (2005) conducted a study in Takatsuki among 1529 patients in 22 Japanese Institutions about patient's impression on radiation therapy and their need for additional medical information. Questionnaires contained 10 items which included patient's back ground, their impression of radiation therapy; need to obtain information about radiation therapy, and ideal additional medical informational resources or their content. 10% responded that they had no idea about radiation therapy. 30% felt unspecified anxiety concerning radiation therapy, and those who had less chance to get adequate information about radiation therapy felt more anxiety than the others (33.2% vs. 25.2%, p = 0.0008). So they found that the explanation about the radiation therapy and the information regarding the side effects was the top priority to decrease the anxiety and created a good nurse – patient relationship.

Ahlberg. K., Ekman. T., Gaston (2005) conducted a study in Sweden among 60 cancer patients about the fatigue, psychological distress coping resources and functional status during radiation therapy for uterine cancer. Data were collected through self-report instruments. Demographic and clinical data were extracted from the patent's records. They found that the anxiety level before treatment might be an important variable when try to find a risk factor for the development of the anxiety over the course of treatment.

Cazzaniga. L. F. et al (2003) conducted a study in Italy among 82 patients about anxiety, depression and informed consent in patients referred to the radiation therapy department. A physician with psychiatric training

conducted interviews with patients after their consultation with the Radiotherapist and asked them to fill a Questionnaire. Anxiety and depression were measured by a scoring system (HAD-A, HAD-D) scores and compression scores of disease, treatment schedule, side effects and patient satisfaction or between any scores and presumed predictive variables. They found that the informed consent did not seem to increase reactive anxiety or depression in patients referred to a radiation therapy department.

Foss. N. S. D., Dahl. A. A., Loge. J. H. (2003) conducted a study in Norway about the fatigue, anxiety and depression in long term survivors of testicular cancer. 791 Patients completed the Hospital Anxiety and Depression Scale (HADS) and Fatigue Questionnaires (FQ). Among 791, 16 displayed chronic fatigue (HADSs, 24%; FQ-10%). In the age group less than 30 years, the prevalence of chronic fatigue was higher (p value <0.01). So it was confirmed that the prevalence of anxiety was less in cancer patients. Anxiety was a larger problem in cancer patients than the depression, particularly among the youngest cancer patients.

Thomas. E. B. et al (2002) conducted a study in Trivandrum about the psychological distress in cancer patients. They conducted among 238 breast cancer patients who were receiving radiation therapy. They proved that the impact of distress had played a prominent role in the transition from a state of health to that of ill-health or even a terminal event.

D' Haese et al (2000) conducted a study in Belgium about the effect of timing on the provision of the information regarding anxiety and satisfaction level of cancer patients receiving radiation therapy. Two sources of information were used. First booklet with radiotherapy procedures and the sensations patients can experience and the second one was teaching sheets with treatment-site related information. 68 patients were randomized to a

simultaneous- information group (n=31), and a stepwise information group (n=37). Results showed that stepwise information group has less anxious before simulation (p=0.02) and more satisfied (p=0.001). So they concluded that the provision of patient information in a stepwise format lead to less treatment-related anxiety and greater patient satisfaction among the radiation therapy patients undergoing simulation.

SECTION – B

Studies related to coping abilities

Lauver D. R., Connolly – Nelson. K., Vang. P. (2007) conducted a study in Madison about stressors and coping strategies among female cancer survivors after treatment. They conducted this study among 51 patients by using longitudinal interviews within 4 weeks and 3 to 4 months. They found that most of the cancer patients used acceptance, religion, and distraction as primary coping strategies. These strategies also were related as highly helpful coping strategies and clinicians suggested to provide anticipatory guidance.

Agnihotram. V., Ramanakumar, Yeole Balakrishna, Garimella Ramarao (2007) conducted a study in Mumbai about the coping strategies among the Breast and Cervical cancer patients. They conducted this study for five years and proved that the positive coping lead to a good quality of life, which would contribute significantly to the prognosis. In low resource settings, it was a challenge for medical teams and patient families to provide psychological and emotional support throughout the disease.

Warnock. C. (2005) conducted a study in Sheffield among 32 gynecological cancer patients about the patient's experiences of radiation therapy and brachytherapy treatment. They completed questionnaires, interviews before and after treatment and symptom checklists at two hourly intervals during treatment. Nurses also completed two hourly assessments of

their perceptions of the degree of difficulty, the patients were experiencing. They found that the patient information played an important role in helping the patients to cope, but could not allay all of their fears, but the approach taken by the patients provided the basic information which endured for future benefits.

Stiegelis. H. E. et al (2004) conducted a study in Netherlands among 209 cancer patients about the impact of informational self-management intervention on the association between control and illness, uncertainty psychological distress before and after radiation therapy. Prior to radiation therapy, 209 patients with cancer completed baseline measures, including control and illness uncertainty. After completing radiation therapy, patients were randomly allocated to receive either a booklet (experimental group n=103), or no booklet group (control group n=106). The booklet contained general information about cancer and cancer treatment, information about possible coping strategies and social comparison which included short stories of other patients, or no booklet group (control group n=106). Three month after intervention, aspects of psychological distress were assessed including anxiety, stress, anger, depression and fatigue. It was proved that informational self – management intervention (booklet) issue prior to radiation therapy reduced the anxiety level and strengthened the possible coping abilities.

Sehlen. S. et al (2003) conducted a study in Germany among 276 patients about the coping of cancer patients during and after radiation therapy. With the FKV (Freiburg Questionnaire coping with the disease) scale, cancer specific coping aspects were assessed. The association between coping styles and psycho social adaptation was evaluated using the questionnaire on stress in cancer patients (QSC) and the Questionnaire on

Functional Assessment of Cancer Treatment (FACT-G). They followed for two years and found the presence of positive correlation between the Quality of Life and coping mechanisms and at the beginning of the radiation therapy who had a low psychosocial adaptation had low quality of life. Psycho – oncologically trained teams of physicians and nurses would best correspond to this profile of needs and would contribute significantly to an ameliorated adaptation of patients to cancer which could lead to higher life satisfaction.

Stiegelis. H. E. et al (2003) conducted a study in Netherlands about the cognitive adaptation of cancer patients and healthy references among 67 cancer patients and 50 healthy references and supported the theory of cognitive adaptation. Patients filled out Questionnaires prior to their radiotherapy at 2 weeks and 3 months after completing radiotherapy. T-tests revealed that patients experienced significantly higher levels of optimism and self esteem than the healthy reference group and found out that the cancer patients undergoing radiation therapy had higher levels of optimism and self-esteem than the healthy reference group.

Jahraus. D., Sokolosky. S., Thurston. N. (2002) conducted a study in Canada among 79 cancer patients about the evaluation of an education program for patients with breast cancer receiving radiation therapy. They found that the individual patient's information preferences, priority information needs, and preferred information seeking activities should be identified early and incorporated within the educational programs to target the resources like, good coping strategies and minimize the likelihood that positive patient outcomes would result.

Hassanein. K. A., Musgrove. B. T., Bradbury. E. (2001) conducted a study in Manchester about the functional status of patients with oral cancer and its relation to style of coping, social support and psychological status

among 68 patients. They used the Washington of University Quality of Life questionnaire (UW-QOL) for assessing the functional status, Hospital Anxiety and Depression Scale (HADS) for psychological outcome, Mental Adjustment to Canver Questionnaire (MAC-Q) for style of coping, and Short Form Social Questionnaire (SSQ-6) for social support. They were evaluated for six months to six years and the researchers proved that the young patients, women, patients with advanced tumors, those who had been treated with radiation therapy reported low functional status which was mainly associated with the anxiety and the depression.

Petz. T. et al (2001) conducted a study in Magdeburg about patients coping with malignant glioma during the course of radiation therapy among 21 patients. They used the FKV (Freiburg Questionnaire coping with the disease) scale for assessing the coping strategies, State Trait Anxiety Inventory (STAI) for assessing the anxiety and Beck Depression Inventory Scale for assessing the depression and the QLQ-C 30 Questionnaire of the EORCT and found that the patients with malignant tumors had an insignificant influence of radiation therapy on anxiety, depression, coping and the quality of life in comparison to that of the diagnosis of cancer.

Forsberg. C. et al (2001) conducted a study in Sweden among 132 cancer patients about the problems faced radiation therapy and the coping strategies. They proved that the cancer patients on radiation therapy facedd several problems like anger, depression, withdrawal and used emotion focused strategies to cope up with the treatment. Family, friends and colleagues had a positive impact on the coping process. They also found that a hopeful and optimistic attitude was a helpful strategy for coping with the treatment.

Lundberg. P. C., Trichorb. K. (2001) conducted a study in Sweden among 90 male and 87 female Thai Buddhist patients about the feelings, coping, and satisfaction with nurse-provided education and support to cancer patients undergoing radiation therapy. They predicted that the oncology nurses had to provide education to radiation therapy patients, and it is essential that they should aware of their patient's cultural values and religious beliefs in order to improve their coping strategies.

Luebbert. K., Dahme. B., Hasenbring. M. (2001) conducted a study in Germany about the effectiveness of relaxation training in reducing treatment related symptoms and improving emotional adjustment among 192 cancer patients. They concluded that the relaxation training should be implemented into clinical routine for cancer patients undergoing radiation therapy as an acute medical treatment to reduce the treatment-related symptoms and for improving the emotional adjustment of the patients.

CHAPTER – III
RESEARCH METHODOLOGY

This chapter includes research design, setting of the study, population, sample, inclusion and exclusion criteria for the selection of the sample, development and description of the tool, content validity, pilot study, data collection procedure and plan for data analysis.

RESEARCH APPROACH:

The quantitative approach was used in this study

RESEARCH DESIGN:

Descriptive research design was adopted in this study.

SETTING OF THE STUDY:

This study was conducted at Meenakshi Mission Hospital; Madurai. It was situated 58-kms away from Matha college of Nursing, Manamadurai. It is a 575 bedded hospital and has 40 beds in Oncology unit. Nearly 50 to 60 Oncology patients are attending out-patient and in-patient department to receive radiation therapy.

POPULATION:

The target population of this study was adult patients with malignant tumor who are receiving radiation therapy at Meenakshi Mission Hospital, Madurai.

SAMPLE:

The adult patients with cancer who fulfilled the inclusion criteria were selected as samples.

SAMPLE SIZE:

  The sample consisted of 60 adult patients with cancer who were receiving radiation therapy at Meenakshi Mission Hospital, Madurai.

SAMPLING TECHNIQUE:

  Purposive sampling technique was used to select the samples.

CRITERIA FOR SAMPLE SELECTION:

<u>Inclusion Criteria:</u>

- Patients who were willing to participate in this study.
- Patients with malignant tumor, between the age group of 21 to 65 years.
- Patients who were receiving radiation therapy
- Both female and male patients were included.
- Patients who were able to read and understand Tamil and English.

<u>Exclusion Criteria:</u>

- Patients who were not willing to participate in this study.
- Patients who were below the age of 21 years and above the age of 65 years.
- The benign cancer patients.
- The cancer patients who were not receiving radiation therapy.

RESEARCH TOOL AND TECHNIQUE:

DESCRIPTION OF THE TOOL:

  The research tool consisted of two sections:

Section-A:

PART – I:

This deals with the demographic data of cancer patients such as age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, and family history of cancer.

PART-II:

It deals with the disease profile which includes the site of cancer, duration of illness, stage of the disease, duration of treatment and number of radiation therapy attended.

Section – B:

PART - I

The state anxiety inventory scale which was developed by Spielberger's et al (1983) was used and modified by the researcher to assess the level of anxiety. It consists of 25 statements which was a self report inventory that focused the subjective feeling on radiation therapy treatment.

All patients were encouraged to describe their feelings for assessing the state anxiety. The state anxiety consists of 25 statements that evaluate how the respondents felt "right now at that moment". It also might be used to evaluate how they felt at a particular time in the recent past and how they felt in a specific situation that was likely to be encountered in the future or a variety of hypothetical situation.

Scoring Procedure:

The state anxiety consists of 25 statements that evaluate how the respondents felt "right now at that moment". Each state anxiety inventory was given a weighted score of 1 to 4. A rating of 4 for the positive statements 3, 4, 6, 7, 9, 12, 13, 14, 17, 18,21,22,23 indicated the presence of a high level of anxiety. For the reversed statements 1, 2, 5, 8, 10, 11, 15, 16, 19, 20, 24, 25 rating of 4 indicates the absence of anxiety. The score for the state anxiety inventory scale ranged from 25 to 100

Based on the score from Mean +/- Standard deviation formula, the subjects were classified as follows:

- Low level of anxiety   –   0 to 48
- Moderate level of anxiety   –   49 to 68
- High level of anxiety   –   68 to 100

PART-II:

The standard Jalowiec coping scale was used for this study to assess the level of coping abilities. It consists of 25 statements. It was a self report coping scale that focused on the coping abilities of patients undergoing radiation therapy.

Scoring Procedure:

Out of 25 statements 13 were positive and 12 were negative statements. The subjects were requested to respond in a five point scale. The five categories for the scale were "never", "very rarely", "sometimes", "very often" and always with the score of 1, 2, 3, 4, and 5 respectively. The negative statements scored in a reversed fashion (ie) "always", "very often", "sometimes", "very rarely" and "never", with the score of 1, 2, 3, 4, and 5.

