EFFECTIVENESS OF PROGRESSIVE MUSCLE RELAXATION TECHNIQUE ON REDUCTION OF STRESS AMONG PATIENT WITH CANCER ADMITTED IN CSI MISSION HOSPITAL AT NEYYOOR

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

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By

Reg. No. 30105403

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MATHA COLLEGE OF NURSING

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ABSTRACT

A study to assess the effectiveness of progressive muscle relaxation technique on reduction of stress among cancer patients under went CSI Mission Hospital, Neyyoor. TamilNadu was conducted in partial fulfillment of the requirement for the award of a degree master of science in Nursing under the Tamilnadu Dr. M.G.R. Medical University, Chennai. The research design was quasi experimental design. Sample size was 80; purposive sampling technique was used to select the samples

Objectives of the Study

- To assess the pre test level of stress among cancer patients of experimental group and control group.
- To assess the post test level of stress among cancer patients of experimental group and control group.
- To evaluate the effectiveness of progressive muscle relaxation in reducing stress among cancer patients in experimental group.
- To find out the association between the post test level of stress among cancer patients and selected demographic variables in experimental group.
- To find out the association between the post test level of stress among cancer patients and selected demographic variable in control group.

The study was based on J.W.Kenny's open system model.

Hypotheses

Four hypotheses were formulated and tested.

H_1 The mean post test level of stress will be significantly lower than the mean pretest level of stress among the experimental group.

H_2 The mean post test level of stress among the experimental groups who received progressive muscle relaxation technique will be significantly lower than the mean posttest level of stress among the control groups.

H_3 There will be a significant association between post test levels of stress among experimental group and their selected demographic variables such as age, sex, education, occupation, area of residence, type of family, helping people, monthly income.

H_4 There will be a significant association between post test levels of stress among control group and their selected demographic variables such as age, sex, education, occupation, area of residence, type of family, helping people, monthly income.

Major Findings of the Study

In Experimental Group

- Majority of the subjects 30(75%) were above 40 years.
- Majority of the subjects 21(52.5%) were male.
- Majority of the subjects17 (42.5%) were illiterate.
- Majority of the subjects 28 (70.0%) were employee.
- Majority of the subjects 29 (72.5%) were rural area.

- ❖ Majority of the subjects 37 (92.5%) were nuclear family.
- ❖ 45% of the subjects (18) were family members.
- ❖ 40% of the subjects(16) were above Rs.3000

The case of control group subjects,

- ✧ Majority of the subjects 26 (65%) were above 40 years.
- ✧ Majority of the subjects 23 (57.5%) were male.
- ✧ 45%of the subjects (17) were primary education.
- ✧ Most of the subjects 32 (80%) were employee.
- ✧ Majority of the subjects 32 (80%) were rural area.
- ✧ Majority of the subjects39 (97.5%) were joint family.
- ✧ Majority of the subjects 32 (80%) were family members.
- ✧ 45% of the subjects(18) were above Rs.3000.

Overall result shows that there is an association on selected demographic variables such as age, sex, education, occupation, area of residence, type of family, helping people, monthly income.

Recommendations

Based on the findings of the study, the investigator proposed the following recommendations for the study.

The previous reviews and the present study indicate the progressive muscle relaxation technique is the best option to reduce the stress since it has no side effects and non invasive. So this study

strongly recommended using, progressive muscle relaxation technique reducing stress among cancer patient.

1) A comparative study may be done between effectiveness of progressive muscle relaxation and other pharmacolological methods.

2) A comparative study may be undertaken between effectiveness of music therapy and relaxation therapy.

3) A similar study can be replicated on a large scale with different demographic variables to generalize the findings.

4) A comparative study may be done between effectiveness of progressive muscle relaxation technique and guided imagery among cancer patient.

Conclusion

As for this research is concerned, the intervention proved effective, as there was a significant reduction of stress among cancer patient. The pre test and post test mean and standard deviation value can be calculated, since the standard deviation and standard errors were zero. The paired t' test was applied for identifying the significant/difference. The reduction of stress was statistically highly significant (p.0.05%) from the above results. According to hypotheses, the progressive muscle relaxation significantly reduce the stress was accepted. Therefore the progressive muscle relaxation technique is very effective form non-pharmacological intervention to relieve stress among cancer patients as it is non invasive and no side effects were reported. The findings of the present study agree with the findings of previous clinical study, regarding progressive muscle relaxation technique.