The minimum score of the coping scale was 25 and the maximum score was 125.

Based on the score from Mean +/- standard deviation the subjects were classified as follows:

- Maximum level of coping abilities   –   88 to 125
- Moderate level of coping abilities   –   61 to 87
- Minimum level of coping abilities   –   25 to 60

TESTING OF THE TOOL:

Content Validity:

In order to ensure content validity, the tool was submitted to five experts in the field of Medical Surgical Nursing along with the blue print, criteria, and questionnaires. After establishing the validity, the tool was translated into Tamil and again translated in to English to validate the language.

Reliability of the Tool:

The test retest method was used to establish the reliability of questionnaires. By using Spearman Brown formula the ' r ' value was identified. It was 0.86

PILOT STUDY:

In order to find out the feasibility of the study, a pilot study was conducted among 6 patients with cancer, who were receiving radiation therapy at Meenakshi Mission Hospital, Madurai, who fulfilled the inclusion criteria. It was carried out in the same way as the final study was done. In order to test the feasibility and practicability, it was conducted. After

obtaining permission from the Institution, six patients who met the inclusion criteria were selected by using purposive sampling method. After the proper explanation, the questionnaires were distributed and the doubts were cleared. The results were analyzed based on the scores obtained by the patients. The calculated value 'r' for the pilot study was -0.96 which indicated the presence of negative correlation in between the anxiety and coping abilities. During the pilot study the investigator did not face any difficulties. These subjects were excluded from the final study.

DATA COLLECTION PROCEDURE:

Data was collected for a period of six weeks at Meenakshi Mission Hospital, Madurai. Before the interview, the purpose of interview was explained with self introduction and assured that the confidentiality would be maintained for ever. The time scheduling for data collection was from 9.30 A.M to 4.30 PM. 30 to 45 minutes time was given to each patient. 3 to 4 patients were assessed in a day. During this assessment the patients were very cooperative. The Self instructional module has issued and each one was given time to ask questions and to clarify their doubts.

DATA ANALYSIS:

Data were analyzed based on the objectives. Frequencies and percentage were computed for describing the sample characteristics. Chi-square test was computed to describe the association of the selected demographic variables with the anxiety and coping abilities. Karl Pearson's 'r'(correlation) was computed to find out the relationship between the level of anxiety and the level of coping abilities.

PROTECTION OF HUMAN SUBJECTS:

The research proposal was approved by the dissertation committee prior to the pilot study. The permission was obtained from the Head of the Department of Medical-Surgical Nursing, Matha College of Nursing, Manamadurai and from the Hospital authority. Verbal permission was obtained from the study subject and the data collection was kept as confidential. Assurance was given to the study subjects that anonymity of each individual would be maintained.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with analysis and interpretation of collected data from 60 patients with cancer, who are receiving radiation therapy, to assess the level of anxiety and coping abilities among them.

Analysis is a method for rendering quantitative, meaningful and providing intelligible information, so that the research problem can be studied and tested including the relationship between the variables. The purpose of analysis is to reduce the data to a interpretable and meaningful form so that the result can be compared and significance can be identified.

Data were collected through standardized and structured interview schedule. The obtained data were analyzed by using descriptive and inferential statistics which were necessary to assess the level of anxiety and coping abilities.

PRESENTATION OF DATA:

The analysis of data was organized and presented under the following sections.

SECTION-I

Table 1:

Frequency and percentage distribution of samples according to selected demographic variables

Table 2:

Frequency and percentage distribution of samples according to their level of anxiety

Table 3:

  Frequency and percentage distribution of samples according to their level of coping abilities

SECTION-II:

Table 4:

  Relationship between the level of anxiety and coping abilities among the patients with cancer undergoing radiation therapy

SECTION-III:

Table 5:

  Association between the level of anxiety and the selected demographic variables the patients with cancer undergoing radiation therapy

Table 6:

  Association between the level of coping abilities and the selected demographic variables of the patients with cancer undergoing radiation therapy

SECTION-I

Frequency distribution of Demographic Variables

Table-1   N=60

S.No	Demographic Variables	Frequency	Percentage
1	**Age (in years)**		
	21 to 35	5	08.30%
	36 to 50	16	26.70%
	51 to 65	39	65.00%
2	**Sex**		
	Female	25	41.60%
	Male	35	58.40%
3	**Religion**		
	Hindu	48	80.00%
	Muslim	9	15.00%
	Christian	3	05.00%
4	**Education**		
	Illiterate	15	25.00%
	Upto middle school level	20	33.30%
	Higher secondary level	14	23.40%
	Under Graduate	8	13.30%
	Degree and Above	3	05.00%
5	**Occupation**		
	Un Employed	33	55.00%
	Govt. Employee	6	10.00%
	Private Employee	6	10.00%
	Self employee	15	25.00%

6	**Income of the family (per month in rupees)**		
	Below 5000	29	48.30%
	5001 to 10,000	24	40.00%
	10,001 and above	7	11.70%
7	**Marital status**		
	Married	56	93.40%
	Unmarried	2	03.30%
	Widow/Spinster	2	03.30%
	Divorced	0	00.00%
8	**Number of children**		
	One	8	13.30%
	Two	22	36.70%
	More than two	29	48.30%
	None	1	01.70%
9	**Type of the family**		
	Nuclear family	33	55.00%
	Joint family	26	43.30%
	Extended family	1	01.70%
	separated family	0	00.00%
10	**Dietary pattern**		
	Vegetarian	12	20.00%
	Non-vegetarian	48	80.00%
11	**Habits**		
	Smoking	8	13.30%
	Alcohol	1	01.70%
	Tobacco chewing	0	00.00%
	Betal chewing	4	06.70%
	None of the above	47	78.30%

12	**Hobbies**		
	Watching movies	31	51.70%
	Listening music	7	11.70%
	Reading books	12	20.00%
	Sleeping	10	16.60%
	None	0	00.00%
13	**Family history of cancer**		
	Yes	7	11.70%
	No	53	88.30%
14	**Site of cancer**		
	Head & Neck	13	21.70%
	Lung	6	10.00%
	Breast	15	25.00%
	Gastro Intestinal Tract	2	03.30%
	Cervical	16	26.70%
	Others	8	13.30%
15	**Duration of Illness**		
	0 to 3 months	10	16.70%
	4 to 7 months	18	30.00%
	8 to 12 months	14	23.30%
	Above one year	18	30.00%
16	**Stage of disease**		
	I stage	14	23.30%
	II stage	37	61.70%
	III stage	7	11.70%
	IV stage and above	2	03.30%

17	**Duration of treatment** 0 to 1 month 2 to 6 months more than 6 months	25 20 15	41.70% 33.30% 25.00%
18	**Number of radiation therapy attended** One Two More than two	5 1 54	08.30% 01.70% 90.00%

Table-1 shows the frequency and percentage distribution of samples based on the demographic variables.

Regarding age, 5 (8.3%) samples are in the age group of 21 - 35 years and 16 (26.7%) samples are in the age group of 36 - 50 and 39(65%) samples are in the age group of 51 – 65.

Regarding sex, 25 (41.6%) samples are females and 35 (58.4%) samples are males.

Regarding religion, 48 (80%) samples are Hindus, 9 (15%) samples are Muslims, and 3 (5%) samples are Christians.

Regarding education 15 (25%) samples are Illeterate, 20(33.3%) samples studied upto middle school level, 14 (23.4%) samples studied upto higher secondary level, 8 (13.3%) samples studied upto undergraduate and 3 (5%) samples studied upto degree and above.

Regarding occupation 33 (55%) samples are unemployed, 6 (10%) samples are government employees, 6 (10%) samples are private employees and 16 (25%) samples are self employees.

Regarding the total income of the family per month, 29 (48.3%) samples are earning below Rs. 5000, 24 (40%) samples are earning Rs. 5001 to 10,000 and 7 (11.7%) samples are earning Rs.10,001 and above.

Regarding marital status, 56 (93.4%) samples are married, 2 (3.33%) samples are unmarried and 2 (3.33%) samples are widow /spinster.

Regarding number of children, 8 (13.3%) samples are having one child, 22 (36.7%) samples are having two children, 29 (48%) samples are having more than two children, 1 (17%)sample is not having child.

Regarding type of the family, 33 (55%) samples are belongs to Nuclear family, 26 (43.3%) samples are belongs to joint family, and 1 (1.7%) sample is belongs to extended family.

Regarding dietary pattern , 12 (20%) samples were vegetarian and 48(80%) samples were Non vegetarians.

Regarding habits, 8 (13.3%) samples are smokers, 1 (1.77%) sample is an alcoholic, 4 (6.7%) samples are Betal chewers, 47 (78.3%) samples have no bad habits.

Regarding hobbies, 31(51.7%) samples are watching movies, 7 (11.7%) samples are listening music, 12 (20%) samples are reading books, 10 (16.6%) samples are sleeping.

Regarding the family history of cancer, 7 (11.7%) samples had the family history and 53 (88.3%) samples had no family history.

Regarding the site of cancer, 13 (21.75%) samples had Head and Neck cancer, 6 (10%) samples had Lung cancer, 15 (25%) samples had Breast cancer, 2 (3.33%) samples had Gastro Intestinal cancer, 16 (26.7%) samples on cervical cancer, 8 (13.3%) samples had cancer on other sites.

Regarding the duration of Illness, 10 (16.7%) samples have 0 to 3 months Illness, 18 (30%) samples have 4 to 7 months Illness, 14 (23.3%) samples

have 8 to 12 months Illness, and 18 (30%) samples have above one year Illness.

Regarding the stage of disease 14 (23.3%) samples are in I Stage disease, 37 (61.7%) samples in II Stage disease, 7 (11.7%) samples in III stage disease and 2 (3.3%)samples in IV Stage and above.

Regarding the duration of treatment 25 (41.7%) samples are receiving treatment for 0 to 1 month, 20 (33.3%) samples are receiving treatment for 2 to 6 months and 15 (25%) samples are receiving treatment for more than 6 months.

Regarding the number of radiation therapy attended, 5 (8.3%) samples are attending the radiation therapy for the first time, 1 sample (1.7%) is for the second time and 54 (90%) samples are for more than two times.

FIGURE - II

Percentage distribution of demographic variables according to age
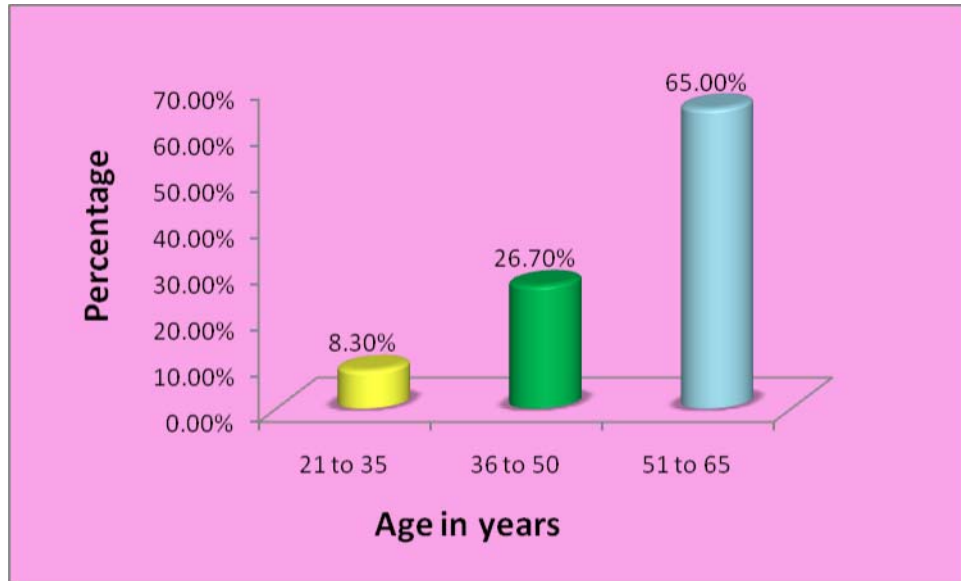
FIGURE – III

Percentage distribution demographic variables according to of sex
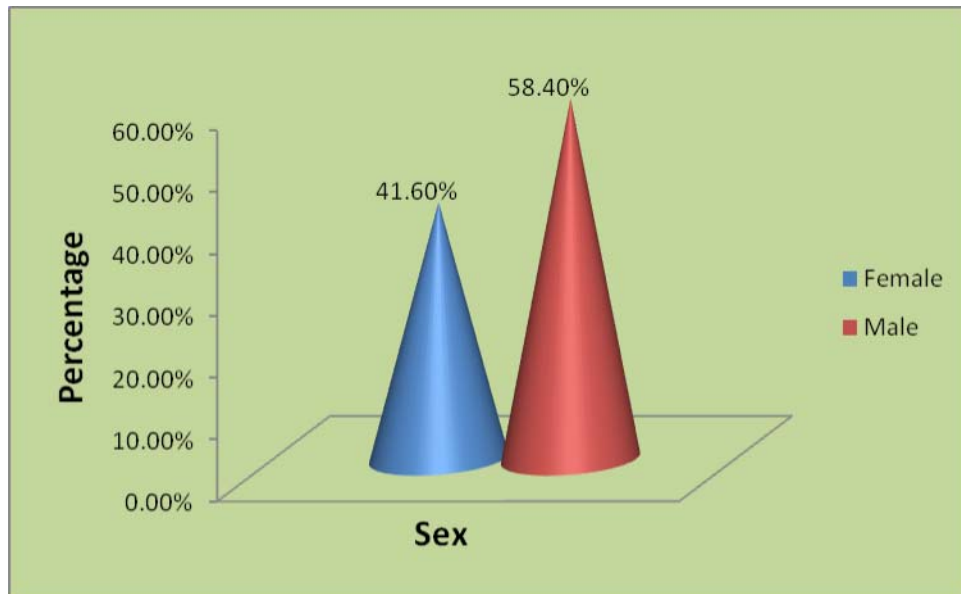
FIGURE – IV