CHAPTER – I

INTRODUCTION

People think cancer is equal to capital punishment,
But the affected can post pone the death for a decade,
If they underwent treatment on time

Dr.Velavan

Cancer is the Latin word for crab The ancient people used the word to mean a malignancy, doubtless because of the crab- like tenacity a malignant tumor Cancer and abnormal growth of cells which tend to proliferate in an uncontrolled way and in some cases, to metastasize spread. Cancer is not a single one disease. It is a group of more than 100 different and distinctive diseases. Cancer is a very common disease; approximately one out of every two American men and one out of every three American women have some type of cancer at some point during the course of their life. Cancer is more common in the elderly. And 77 percent of cancers occur in people above age 55 or older. Cancer is also common in children. Cancer incidence is said to have two peaks once during early childhood and then during late years in life. Late stages of cancer may be incurable in most cases, but with the advancement of medicine, more and more cancers are becoming curable. Early detection of cancer is very important because the generally earlier the cancer is detected higher the chance for cure.

According to **Luckman and Surensm (2001)** all living beings are made up of cells. Cells are the basic living units. Many cells

divide to produce daughter cells. This is required for the replacement of cells lost during the course of life. The process of cell division is a very tightly controlled process and occurs in the body only to the extent needed in any particular situation. During the process of cell division one cell may acquire some genetic mutation that would alter the cell division control mechanisms of that cell. This altered cell no longer listens to the control signals for cell division and may continue to divide and multiply. This uncontrolled cell division and growth ultimately results in cancer.

Stress is Universal and part of the human experience. Life events and pressure of every day life have a forceful impact on health. Recent advances in mind, body research on stress and its effect on body and mind. It affects every person with regardless of age, gender, race, economic condition and educational level. It is of great importance in patients. In this study the effectiveness on progressive muscle relaxation technique reduction on stress among cancer patients have been taken up for the study.

Progressive muscle relaxation involves a combination of controlled breathing exercise and series of contractions and relaxation of muscle groups. The patient begins by breathing slowly and diaphragmatically, allowing the abdomen to rise slowly and the chest to expand. Often a patient closes the eyes to focus on the exercise when the patient establishes a regular breathing pattern coach the patient to locate any area of muscular tension, think about how it feels gently tense the muscle and then completely relax them. This creates the sensation of removing all discomfort and stress. Progressive Muscle Relaxation [PMR] is a relaxation technique of stress management developed by American Physician Edmund Jacobson in 1934. This progressive muscle relaxation technique is focused on

tensing and releasing tensions in the 16 different muscle groups. Jacobson reasoned that since muscular tension is usually followed as a by product of anxiety, one can lower and reduce anxiety by understanding and learning how to self relax those muscular tension **(McCallie et al., 2006)**.

Joseph Wolpe (Conrad & Roth, 2006) further adjusted this technique for use with systematic desensitization in 1948. Subsequently, both Bernstein and Borkovec in 1973 came out with adjustments to the technique to suit cognitive behavioral stress management. Empirical proofs also support the use of progressive muscle relaxation in high level tension responses and mind body techniques such as: irritable bowel syndrome, insomnia, reducing tension headaches, adjunct treatment in cancer and chronic pain management in inflammatory arthritis **(McCallie et al., 2006)**.

Our fast paced society can cause people to push their minds and bodies to the limit, often at the expense of physical and mental well being. According to the Mind/Body Medical Institute at Harvard University, 60 to 90 percent of all medical office visits in the United States are for stress related disorders. Such stress has damaging effects on health and the immune system. Relaxation techniques are helpful tools for coping with stress and promoting long term health by slowing down the body and quieting the mind. Such techniques generally entail: refocusing attention (for example, noticing areas of tension); increasing body awareness; and exercises (such as meditation) to connect the body and mind together. Used daily, these practices can lead to a healthier perspective on stressful circumstances. In fact, more than 3,000 studies show the beneficial effects of relaxation on health and well being.

Health should mean a lot more than escape from death

Or, for that matter escape from disease

NEED FOR THE STUDY

In the year 2000, malignant tumours were the root cause for 12 percent of the nearly 56 million deaths worldwide from all causes. In many countries, more than 25 percent of deaths are attributable to cancer. In 2000, 5.3 million men and 4.7 million women developed a malignant tumour and altogether 6.2 million died due to the disease. The report also reveals that cancer has become as a major public health problem in developing countries, matching its effect in industrialized nations.