Percentage distribution of demographic variables according to religion
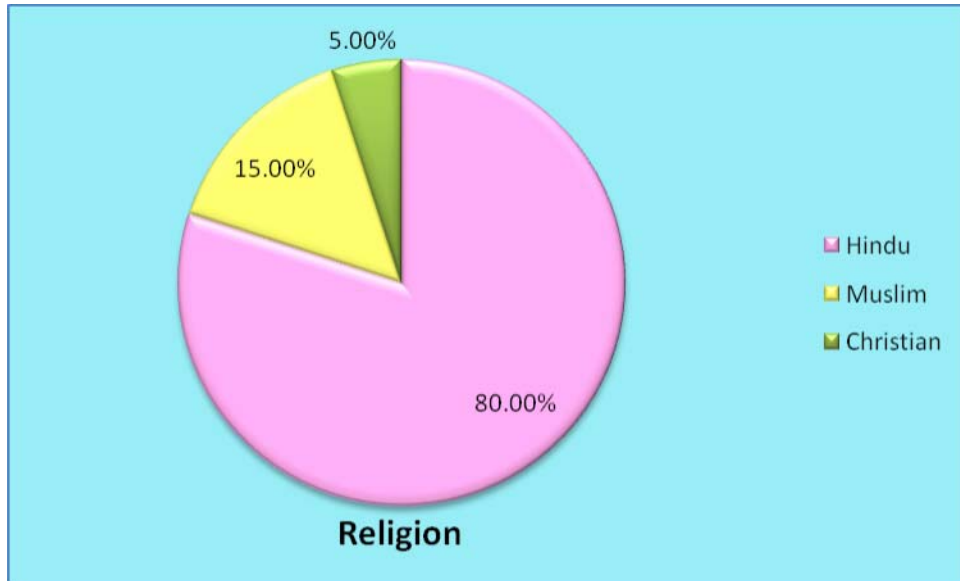
FIGURE - V

Percentage distribution of demographic variables according to education
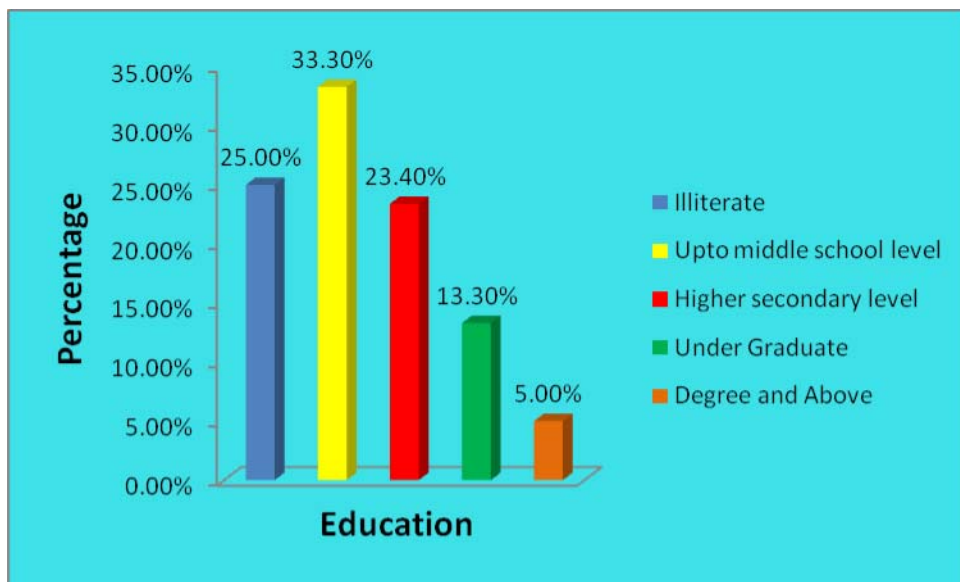
FIGURE - VI

Percentage distribution of demographic variables according to occupation
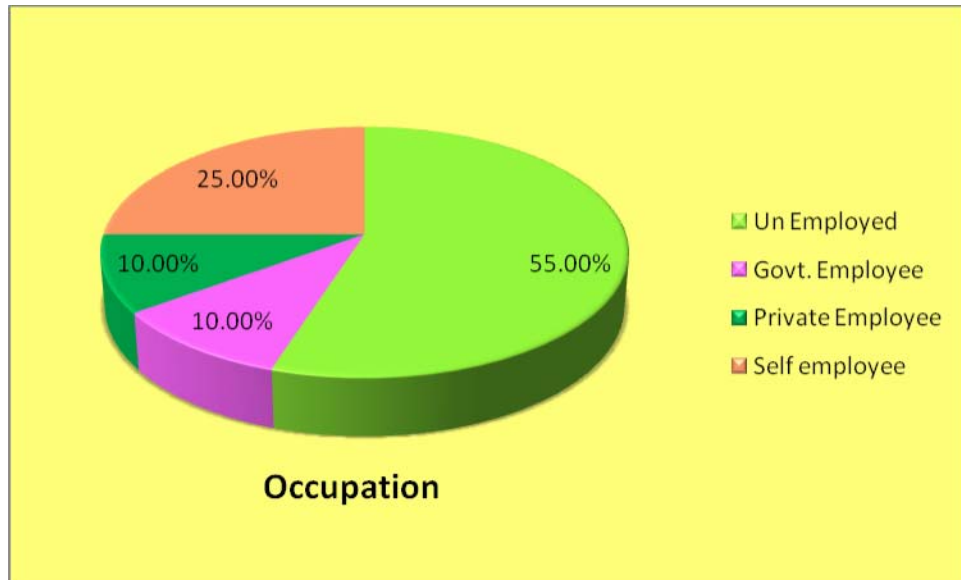
FIGURE - VII

Percentage distribution of demographic variables according to income
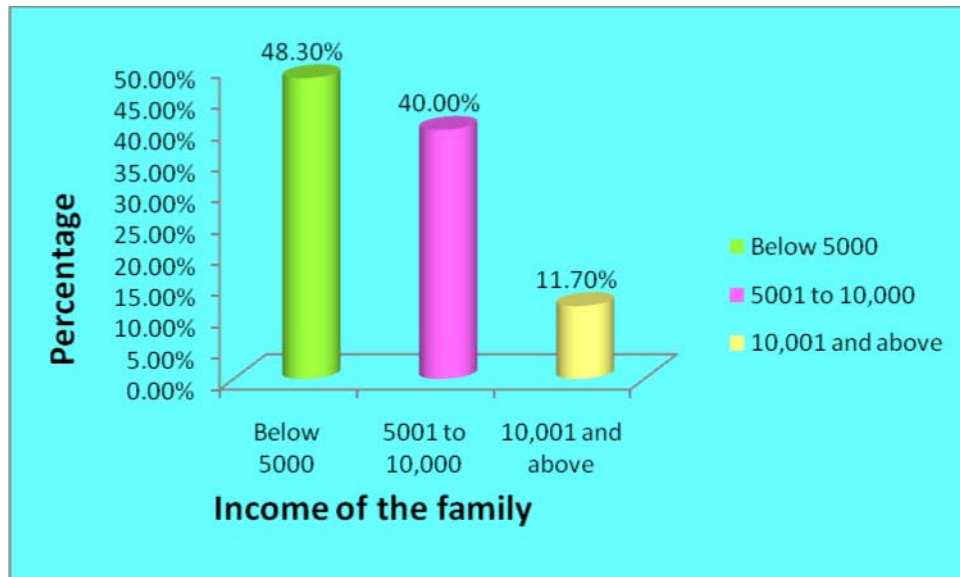
FIGURE - VIII

Percentage distribution of demographic variables according to marital status
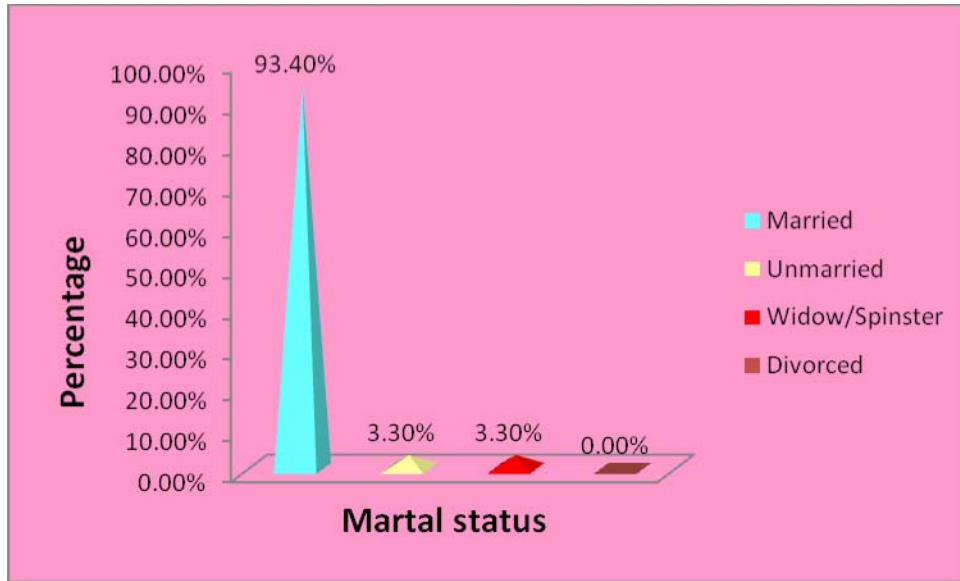
FIGURE - IX

Percentage distribution of demographic variables according to number of children
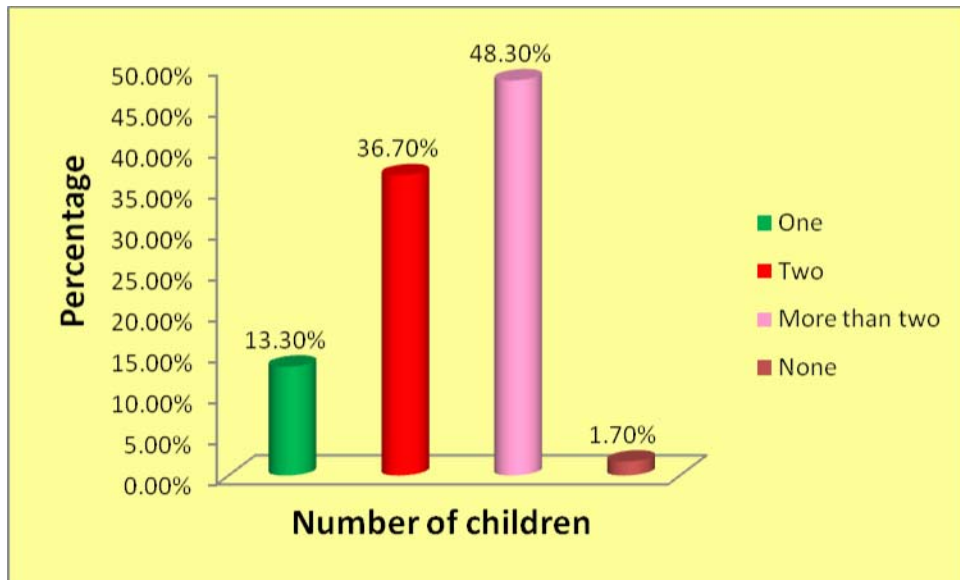
FIGURE – X

Percentage distribution of demographic variables according to type of family
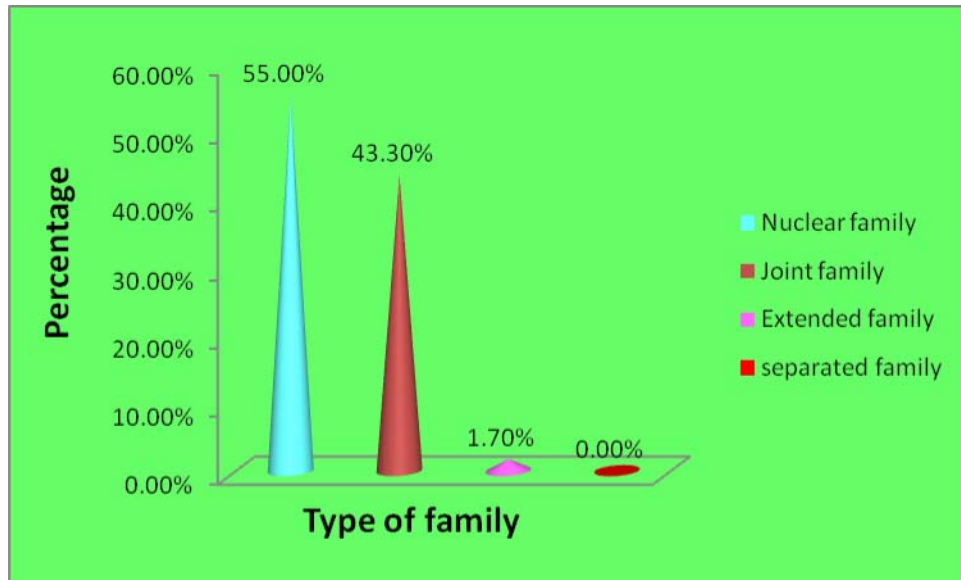
FIGURE – XI