“The Cancer Report tells us that cancer rates are set to increase at an alarming rate globally. We can make a difference by taking action today. We have the opportunity to stem this increase. This report calls on Governments, health practitioners and the general public to take urgent action. Action now can prevent one third of cancers, cure another third, and provide good, palliative care to the remaining third who need it, "said Dr. Paul Kleihues, Director of the International Agency for Research on Cancer (IARC) and co-editor of the World Cancer Report.

The World Cancer Report is a concise manual describing the global burden, the causes of cancer, and major types of malignancies, early detection and treatment. The global report is issued by IARC, which is part of the World Health Organization (WHO).

Dr.Gro Harlem Brundtland, Director-General of states: “The report provides a basis for public health action and assists us in our

goal to reduce the morbidity and mortality from cancer, and to improve the quality of life of cancer patients and their families, everywhere in the world."

WHO is also engaged in preparing a Global Strategy on Diet, Physical Activity and Health, under a May 2002 mandate from Member States to address the growing global burden of chronic diseases, including cancers, cardiovascular diseases, diabetes and obesity? WHO is consulting widely with Member States, other UN agencies, the private sector and civil society on the strategy, which will be presented to the World Health Assembly in May 2004? The strategy will contain recommendations for governments on nutrition and physical activity goals and population-based interventions to reduce the prevalence of chronic disease including cancer.

Cancer diagnosis is described as one of the most stressful medical diagnoses a person can receive. Indeed, data from many studies document acute emotional stress/distress at the time of diagnosis and early treatment. Depressive symptoms are the most common affective symptoms reported by cancer patients. Research suggests that the majority of patients experience some degree of depressive symptoms and approximately 50 percent meet criteria for a psychiatric diagnosis (i.e. adjustment, mood and/or anxiety disorders. In a recent review on the prevalence of depression in cancer patients, found rates ranging from 1.5 to 50 percent rates consistently higher than those for patients with other medical diagnoses.

For those with breast cancer, the rates for depression symptoms are the third highest of any cancer diagnostic group. Within six months of initial breast cancer diagnosis and treatment, rates of diagnosable depression have been estimated to be 20 to 30 percent

with individual studies ranging from 6 percent to 29 percent. As breast cancer is the most commonly diagnosed cancer in women (i.e. over 192,000 new cases annually in the United States; upwards of 96,000 (50%) women may experience some depressive symptoms. A subset 38,400 to 57,600 (20–30%), may have symptoms of a magnitude sufficient to suggest clinical depression. Such numbers clearly illustrate the need for appropriate identification of women 'at risk' for depressive symptoms as these symptoms are not only associated with lower quality of life but may lead to other difficulties such as poorer treatment compliance and shorter disease free intervals.

Global Scenario

Female Breast Cancer

Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death in females worldwide, accounting for 23 percent (1.3 million) of the total new cancer cases and 14 percent (458, 400) of the total cancer deaths in 2008. About half of the breast cancer cases and 60 percent of the deaths are estimated to occur in economically developing countries.

Lung Cancer

Lung cancer was the most commonly diagnosed cancer as well as the leading cause of cancer death in males in 2008 globally.

Stomach Cancer

A total of 989, 600 new stomach cancer cases and 738,000 deaths are estimated to have occurred in 2008, accounting for 8 percent of the total cases and 10 percent of total deaths.

Liver Cancer

Liver cancer in men is the fifth most frequently diagnosed cancer worldwide but the second most frequent cause of cancer death. An estimated 748,300 new liver cancer cases and 695,900 cancer deaths occurred worldwide in 2008.

Lip and Oral Cavity Cancer

Cancers of the Lip and oral cavity an estimated 263,900 new cases and 128,000 deaths from oral cavity cancer (including lip cancer) occurred in 2008 world wide smoking, alcohol use, smotheless tobacco products, and HPV infections are the major risk factors for oral cavity cancer.

Indian Scenario

In India the incidence of breast cancer is increasing, with an estimated 80,000 new cases diagnosed annually. The incidence of breast cancer increased by approximately 50 percent between 1965 and 1985. Much of this increase may be associated with greater urbanization and improved life expectancy.