Percentage distribution of demographic variables according to dietary pattern
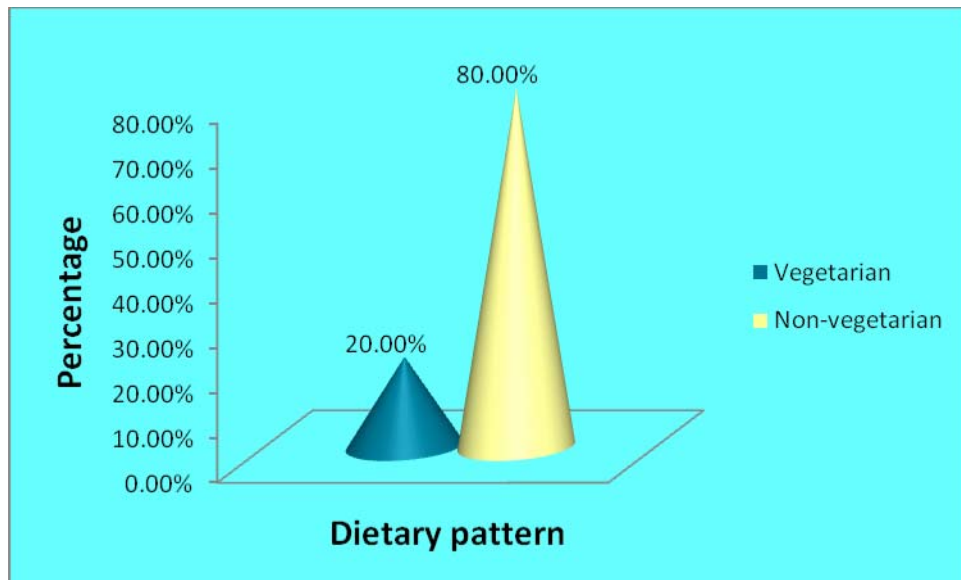
FIGURE – XII

Percentage distribution of demographic variables according to habits
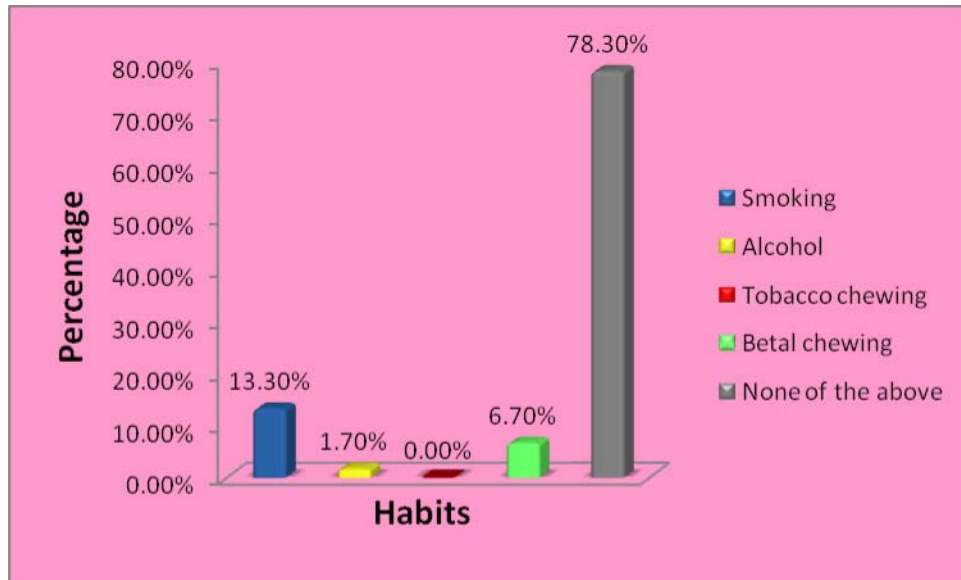
FIGURE – XIII

Percentage distribution of demographic variables according to hobbies
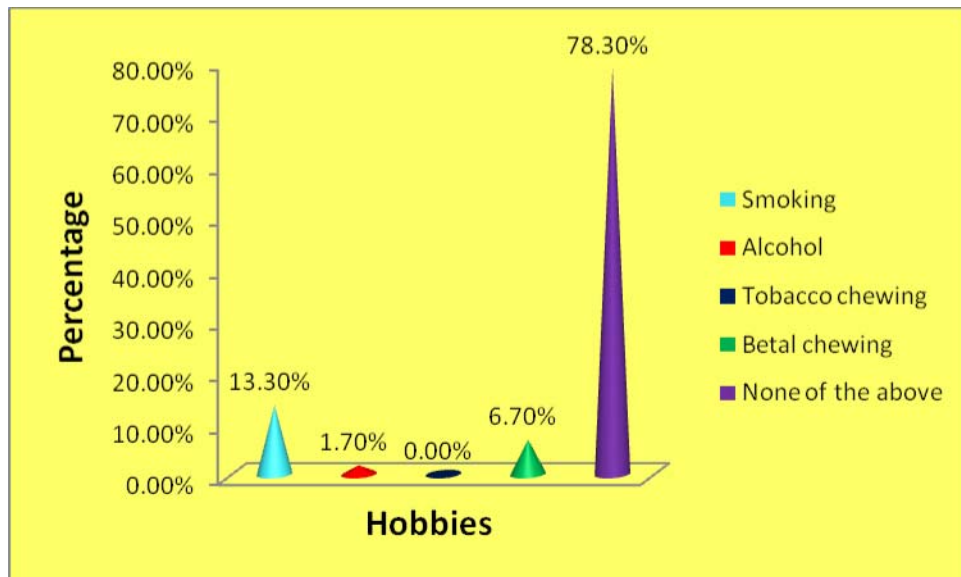
FIGURE – XIV

Percentage distribution of demographic variables according to family history of cancer
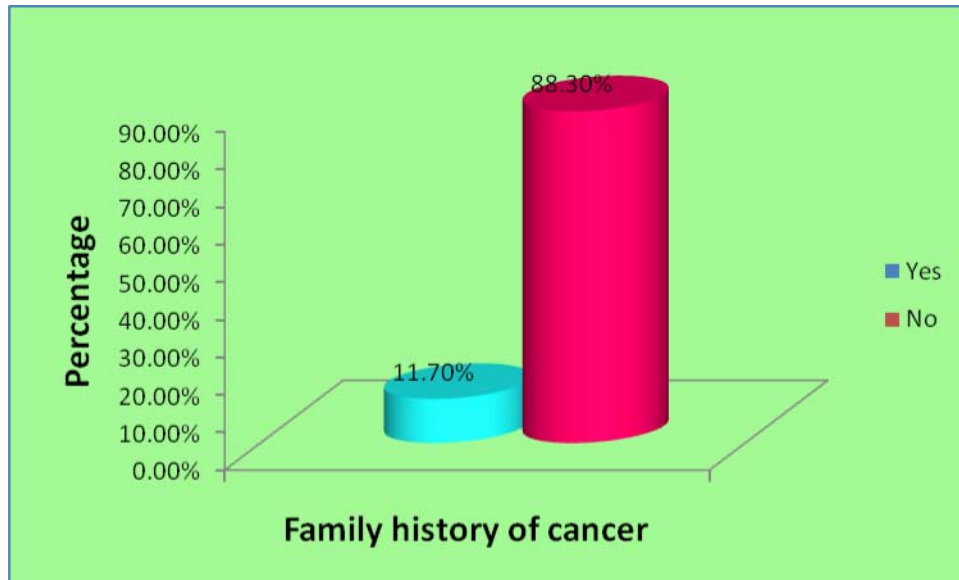
FIGURE – XV

Percentage distribution of demographic variables according to site of cancer
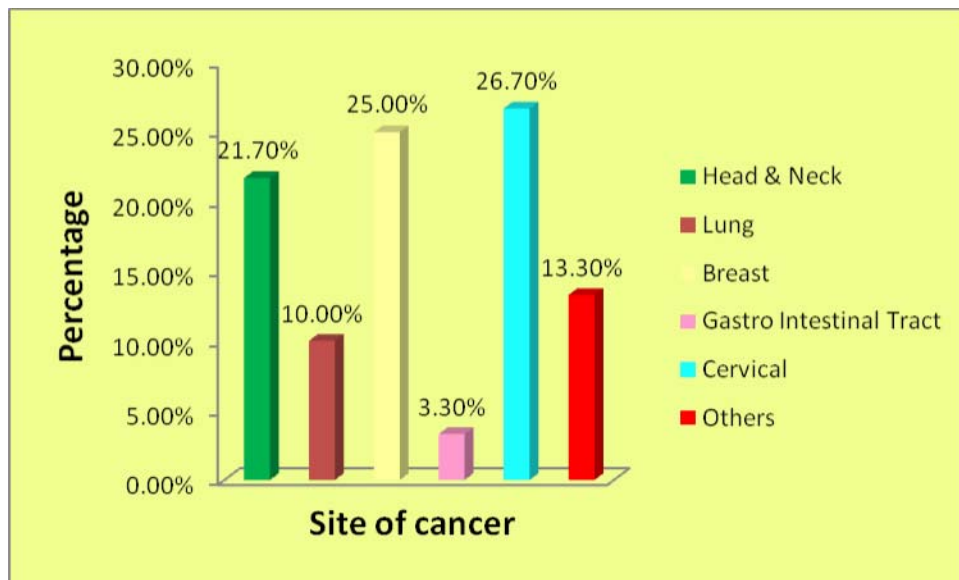
FIGURE – XVI

Percentage distribution of demographic variables according to duration of illness
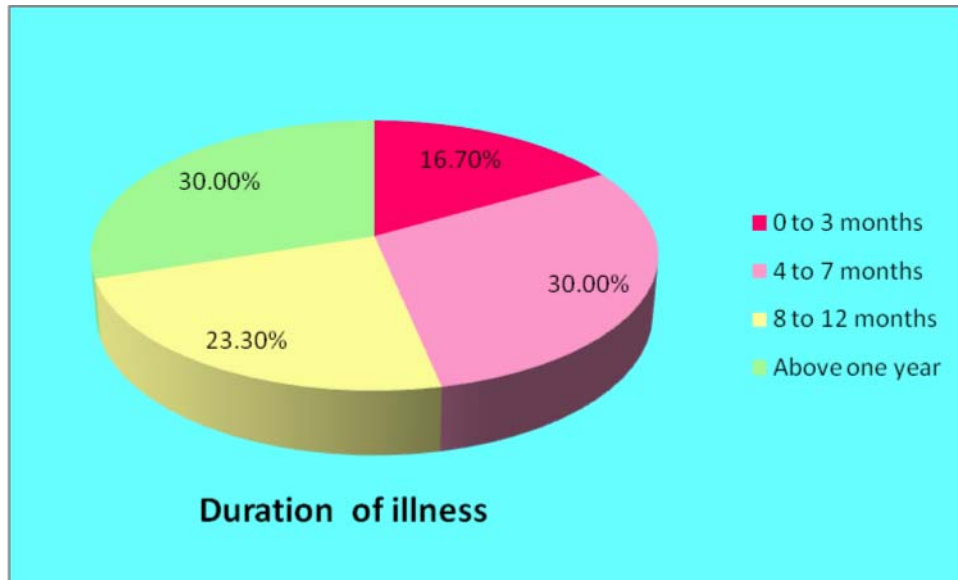
FIGURE – XVII

Percentage distribution of demographic variables according to stage of the disease
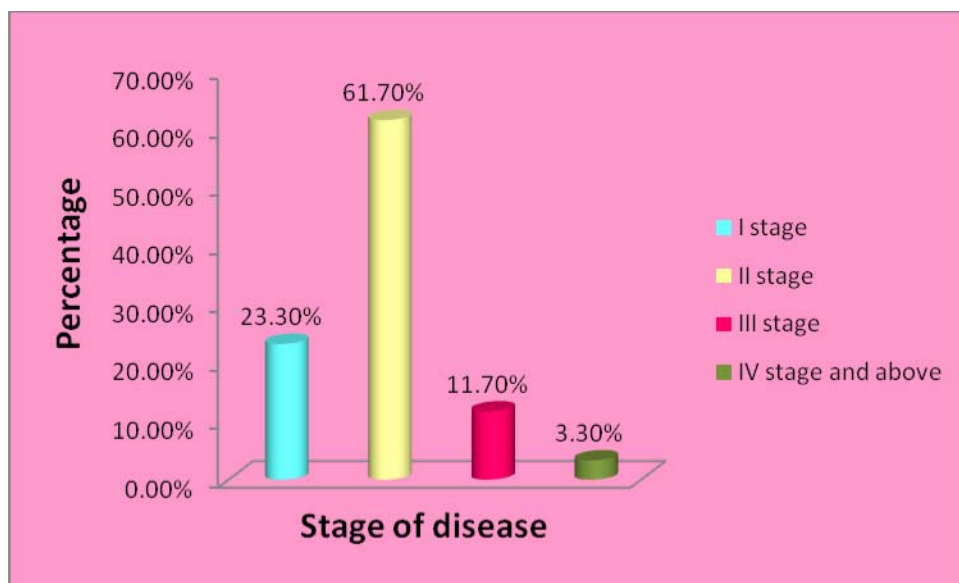
FIGURE – XVIII