Cancer is the leading cause of death in economically developed countries and the second leading cause of death in developing countries. The burden of cancer is increasing in economically developing countries as a result of population aging and growth as well as, increasingly, an adoption of cancer-associated lifestyle choices including smoking, physical inactivity, and “westernized” diets. In this article, we provide an overview of the global cancer burden, including the estimated number of new cancer cases and deaths in 2008 and the incidence and mortality rates by region for selected cancer sites.

Tamilnadu Scenario

Prior information regarding cancer, radiation therapy and side effects of radiation therapy which enabled the family members to go for periodical review and aided in early identification of cancer **(Chandra, P. 2003)**.

In CSI Mission Hospital

In CSI Mission Hospital, the oncology ward consists of 50 beds and nearly 30 to 45 patients are admitted per day. They are receiving radiation therapy and chemotherapy mainly for thyroid cancer, oral cancers, esophageal cancers, and Breast cancer.

Stress has been conceptualized as life events/stressors or as, perceptions of stress (i.e. global perceptions or cancer-related perceptions).stress is associated with poor psychological outcomes in cancer patients. For instance, increased recent life events are positively related to distress in cancer populations. While studied in non-cancer medical populations, little is known about the association of global stress perceptions to psychological outcomes in cancer populations. One exception found that higher perceived global stress is associated with increased depression and anxiety in adolescent survivors of pediatric cancer. Much more is known about cancer-related stress perceptions. The Impact of Events Scale, a measure of traumatic stress, is commonly used to assess the severity of cancer-related intrusive and avoidant thoughts/behaviors. Research consistently reveals that increased perceptions of cancer-related traumatic stress are correlated with psychological distress. Intrusive symptoms (e.g. recurrent distressing thoughts, flashbacks), not avoidant ones (e.g. feelings of detachment, restricted range of affect), account for this significant relationship. However, we are unaware of

any cancer studies examining the relative contributions of these types of stress to depressive symptoms.

In the study, depressive symptoms were examined in a sample of women recently diagnosed and surgically treated for regional breast cancer. Importantly, the relationship of three types of stress to these symptoms was examined - the occurrence of stressful life events in the year prior to cancer diagnosis, perceptions of global stress, and perceptions of cancer-related traumatic stress. Other potentially relevant correlates of depressive symptoms were also examined. An individual difference variable, the personality trait of neuroticism was tested. Positive associations between neuroticism, the tendency to be emotionally negative, and psychological outcomes have been found in heterogeneous cancer groups. However, the importance of a neurotic style to adjustment after surgery for breast cancer patients is unknown. Other control variables examined were those related to the general context (i.e. socio demographics) as well as the specific context (i.e. disease and treatment characteristics) of the breast cancer experience. We used a conservative strategy (i.e. controlling for other variables) in order to examine the contribution of different types of stress to depressive symptoms above and beyond other variables.

Yoichi Chida et al., (2008) had conducted a study to investigate the associations between stress-related psychosocial factors and cancer outcomes. They evaluated longitudinal associations between stress and cancer using meta-analytic methods. The results of 165 studies indicate that stress-related psychosocial factors are associated with higher cancer incidence in initially healthy populations ($p=0.005$); in addition, poorer survival in patients with diagnosed cancer was noted in 330 studies ($p<0.001$), and higher cancer mortality was seen in 53 studies ($p <0.001$). Subgroup meta-

analyses demonstrate that stressful life experiences are related to poorer cancer survival and higher mortality but not to an increased incidence. Stress-prone personality or unfavorable coping styles and negative emotional responses or poor quality of life were related to higher cancer incidence, poorer cancer survival and higher cancer mortality. Site-specific analyses indicate that psychosocial factors are associated with a higher incidence of lung cancer and poorer survival in patients with breast, lung, head and neck, hepatobiliary, and lymphoid or hematopoietic cancers. These analyses suggest that stress-related psychosocial factors have an adverse effect on cancer incidence and survival, although there is evidence of publication bias and results should be interpreted with caution.