Percentage distribution of demographic variables according to duration of treatment
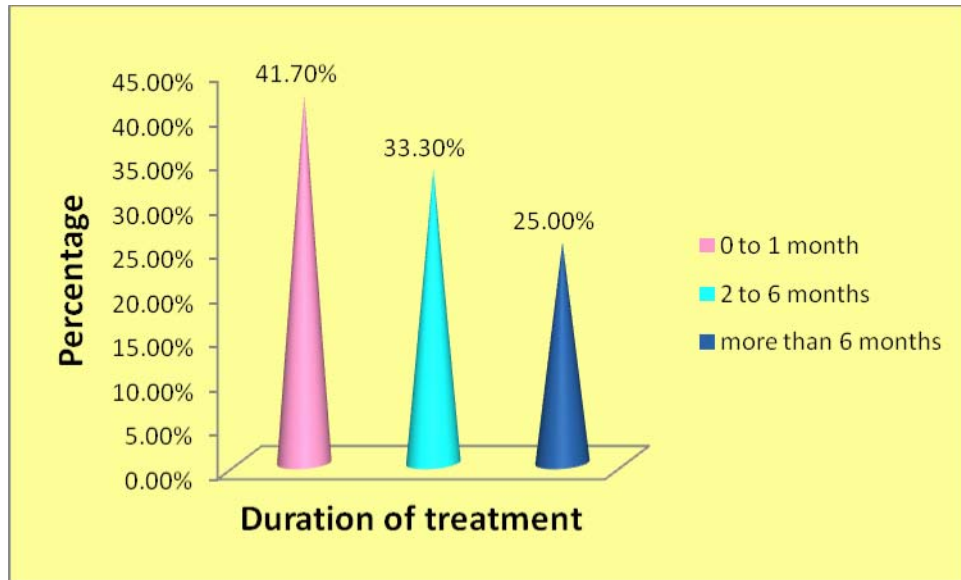
FIGURE – XIX

Percentage distribution of demographic variables according to number of radiation therapy attended
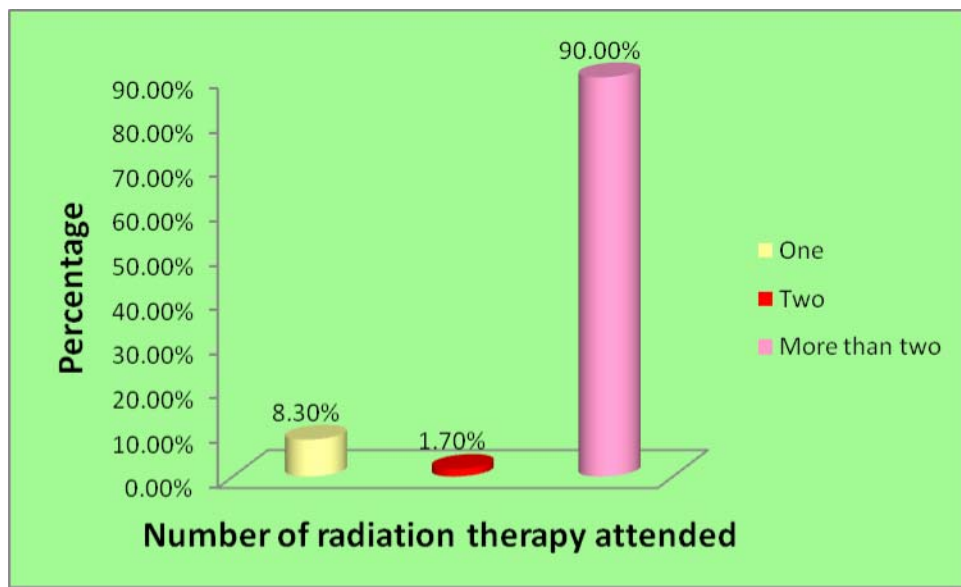
Distribution of level of anxiety during radiation therapy according to their
selected demographic variables

Table – 2

N = 60

Level of anxiety					
Low level		**Moderate level**		**High level**	
Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
14	23.33%	36	60%	10	16.67%

Table – 2 reveals that 36 (60%) cancer patients are having moderate level of anxiety; 14 (23.33%) patients are having low level of anxiety; and 10 (16.67%) patients are having high level of anxiety.

FIGURE – XX

Percentage distribution of level of anxiety among patients with cancer who are receiving radiation therapy
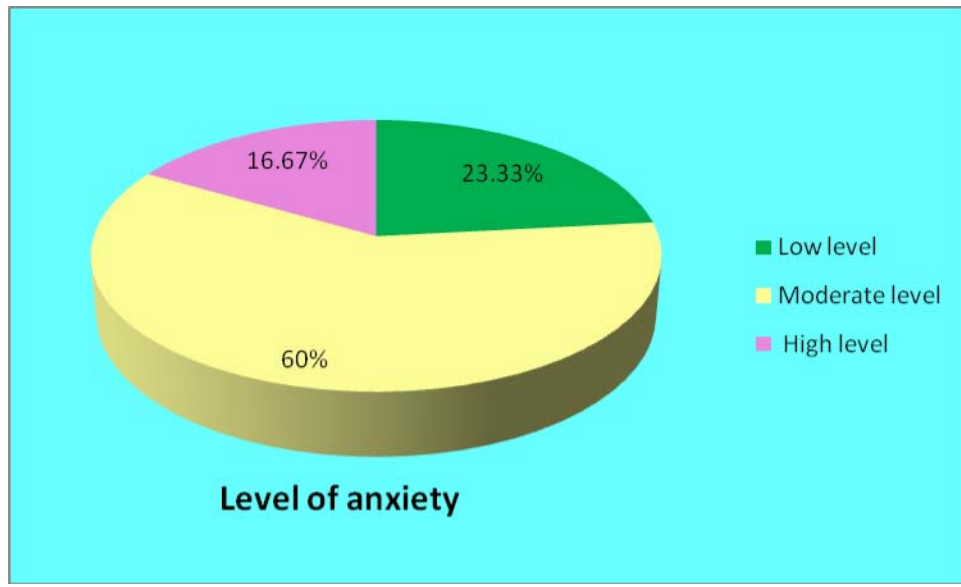
Distribution of level of coping abilities according to their selected
demographic variables

Table – 3:

N=60

Level of coping abilities					
Minimum level		**Moderate level**		**Maximum level**	
Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
8	13.33%	39	65.00%	13	21.67%

Table – 3 reveals that maximum of 39 (65%) cancer patients have moderate level of coping abilities, 13 (21.67%) patients have maximum level of coping abilities, and 8 (13.33%) patients haves minimal level of coping abilities.

FIGURE – XXI

Percentage distribution of coping abilities among patients with cancer who are receiving radiation therapy
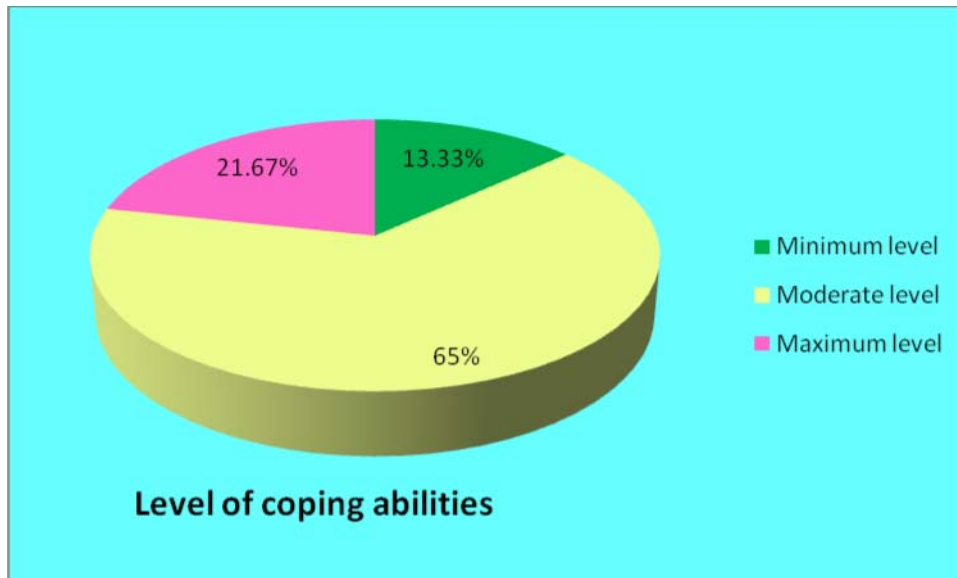
SECTION – II

<u>Relationship between the level of anxiety and coping abilities</u>

Table – 4:

N = 60

Variables	Mean	Standard deviation	Correlation
Anxiety	56	10.01	'r' = -0.79
Coping Abilities	74	13.42	

Table – 4 shows that the calculated value 'r' is - 0.79 which indicates the presence of negative correlation between the anxiety and coping abilities.

<u>SECTION - III</u>

Association between anxiety and demographic variables

Table – 5:   N=60

S.No	Demographic data	Level of anxiety			Chisquare Value
		Low	**Medium**	**High**	
1	**Age in years**				
	a) 21 to 35	1	2	2	
	b) 36 to 50	3	10	3	2.76#
	c) 51 to 65	10	24	5	
2	**Sex**				
	a) Female	5	16	4	
	b) Male	7	20	6	0.53#
3	**Religion**				
	a) Hindu	11	31	6	
	b) Muslim	3	5	1	16.224*
	c) Christian	0	0	3	
4	**Education**				
	a) Illiterate	0	11	4	
	b) Upto middle school level	5	11	4	
	c) Higher secondary level	4	9	1	9.37#
	d) Under Graduate	3	4	1	
	e) Degree and Above	2	1	0	
5	**Occupation**				
	a) Un Employed	1	26	5	
	b) Govt. Employee	4	3	0	
	c) Private Employee	1	3	2	30.45*
	d) Self Employee	8	4	3	
	Total income of the				

6	**family** **(per month in rupees)** a) Below 5000 b) 5001 to 10,000 c) 10,001 and above	7 5 2	18 15 3	4 4 2	1.456#
7	**Marital status** a) Married b) Unmarried c) Widow/spinster d) Divorced	13 0 1 0	34 1 1 0	9 1 0 0	2.83#
8	**Number of children** a) One b) Two c) More than two d) None	4 5 5 0	4 14 19 1	3 5 0	5.86#
9	**Type of family** a) Nuclear family b) Joint family c) Extended family d) separated family	8 6 0 0	11 14 1 0	4 6 0 0	5.82#
10	**Dietary pattern** a) Vegetarian b) Non-vegetarian	2 12	9 27	1 9	1.48#
11	**Habits** a) Smoking b) Alcohol c) Tobacco chewing d) Betel chewing e) None of the above	2 1 0 1 10	4 0 0 1 31	2 0 0 2 6	13.18#
	Hobbies				

No					
12	a) Watching movies b) Listening music c) Reading books d) Sleeping e) None	9 0 5 0 0	15 7 6 8 0	7 0 1 2 0	11.14#
13	**Family history of cancer** a) Yes b) No	 4 10	 3 33	 0 10	6.47*
14	**Site of cancer** a) Head & Neck b) Lung c) Breast d) Gastro Intestinal Tract e) Cervical f) Others	 3 1 4 1 4 1	 8 2 10 1 9 6	 2 3 1 0 3 1	2.72#
15	**Duration of illness** a) 0 to 3 months b) 4 to 7 months c) 8 to 12 months d) Above one year	 0 3 4 7	 6 12 9 19	 4 3 1 2	14.29*
16	**Stage of disease** a) I stage b) II stage c) III stage d) IV stage and above	 1 9 3 1	 11 21 3 1	 1 8 1 0	12.59#
17	**Duration of treatment** a) 0 to 1 month b) 2 to 6 month **c)** More than 6 month	 4 5 5	 16 11 9	 5 4 1	2.58#
18	**Number of radiation therapy attended** a) One b) Two c) More than two	 0 0 12	 1 0 34	 4 1 5	23.88*

\# - Not significant

* - Significant

Table 5 represents the association between the level of anxiety and selected demographic variables of patient with cancer, who are receiving radiation therapy. The result shows that the calculated value for anxiety and the selected demographic variables such as, Religion, Occupation, Family history, Duration of illness, and Number of radiation therapy attended are greater than the tabulated value. So it is concluded that there is a significant association between anxiety and the selected demographic variables such as, Religion, Occupation, Family history of cancer, Duration of illness, and Numbers of radiation therapy attended.

Association between coping abilities and demographic Values among patients who are receiving radiation therapy

Table – 6   N=60

S.No	Demographic data	Level of coping			Chi square Value
		Minimum	**Average**	**Maximum**	
1	**Age (in years)**				
	a) 21 to 35	1	3	1	
	b) 36 to 50	2	12	2	1.46#
	d) 51 to 65	5	24	10	
2	**Sex**				
	a) Female	2	17	6	1.06#
	b) Male	6	22	7	
3	**Religion**				
	a) Hindu	4	34	10	
\	b) Muslim	3	3	3	7.38#
	e) Christian	1	2	0	
4	**Education**				
	\ a) Illiterate	4	11	0	
	b) Upto middle school level	1	14	5	
	c) Higher secondary level	2	8	4	12.81#
	d) Under Graduate	0	5	3	
	e) Degree and Above	1	1	1	
5	**Occupation**				
	a) Un Employee	6	22	5	
	b) Govt. Employee	0	3	3	
	c) Private Employee	0	6	0	9.07#
	d) Self Employee	2	8	5	

6	**Total income of the family (per month in rupees)** a) Below 5000 b) 5001 to 10,000 c) 10,001 and above	4 3 1	19 15 5	6 6 1	0.38#
7	**Marital status** a) Married b) Unmarried c) Widow/spinster d) Divorced	8 0 0 0	36 2 1 0	12 0 1 0	2.205#
8	**Number of children** a) One b) Two c) More than two d) None	0 4 4 0	5 12 21 1	3 6 4 0	4.37#
9	**Type of family** a) Nuclear family b) Joint family c) Extended family d) separated family	5 3 0 0	23 15 1 0	5 8 0 0	4.23#
10	**Dietary pattern** a) Vegetarian b) Non-vegetarian	0 8	9 30	3 10	41.9*
11	**Habits** a) Smoking b) Alcohol c) Tobacco chewing d) Betel chewing e) None of the above	0 0 0 2 6	6 1 0 1 31	2 0 0 3 8	12.53#

12	**Hobbies**				
	a) Watching movies	4	22	5	
	b) Listening music	1	5	1	
	c) Reading books	1	4	7	
	d)Sleeping	2	8	0	
	e) None	0	0	0	13.23*
13	**Family history of cancer**				
	a) Yes	0	2	5	
	b) No	8	37	8	11.37*
14	**Site of cancer**				
	a) Head & Neck	2	9	2	
	b) Lung	1	4	1	
	c) Breast	0	12	3	6.69#
	d) Gastro Intestinal Tract	0	2	0	
	e) Cervical	3	8	5	
	f) Others	2	4	2	
15	**Duration of illness**				
	a) 0 to 3 months	3	5	2	
	b) 4 to 7 months	0	15	3	7.79#
	c) 8 to 12 months	1	10	3	
	d) Above one year	4	9	5	
16	**Stage of disease**				
	a) I stage	4	9	4	
	b) II stage	1	28	5	18.02*
	c) III stage	2	2	3	
	d) IV stage and above	1	0	1	
17	**Duration of treatment**				
	a) 0 to 1 month	3	17	5	2.2#
	b) 2 to 6 months	3	14	3	
	c) more than 6 months	2	8	5	
18	**Number of radiation therapy attended**				
	a) One	1	4	0	
	b) Two	0	1	0	
	c) More than two	7	34	13	4.02#

#- Not significant

*   Significant

Table 6 represents the association between the coping abilities and the selected demographic variables of patient with cancer, who are receiving radiation therapy. The result shows that the calculated value for coping abilities and selected demographic variables such as Dietary pattern, Hobbies, Family history, and Stage of disease are greater than the tabulated value. So it is concluded that there is a significant association between coping abilities and selected demographic variables such as Dietary pattern, Hobbies, Family history, and Stage of disease.

CHAPTER – V

DISCUSSION

The aim of this study was to determine the level of anxiety and coping abilities among the patients with cancer, who are receiving radiation therapy. The investigator conducted the study in Meenakshi Mission Hospital and Research Center, Madurai, Tamilnadu.

Sixty samples were selected by using the purposive sampling technique. The samples were selected based on inclusion criteria. The samples were interviewed separately by means of modified spielberger's state anxiety inventory scale and standard Jalowiec coping scale to collect the information after getting the validity from experts and pilot study.

The responses were coded, verified and finally processed by using the most commonly used package.

The collected data were classified into two sections. The first section dealt with the Demographic variables of the sampless with cancer who were receiving the radiation therapy. Second section included the modified Spielberger's State anxiety inventory to assess the level of anxiety among the samples with cancer who are receiving radiation therapy, and standard Jaloweic coping Scale to assess the coping abilities of those samples.

The investigator modified **Rosenstock's Becker (1974) and Mainma's (1975), Health belief model**. It addressed the relationship between a person's beliefs and behaviors. It provided a way of understanding and predicting how clients complied with their health care therapies. It included the following components.

➢ Individual perception

➢ Modifying factors

➢ Likelihood of action

<u>Objectives of this study were:-</u>

❖ To determine the level of anxiety among patients with cancer who are receiving radiation therapy

❖ To determine the level of coping abilities among patients with cancer are receiving radiation therapy

❖ To find out the relationship between the level of anxiety and coping abilities among patients with cancer who are receiving radiation therapy

❖ To find out the association between the level of anxiety and selected demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

❖ To find out the association between the level of coping abilities and selected demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

Objective 1: **To determine the level of anxiety among patients with cancer who are receiving radiation therapy.**

The findings of the study revealed that, 36 (60%) samples had moderate level of anxiety, 14 (23.33%) samples had low level of anxiety, and 10 (16.67%) samples had high level of anxiety.

These findings were supported by **Nunes D F et al (2007).** They proved that emotional distress, anxiety and depression were commonly present during treatment and varied from an individual to individual according to their coping abilities

The anxiety is unavoidable for the cancer patients undergoing radiation therapy, and may be vary from individual to individual according to their perseverance, family support, and individual coping abilities.

Objective 2 :- To determine the level of coping abilities among patients with cancer who are receiving radiation therapy.

The findings of the study revealed that maximum of 39 (65%) samples had moderate level of anxiety, 13 (21.67%) samples had maximum level of coping abilities, and 8 (13.33%) samples had minimal level of coping abilities.

These findings were supported by **Foss N SD, Dahl AA, Loge JH (2003).** They proved that the varying level of coping abilities were unavoidable among the cancer patients and vary from individual to individual.

The coping abilities and style may vary from an individual to individual according to their previous exposure to any stage of anxiety; adjusting with life style situation, family support and the acceptance level of each individual.

Objective 3: - **To find out the relationship between the level of anxiety and coping abilities among patients with cancer who are receiving radiation therapy.**

The study findings revealed that the calculated 'r' value was - 0.79, which indicated that there was a negative correlation between the anxiety and coping abilities.

These findings were supported by **Luebbert K, Dahme B, Hasenbring M (2001).** They proved that relaxation trainings and strengthening the coping abilities could reduce the anxiety level which indicated the negative correlation.

The researcher finds that, when the coping abilities are high, the level of anxiety will be low and when the coping abilities are less the level of anxiety will be high.

Objective 4:- To find out the association between the level of anxiety and the selected demographic variables such as, age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

The findings of the study revealed, that the calculated value for anxiety and the selected demographic variables such as, Religion, Occupation, Family history, Duration of illness, and Number of radiation therapy attended is greater than the tabulated value. So, it was concluded that there is a significant association between anxiety and selected demographic variables such as Religion, Occupation, Family history of cancer, Duration of illness, and Number of radiation therapy attended.

The findings showed that 48 (80%) samples were belongs to Hindu religion; 8(13.3%) samples were self employees, and 4(6.7%) samples were Government employees; 7 (11.7%) samples had family history of cancer; 18 (30%) samples were treated for more than one year; and 12(20%) samples were attended the radiation therapy for more than two times.

These findings were supported by **Lundberg PC, Trichorb K (2001).** They proved that most of the cancer patients were using cultural beliefs, and religious factors as their primary coping strategies. This was also supported by **Jahraus D, Sokolosky S, Thurston N** who conducted a study in 2002 and proved that the prior adequate information regarding the radiation therapy, adverse reaction and coping mechanisms may help to reduce the anxiety. These findings were also supported by **Chandra P (2003)**. She proved that the family history of cancer could provide prior information regarding cancer, radiation therapy and the side effects of therapy which enabled the family members to go for periodical review and aided in early identification of cancer. She also proved that these prior information had reduced the anxiety level and strengthen the coping abilities.

Most of the samples may prefer religion as their primary coping strategy and hence, there is a low and moderate level of anxiety among Hindus. Job assurance and the consistent income which may give a feeling of secured life; so when compared to unemployed, the job holders are having less anxiety. Previous exposure of knowledge, skills and attitudes towards the cancer may reduce the level of anxiety; hence the level of anxiety is low among the family history of cancer samples. Confirmation of sudden insult of the disease may shoot up the level of anxiety and following information regarding treatment modalities, expected outcome, side effects can alert the patient, and may give a chance to strengthen the coping abilities which in turn reduce the anxiety level. The level of anxiety is high among the samples who were receiving radiation therapy for the first time it may be due to the lack of knowledge and the fear of radiation therapy, once they have exposed, then they know about the impact of radiation therapy; so, the anxiety is gradually reducing according to the number of radiation therapy attended.

Hence, the researcher concludes that there is a significant association between the level of anxiety and the selected demographic variables such as, Religion, Occupation, Family history of cancer, Duration of illness, and Number of radiation therapy attended at a significance level of $p < 0.05$.

Objective 5 : To find out the association between the level of coping abilities and selected demographic variables such as age, sex, religion, education, occupation, income, marital status, number of children, type of family, dietary pattern, habits, hobbies, family history of cancer, site of cancer, duration of illness, stage of disease, duration of treatment, and number of radiation therapy attended.

In this study, the result showed that the calculated value for coping abilities and the selected demographic variables such as, Dietary pattern, Hobbies, Family history, and Stage of diseases is greater than the table value. So, it was concluded that there is a significant association between coping abilities and selected demographic variables such as, Dietary pattern, Hobbies, Family history of cancer, and Stage of disease.

This study revealed that, 48 (80%) samples were non-vegetarians; 6(8.3%) samples were having the habit of watching movies and 7 (11.7%) samples were having the habit of reading books; 7 (11.7%) samples had family history of cancer; and 37 (61.7%) samples had II stage of cancer.

These findings were supported by, **Lauver DR, Conolly Nelson K, Vang P (2007).** They proved that most of the patients were using distractions like listening music as their primary coping strategy. These findings were also supported by **Rao M et al (2007)**. They proved that relaxation techniques, divertional therapies and yoga were significantly strengthen the coping abilities.

These findings were also supported by **Christman NJ, Cain LB (2004).** They found that recreational activities, relaxation techniques, divertional therapies like reading books, listening music were effective methods to strengthen the coping mechanisms. These findings were also supported by **Jasline (2003)**. She proved that the prior information from the families regarding cancer and the treatments had reduced the anxiety level by strengthening the coping abilities.

It may be due to diversion of mind from the problems. In India, many people are using 'watching movies and listening musics as their primary coping strategy because of easy availability and the less cost containment. The prior information about radiation therapy and the family history of cancer may allow the patient to strengthen their coping abilities which proved the adequate information may allow the patients to strengthen their coping abilities.

Hence, the researcher concludes that there is a significant association between the level of coping abilities and the selected demographic variables such as, Dietary pattern, Hobbies, Family history, and Stage of disease at a significance level of $p<0.05$.

THE OPINION OF THE SAMPLES:
➢ Most of the samples expressed that they need the prior adequate information regarding the radiation therapy
➢ They also suggested to provide separate rooms for the patients who are waiting to receive radiation therapy, according to their stage of disease, which will help to prevent the contact with the people in advanced stage of disease.

➢ The samples suggested to maintain the appropriate time schedule to receive radiation therapy.

CHAPTER – VI
SUMMARY, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION

SUMMARY:

A descriptive study was conducted to determine the level of anxiety and coping abilities among patients with cancer who were receiving radiation therapy at Meenakshi Mission Hospital, Madurai, Tamilnadu. The research design was descriptive design. Sample size was 60; purposive sampling technique was used to select the patients.

The aim of the study was to determine the level of anxiety and coping abilities among patients with cancer undergoing radiation therapy, to improve the coping abilities by giving health teaching module, booklet and pamphlets to the patients.

Review of literature enabled the investigator to develop the conceptual framework, methodology, setting for the study and plan for data analysis. The conceptual model/ framework adopted by this study was based on **ROSENSTOCK'S BECKER (1974) and MAINMA'S (1975), HEALTH BELIEF MODEL**, which focus on providing teaching on coping abilities.

A questionnaire was prepared with two sections. The first section dealt with the Demographic variables of the patients with cancer who were receiving the radiation therapy. Second section included the modified Spielberger's State anxiety inventory Scale to assess the level of anxiety of the patients with cancer who were receiving the radiation therapy, and standard Jaloweic coping Scale to assess the coping abilities of those patients.

The gathered data were tabulated, grouped and analyzed. Biostatistical methods (chi square and correlation) were used for analysis.

MAJOR FINDINGS OF THE STUDY:

➢ Majority of the samples were in the age group of 51 to 65 (65%).

➢ Males were affected more with cancer 35 (58.4%).

➢ Most of the samples were Hindus (80%)

➢ Most of the patients studied upto middle school level (23.4%)

➢ Majority of the samples were unemployed (55%)

➢ Most of the family's income (per month) was less than Rs. 5000 (48.3%)

➢ Maximum number of patients were married (93.4%)

➢ Majority of the samples(48%) were having more than two children

➢ Most of the patients belong to Nuclear family (55%)

➢ Maximum number of the patients was Non vegetarians (80%)

➢ Majority of the patients had no bad habits (78.3%)

➢ Most of the sample's hobby was watching movies (51.7%)

➢ Maximum number of patients had the family history of no cancer (88.3%)

➢ Majority of the samples had the cancer cervix (26.7%)

➢ Majority of the patient were suffering with cancer for 0 to 3 months (30%) and more than one year (30%)

➢ Majority of the samples were in the II stage (61.7%) of Disease

➢ Majority of the samples were in 0 to 1 month treatment (41.7%)

➢ Most of the patients were receiving radiation therapy for more than two times

➢ Majority of the cancer patients 36 (60%) had moderate level of anxiety, 14 (23.33%) patients had low level of anxiety, and 10 (16.67%) patients had high level of anxiety

➢ Majority of the 39 (65%) cancer patients had moderate level of coping abilities, 13 (21.67%) patients had maximum level of coping abilities, and 8 (13.33%) patients had minimal level of coping abilities

➢ The reports indicated that there was a negative correlation between the level of anxiety and coping abilities

➢ The results indicated that there was a significant association between anxiety and the selected demographic variables such as, Religion, Occupation, Family history of cancer, Duration of illness, and Number of radiation therapy attended

➢ The results confirmed that there was a significant association between coping abilities and the selected demographic variables such as, Dietary pattern, Hobbies, Family history, and Stage of disease

IMPLICATIONS

IMPLICATIONS FOR NURSING PRACTICE:
• Nurses play a pivotal role in managing and rendering a competent nursing care to the chronic ill patients (like cancer) both in the hospital as well as in the community settings

• Divertional therapy, Relaxation therapy, Social support and psychological intervention should be educated to the cancer patients who are receiving radiation therapy to improve the coping abilities and the outcomes.

• Teach the importance and the ways of strengthening the coping abilities of the cancer patients who are receiving radiation therapy

IMPLICATIONS FOR NURSING EDUCATION:

- ❖ Content and experience related to the mechanisms of strengthening the coping abilities among patients with cancer who are undergoing radiation therapy is an important part of basic nursing education programme in both the hospital and community settings in order to reduce their anxiety levels.

- ❖ The current concept and trends in the care of cancer patients, the importance of coping strategies should be insisted more in the nursing curriculum

- ❖ The task is to identify the essential content for nurse to master at the basic level, evaluate and update the content as an ongoing future. Only this updated information will enhance confidence in patients about the correct way of the mechanisms of strengthening the coping abilities.

IMPLICATIONS FOR NURSING ADMINISTRATION:

- ▪ Necessary nursing education is to be provided to the nursing personnel at various levels to improve their knowledge and they should aware of the anxiety and coping abilities of patients with cancer who are receiving radiation therapy.

- ▪ Update the nurse's knowledge about the current practices and mechanisms of strengthening the coping abilities through workshops and conferences. This will enable them to provide teaching regarding the coping mechanisms holistically to the patients with cancer who are receiving radiation therapy.

- ▪ Health teaching should be insisted as one of the prime responsibility of the nursing personnel.

IMPLICATIONS FOR NURSING RESEARCH:

o There is a lot of scope for the nurses to conduct research in this area to find out the effectiveness of various methods of coping abilities to educate patients, relatives.

o This study will help the future investigators to find the effectiveness of various coping strategies like Yoga, Music therapy in reducing the anxiety level

o Findings of the study can provide baseline information for further research

RECOMMENDATIONS FOR FURTHER RESEARCH:

On the basis of the present study following recommendations are made,

✓ A similar study could be done with large sample.

✓ An experimental study could be done with structured teaching programme for strengthening the coping abilities.

✓ A study can be done to assess the Quality of life of patients with cancer who are receiving radiation therapy.

✓ A similar study can be done on a longitudinal basis.

✓ A similar study may be conducted to find out the Quality of life of cancer patients undergoing radiation therapy.

CONCLUSION:-

Strengthening the coping abilities among cancer patients undergoing radiation therapy is a biggest challenge in order to avoid psychological problems like anxiety, depression etc. Social factors are playing a major role in strengthening the coping abilities among the cancer patients undergoing radiation therapy. The stigma associated with the disease often produces an

anxiety and worse the coping ability. The only major way to relieve the anxiety is to strengthen the coping abilities.

The nurses should take a key role in giving teaching to the patients with cancer who are undergoing radiation therapy about the radiation therapy, it's importance, expected side effects and the coping abilities to adjust with the situation , can reduce the anxiety. Especially when giving these informations prior to the radiation therapy reduced the anxiety level much. So, it is a high time for the health members to formulate strategies to improve the coping abilities.

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LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY OF THE TOOL

From

      Ms.R.Suganya,
      M.Sc (Nursing) II-year,
      Matha College of Nursing,
      Manamadurai.

To

      Through The Principal,
      Matha college of Nursing,
      Manamadurai

Respected Madam/sir,

      Subject: requesting experts opinion and suggestion for content validity of the tool.

      I am a final year master degree nursing student in Matha College of Nursing Manamadurai. In partial fulfillment of master degree in nursing, I have selected the topic mentioned below for the research project to be submitted to the Dr.M.G.R.Medical University, Chennai.

PROBLEM STATEMENT:

      A study to determine the level of anxiety and coping abilities among patients with cancer undergoing radiation therapy at Meenakshi Mission Hospital, Madurai.

      I request you to kindly validate the tool and give your expert opinion and necessary modification. Also I would be very grateful if you could correct the problem statement and objectives.

Enclosures:

      a. Statement of the problem
      b. Objectives
      c. Research hypothesis
      d. Description of the tool
           i. Part I : Demographic variables
          ii. Part II : Anxiety Questionnaire
        iii. Part III : Coping abilities Questionnaire

                      Thanking you,

Place: Manamadurai,   Yours sincerely
Date:

                                 (R.SUGANYA)

APPENDIX-II

LIST OF EXPERTS CONSULTED FOR THE CONTENT VALIDITY OF RESEARCH TOOL

1) Prof. (Mrs). JEBAMANI AUGUSTINE., M.Sc(N)., R.N., R.M.,

   Principal,

   Matha College of Nursing,

   Manamadurai.

2) Prof. Mrs. Chandrakala. M.Sc(N)., R.N., R.M., Ph.D (N),

   Vice principal, Sacred Heart College of Nursing,

   Madurai

3) Prof. Mrs. Jaya thangaselvi. M.Sc(N)., R.N., R.M.,

   H. O. D of Medical Surgical Nursing,

   C. S. I. College of Nursing,

   Pasumalai, Madurai.

4) Prof. (Mrs). REGINA RANI. M.Sc(N)., R.N., R.M., Ph.D (N),

   Principal,

   Thanthai Rover College of Nursing,

   Perambalur, Trichy.

5) Mrs. JASLINE JOHN., M.Sc (N)., R.N., R.M.,

   Reader,

   Matha College of Nursing, Manamadurai.

6) Dr, JEBA SINGH., M.D., D.M (ONCOLOGY).,

   Assistant Consultant,

   Meenakshi Mission Hospital & Research Institute,

   Madurai.

_s**APPENDIX-III**

LETTER SEEKING PERMISSION TO CONDUCT A STUDY AT MEENAKSHI MISSION HOSPITAL, IN MADURAI

To

    The administrative officer,

    Meenakshi Mission Hospital,

    Madurai.

Respected Sir/madam,

    Sub: Matha College of Nursing, Manamadurai – Research Project work of M.Sc. Nursing student, in selected area –Oncology unit

    I am to state that Ms.R.Suganya, is one of our final year M.Sc. Nursing student, Matha College of Nursing, Manamadurai has to conduct a research project, as the partial fulfillment of university requirements for the degree of Master of Science in Nursing.

The statement of the problem is:

    "A study to determine the level of anxiety and coping abilities among patients with cancer undergoing radiation therapy at Meenakshi Mission Hospital, Madurai"

    We request you to kindly permit her to do the research in your esteemed institution and give your valuable guidance and suggestions.

                  Thanking you,

Place: Manamadurai   yours faithfully

Date:

                                Prof.Mrs.Jebamani Augustine M.Sc(N),

                                       Principal

SECTION-A

PART-I   DEMOGRAPHIC DATA

Circle the relevant data about you in the following statements.

1. Age in years
   a. 21 to 35   ( )
   b. 36 to 50   ( )
   c. 51 to 65   ( )

2. Sex
   a. Female   ( )
   b. Male   ( )

3. Religion
   a. Hindu   ( )
   b. Muslim   ( )
   c. Christian   ( )

4. Educational qualification
   a. Illiterate   ( )
   b. Upto middle school level   ( )
   c. Higher secondary level   ( )
   d. Diploma/ Degree   ( )
   e. Post graduate and above   ( )

5. Occupation
   a. Unemployed   ( )
   b. Govt employee   ( )
   c. Private employee   ( )
   d. Self employee   ( )

6. Total income of the family (per month)
   a. Below 5,000   ( )
   b. 5,001 to 10,000   ( )
   c. 10,001 and above   ( )

7. Marital status
    a. Married   ( )
    b. Unmarried   ( )
    c. Widow/ Spinster   ( )
    d. Divorced   ( )

8. Number of children
    a. One   ( )
    b. Two   ( )
    c. More than two   ( )
    d. None   ( )

9. Type of the family
    a. Nuclear family   ( )
    b. Joint family   ( )
    c. Extended family   ( )
    d. Separated family   ( )

10. Dietary pattern
    a. Vegetarian   ( )
    b. Non-vegetarian   ( )

11. Habits
    a. Smoking   ( )
    b. Alcohol   ( )
    c. Tobacco chewing   ( )
    d. Betal chewing   ( )
    e. None of the above   ( )

12. Hobbies
    a. Watching movies   ( )
    b. Listening music   ( )
    c. Reading books   ( )
    d. Sleeping   ( )
    e. None   ( )

13. Family history of cancer
    a. Yes   ( )
    b. No   ( )

PART-II
DISEASE PROFILE

Put the tick mark to the appropriate things pertaining to your disease condition.

1. Site of cancer

    a) Head and Neck   ( )
    b) Lung   ( )
    c) Breast   ( )
    d) Gastro Intestinal Tract ( )
    e) Cervical   ( )
    f) Others   ( )

2. Duration of illness
    a) 0 to 3 months   ( )
    b) 4 to 6 months   ( )
    c) 7 to 12 months   ( )
    d) Above one year   ( )

3. Duration of treatment
    a) 0 to 1 month   ( )
    b) 2 to 6 months   ( )
    c) More than 6 months   ( )

4. Stage of the disease

    a) stage   I   ( )
    b) stage II   ( )
    c) stage III   ( )
    d) stage IV and above   ( )

5. Number of radiation therapy attended

    a) One   ( )
    b) Two   ( )
    c) More than two   ( )

PART-I   MODIFIED SPIELBERGER'S STATE ANXIETY INVENTORY

INSTRUCTIONS:

Below are given 25 statements indicating your state of anxiety. There is no right or wrong answer. Circle the appropriate number to the right of the statement to indicate how you feel now.

S.no	Question	Not at	Some what	Modera -tely so	very much so
1*	I feel calm	1	2	3	4
2*	I feel secure	1	2	3	4
3	I feel tensed	1	2	3	4
4	I feel strained	1	2	3	4
5*	I feel at ease	1	2	3	4
6	I feel upset	1	2	3	4
7	I am presently worrying over possible misfortunes	1	2	3	4
8*	I feel satisfied	1	2	3	4
9	I feel frightened	1	2	3	4
10*	I feel comfortable	1	2	3	4
11*	I feel self confident	1	2	3	4
12	I feel nervous	1	2	3	4
13	I am jittery	1	2	3	4
14	I feel confidence	1	2	3	4
15*	I am relaxed	1	2	3	4
16*	I feel content	1	2	3	4
17	I am worried	1	2	3	4

S.no	Question	Not at	Some what	Modera-tely so	very much so
18	I feel confused	1	2	3	4
19*	I feel steady	1	2	3	4
20*	I feel pleasant	1	2	3	4
21	I feel powerlessness	1	2	3	4
22	I feel hopelessness	1	2	3	4
23	I feel low self esteem/ guil	1	2	3	4
24*	I feel better	1	2	3	4
25*	I feel it cures	1	2	3	4

Note :   * - Reversed items

PART-II   JALOWIEC COPING SCALE

Circle the appropriate number which is relevant to you.

		N	VR	S	VO	A
1	Hope that things will get better	1	2	3	4	5
2	Try to maintain some control over the situation	1	2	3	4	5
3	Find out more about the situation so that I control over the situation	1	2	3	4	5
4	Thing through different ways to handle the situation	1	2	3	4	5
5	Look at the problem objectively	1	2	3	4	5
6	Try to find meaning in the situation	1	2	3	4	5
7	Pray: Trust in god	1	2	3	4	5
8*	Got nervous	5	4	3	2	1
9*	Worry	5	4	3	2	1
10	Seek comfort or help from family members	1	2	3	4	5
11	Accept the situation as it is	1	2	3	4	5
12	Want to be alone	1	2	3	4	5
13*	Try to put the problem out of mind	5	4	3	2	1
14	Get prepared to expect the worst	1	2	3	4	5
15	Talk the problem over with someone has been in the same type of situation	1	2	3	4	5
16	Actively try to change the situation	1	2	3	4	5

17	Don't worry about it, everything will probably work out fine	1	2	3	4	5
18*	Withdraw from the situation	5	4	3	2	1
19	Work off tension with physical activity	1	2	3	4	5
20	Settle for the next best thing	1	2	3	4	5
21*	Do nothing in the hope that the problem will take care of itself	5	4	3	2	1
22*	Resign myself to the situation because it is my fate	5	4	3	2	1
23*	Blame someone else for my problems	5	4	3	2	1
24	Meditation/ Yoga/ Bio-feedback is necessary	1	2	3	4	5
25*	Let someone else solve the problem	5	4	3	2	1

*   The revised items are 8, 9, 18, 21, 22, 22, 23, 25

படிவம் - அ

தனிநபர் விபரங்கள்

கீழ்கண்டவற்றில் சரியான பதிலை தேர்வு (✓) செய்யவும்.

1. வயது (ஆண்டுகளில்)

   அ) 21 முதல் 35 வரை   ( )

   ஆ) 36 முதல் 50 வரை   ( )

   இ) 51 முதல் 65 வரை   ( )

2. பாலினம்

   அ) ஆண்   ( )

   ஆ) பெண்   ( )

3. மதம்

   அ) இந்து   ( )

   ஆ) கிருத்துவர்   ( )

   இ) முஸ்லிம்   ( )

4. கல்வித்தகுதி

   அ) படிப்பறிவில்லாதவர்   ( )

   ஆ) தொடக்கக்கல்வி கற்றவர்   ( )

   இ) மேல்நிலைக்கல்வி கற்றவர்   ( )

   ஈ) தொழிற்கல்வி கற்றவர் / பட்டதாரி   ( )

   உ) மேல்நிலை பட்டதாரி அதற்கும் மேல்   ( )

5. தொழில்

   அ) வேலை இல்லாதவர்   ( )

   ஆ) அரசாங்க வேலை   ( )

   இ) தனியார் நிறுவனத்தில் வேலை   ( )

   ஈ) சொந்தத் தொழில்   ( )

6. குடும்ப வருமானம் (ஒரு மாதத்திற்கு)

   அ) ரூ.5,000 மற்றும் அதற்கும் கீழ்   ( )

   ஆ) ரூ.5,001 முதல் ரூ.10,000 வரை   ( )

   இ) ரூ.10,001 மற்றும் அதற்கும் மேல்   ( )

7. திருமண நிலை

   அ) திருமணமானவர்   ( )

   ஆ) திருமணமாகாதவர்   ( )

   இ) வாழ்க்கைத் துணையை இழந்தவர்   ( )

   ஈ) விவாகரத்து பெற்றவர்   ( )

8. குழந்தைகளின் எண்ணிக்கை

   அ) ஒருவர்   ( )

   ஆ) இருவர்   ( )

   இ) இரண்டு பேருக்கு மேல்   ( )

9. குடும்ப வகை

   அ) தனிக்குடும்பம்   ( )

   ஆ) கூட்டுக்குடும்பம்   ( )

   இ) ஒரே வீட்டில் பல குடும்பங்களாக வாழ்பவர்   ( )

   ஈ) பிரிந்த குடும்பம்   ( )

10. உணவு வகை

   அ) சைவம்   ( )

   ஆ) அசைவம்   ( )

11. பழக்க வழக்கங்கள்

   அ) புகைபிடித்தல்   ( )

   ஆ) மது அருந்துதல்   ( )

   இ) புகையிலை போடுதல்   ( )

   ஈ) வெற்றிலை பாக்கு போடுதல்   ( )

   உ) எதுவுமில்லை   ( )

12. பொழுதுபோக்கு

   அ) திரைப்படம் பார்ப்பது   ( )

   ஆ) இசை கேட்பது   ( )

   இ) புத்தகம் படிப்பது   ( )

   ஈ) தூங்குவது   ( )

13. குடும்பத்தில் யாருக்கேனும் புற்றுநோய் உள்ளதா?

   அ) ஆம்   ( )

   ஆ) இல்லை   ( )

நோயினைப்பற்றிய விபரங்கள்

கீழ்கண்டவற்றில் சரியான பதிலை தேர்வு (✓) செய்யவும்

1. புற்று நோய் உள்ள இடம்

   அ) தலை மற்றும் கழுத்துப்பகுதி   ( )

   ஆ) மார்பகப் பகுதி   ( )

   இ) நுரையீரல் பகுதி   ( )

   ஈ) கர்ப்ப வாய்ப்பகுதி   ( )

   உ) மற்ற பகுதிகள்   ( )

2. நோயின் கால அளவு

   அ) 0 முதல் 3 மாதங்கள் வரை   ( )

   ஆ) 4 முதல் 6 மாதங்கள் வரை   ( )

   இ) 7 முதல் 12 மாதங்கள் வரை   ( )

   ஈ) 1 வருடத்திற்கும் மேல்   ( )

3. நோயின் நிலை

   அ) முதல் நிலை   ( )

   ஆ) இரண்டாம் நிலை   ( )

   இ) மூன்றாம் நிலை   ( )

   ஈ) நான்காம் நிலை மற்றும் அதற்கும் மேல்   ( )

4. சிகிச்சை பெற்றுக் கொண்டிருக்கும் கால அளவு

   அ) 0 முதல் 1 மாதம் வரை   ( )

   ஆ) 2 முதல் 6 மாதங்கள் வரை   ( )

   இ) 6 மாதங்களுக்கு மேல்   ( )

5. எடுத்துக்கொண்டிருக்கும் கதிர்வீச்சு சிகிச்சைகளின் (கரன்ட்) எண்ணிக்கை

   அ) ஒன்று   ( )

   ஆ) இரண்டு   ( )

   இ) இரண்டிற்கும் மேல்   ( )

படிவம் - ஆ

திருத்தியமைக்கப்பட்ட ஸ்பில்பெர்கர்-சின் மன உணர்வை மதிப்பிடும் பட்டியல்

பின்வரும் 25 கூற்றுகள் உங்கள் மன உணர்வைப் பற்றி கேட்கப்பட்டுள்ளன. இதில் சரி / தவறு என்று பதில் கிடையாது. இவற்றில் சரியானது என்று நீங்கள் உணர்வதை வட்டமிடவும்.

வ. எண்.	கூற்றுகள்	இல்லை	ஓரளவு	மிதமாக அளவு	அதிக அளவு
1.*	நான் அமைதி நிலையில் இருக்கிறதாக உணர்கிறேன்.	1	2	3	4
2.*	நான் பாதுகாப்பாக உள்ளதாக உணர்கிறேன்.	1	2	3	4
3.	நான் மன இருக்கத்துடன் இருக்கிறேன்.	1	2	3	4
4.	நான் மன அழுத்தம் இருப்பதாக உணர்கிறேன்.	1	2	3	4
5.*	என் மனம் இலகுவாக இருப்பதாக உணர்கிறேன்.	1	2	3	4
6.	நான் பாதிப்படைந்து இருப்பதாக உணர்கிறேன்.	1	2	3	4
7.	வரப்போகும் துரதிர்ஷ்டங்களை நினைத்து தற்போது வருத்தப்படுகிறேன்.	1	2	3	4
8.*	நான் திருப்தியுடன் இருப்பதாக உணர்கிறேன்.	1	2	3	4
9.	நான் பயப்படுவதாக உணர்கிறேன்.	1	2	3	4
10.*	நான் சௌகரியமாய் இருப்பதாக உணர்கிறேன்.	1	2	3	4
11.*	நான் தன்னம்பிக்கையுடன் இருப்பதாக உணர்கிறேன்.	1	2	3	4
12.	எனக்கு நடுக்கம் இருப்பதாக உணர்கிறேன்	1	2	3	4
13.	நான் திகைக்கிறேன்.	1	2	3	4
14.	நான் முடிவு எடுக்க முடியாதவர் போல் நினைக்கிறேன்.	1	2	3	4

15.*	என் மனம் அமைதியாக இருப்பதாக உணர்கிறேன்	1	2	3	4
16.*	நான் நம்பிக்கையுடன் இருப்பதாக உணர்கிறேன்.	1	2	3	4
17.	நான் கவலையுடன் இருக்கின்றேன்.	1	2	3	4
18.	நான் மனக்குழப்பத்துடன் இருப்பதாக உணர்கிறேன்.	1	2	3	4
19.*	நான் மன உறுதியுடன் இருக்கிறேன்.	1	2	3	4
20.*	நான் மகிழ்ச்சியாக இருப்பதாக உணர்கிறேன்.	1	2	3	4
21.	நான் சக்தியை இழந்தது போல் உணர்கிறேன்.	1	2	3	4
22.	நான் நம்பிக்கையை இழந்தாற்போல் நினைக்கிறேன்.	1	2	3	4
23.	நான் குறைவான மதிப்புடையவனாக / தவறிழைத்தவனாகக் கருதுகிறேன்.	1	2	3	4
24.*	நான் நன்றாக இருப்பதாக உணர்கிறேன்.	1	2	3	4
25.*	நான் குணமடைவேன் என்று எண்ணுகிறேன்.	1	2	3	4

பின்குறிப்பு : * - எதிர்மறை வாக்கியங்கள்.

படிவம் - இ

ஜாலோவிக்கின் அனுசரித்துப் போதலை அளவிடும் கூற்றுகளின் பட்டியல்

பின்வரும் 25 வாக்கியங்கள் உங்களின் அனுசரித்துப் போகும் அளவை மதிப்பிட கேட்கப்பட்டுள்ளது. இதில் சரி / தவறு என்று பதில் கிடையாது. அவற்றில் பொருத்தமானது என்று தோன்றுவதை வட்டமிடவும்.

வ. எண்.	கூற்றுகள்	இல்லை	சில சமயங்களில்	எப்பொழுதாவது	அடிக்கடி	எப்பொழுதும்
1.	என்னுடைய நிலை சரியாகுமென்று நம்புகிறேன்.	1	2	3	4	5
2.	சூழ்நிலை மீறிச்செல்லும் போது கட்டுப்பாடில் வைத்துக் கொள்ள நான் முயற்சி செய்கிறேன்	1	2	3	4	5
3.	சூழ்நிலையை நன்றாக அறிவதின் மூலம் சூழ்நிலையை கட்டுப்பாட்டில் வைக்கிறேன்.	1	2	3	4	5
4.	சூழ்நிலையை சமாளிக்க பல வழிகளில் நினைக்கிறேன்.	1	2	3	4	5
5.	என் பிரச்சனையை பொருள்பட ஆராய்ந்து பார்ப்பேன்.	1	2	3	4	5
6.	என் சூழ்நிலைக்கான காரணம் புரிந்து கொள்ள முயல்கிறேன்.	1	2	3	4	5
7.*	பிரார்த்தனை செய்வேன் / கடவுளை நம்புகிறேன்.	5	4	3	2	1
8.*	நடுக்கத்துடன் இருக்கிறேன்	5	4	3	2	1
9.*	கவலைப்படுகிறேன்.	5	4	3	2	1
10.	குடும்ப அங்கத்தினரிடம் இருந்து வசதி (அ) உதவிளை நாடுகிறேன்.	1	2	3	4	5
11.	சூழ்நிலையை அப்படியே ஏற்றுக் கொள்கிறேன்	1	2	3	4	5
12.	தனிமையை விரும்புகிறேன்	1	2	3	4	5
13.*	பிரச்சனையை என் மனதிலிருந்து வெளியேற்ற முயல்கிறேன்	5	4	3	2	1

14.	மோசமான நிலையை எதிர்கொள்ள என்னைத் தயார்படுத்திக் கொள்வேன்	1	2	3	4	5
15.	என்னுடைய கஷ்டத்தைப் பற்றி இதே நிலையில் உள்ள இன்னொரு நபரிடம் பகிர்ந்து கொள்கிறேன்	1	2	3	4	5
16.	என் சூழ்நிலையை மாற்றிக்கொள்ள முனைப்போடு செயல்படுகிறேன்	1	2	3	4	5
17.	எதற்கும் கவலைப்படாமல் எல்லாம் நன்மையாக முடியுமென்று நம்புகிறேன்	1	2	3	4	5
18.*	சூழ்நிலையில் இருந்து என்னைத் தவிர்க்கிறேன்	5	4	3	2	1
19.	மன அழுத்தமின்றி, வேலை செய்ய முற்படுகிறேன்	1	2	3	4	5
20.	அடுத்து வரும் நல்லவைக்கு தயார்படுத்திக் கொள்வேன்	1	2	3	4	5
21.*	என் பிரச்சனை அதுவாகவே சரியாகும் என்று எதுவும் செய்யாமல் இருந்து விடுவேன்	5	4	3	2	1
22.*	இது என் விதி என்று என் சூழ்நிலையில் இருந்து வெளியேறி விடுவேன்	5	4	3	2	1
23.*	என்னுடைய நிலைக்கு பிறரை குற்றப்படுத்துகிறேன்	5	4	3	2	1
24.	தியானம், யோகா, உடல்நலத் தேர்ச்சி போன்றவை தேவை	1	2	3	4	5
25.*	என் பிரச்சனையை வேறு யாராவது சரி செய்யட்டும் என்று இருந்து விடுவேன்	5	4	3	2	1

பின்குறிப்பு : * - எதிர்மறை வாக்கியங்கள்.