Bradley BW et al., conducted a study to assess Autonomic responses to stress the effects of progressive relaxation, the relaxation response and expectancy of relief. Forty-eight male subjects with no previous meditative experience engaged in either Progressive Relaxation (PR), a meditative treatment designed to induce the Relaxation Response (RR), or a no-treatment control experience (C) during four sessions on consecutive days. Negative expectations regarding the effectiveness of each technique for reducing physiological responses to stress were induced for half of the subjects in each treatment condition, and positive expectations were induced for the other half. Subjects viewed a stressful film following practice of their technique during the first and fourth sessions. Heart rate and electrodermal responding were recorded continuously during practice of the techniques and during the stressful film throughout the first and fourth sessions. Results indicated lowered heart rate levels prior to the film for subjects in the PR-positive expectancy condition and during the film for subjects in the

RR-positive expectancy condition. It is suggested that subjects' expectancies concerning meditation may affect cardiovascular responding during stress, although meditative treatments in general do not appear to reduce stress responding as effectively as previously suggested.

When the investigator was posted in Oncology ward, she saw so many patients with stress before attending the progressive muscle relaxation technique and the patients asked so many questions regarding progressive muscle relaxation technique. They are in need of close and competent nursing care during this period. The patients who got adequate information regarding progressive muscle relaxation technique had less stress. When compared to others who have not received adequate information. So the investigator was interested to select this topic.

STATEMENT OF THE PROBLEM

A study to evaluate the effectiveness of progressive muscle relaxation technique on reduction of stress among patient with cancer admitted in CSI Mission hospital at Neyyoor.

OBJECTIVES

- ☆ To assess the Pre- test level of stress among cancer patients in experimental group and control groups.
- ☆ To assess the Post- test level of stress among the cancer patients in experimental group and control groups.
- ☆ To evaluate the effectiveness of progressive muscle relaxation technique on reduction of stress among cancer patients in experimental group.

- ☆ To find out the association between the post- tests level of stress among cancer patient and selected demographic variables in experimental group.
- ☆ To find out the association between the post tests level of stress among cancer patients and selected demographic variables in control group.

HYPOTHESES

H_1 The mean post- test level of stress will be significantly lower than the mean pretest level of stress among the experimental group subjects.

H_2 The mean post- test level of stress among the experimental group who received progressive muscle relaxation technique will be significantly lower than the mean post-test level of stress among the control group.

H_3 There will be a significant association between post- test levels of stress and progressive muscle relaxation technique among experimental group and selected demographic variables.

H_4 There will be a significant association between post- test levels of stress and progressive muscle relaxation technique among control group and selected demographic variables.

OPERATIONAL DEFINITIONS

Effectiveness

In this study, it refers to the ability to bring out change in (or) the level of stress of progressive muscle relaxation technique among cancer client which was measured through perceived stress scale.

Progressive Muscle Relaxation Technique

Progressive muscle relaxation technique it mean a effective relaxation response which involves to step process in which systematically tensed and calm different muscle group such as close the eyes tightly and relaxed after ten seconds, create tense wrinkles in forehead, hold the position for ten seconds and relief do the same for the whole body part.

Cancer

It is an abnormal malignant growth of tissues.

In this study refers to an abnormal malignant growth of tissue to the patients who have diagnosed as a cancer of breast, thyroid, oral cavity.

Stress

In this study it refers to great mental discomfort caused by cancer which is graded as mild level of stress, moderate level of stress and severe level of stress. This is measured by perceived stress scale.

ASSUMPTION

- ☆ The Progressive muscle relaxation technique will reduce the stress among the patients who had cancer.
- ☆ The practicing Progressive Muscle Relaxation technique the subjects quality of life may improve.
- ☆ The demographic variables also will influence the perception of stress among the patients who had diagnosed of cancer.

LIMITATION

- ☆ The study is limited to those who are admitted in oncology ward at CSI Mission Hospital at Neyyoor.
- ☆ The sample size was 80.
- ☆ The data collection period was limited to six weeks.

PROJECTED OUTCOME

- ☆ This study may help to know about the various method of progressive muscle relaxation technique on reduction of stress.
- ☆ The finding of the study may help to determine the effectiveness of progressive muscle relaxation technique in terms of reducing stress of cancer patients.

CONCEPTUAL FRAMEWORK

The conceptual framework is a group of related ideas, statements or concepts. The term conceptual model is often used interchangeably with conceptual framework and some times with grand theories those that articulate a broad range of the significant relationship among the concept of a discipline (Kozier Barbar, 2005).

The conceptual framework for this study was derived from general system given by J.W.Kenny. According to this theory, a system is a set of components or units interacting with each other with in a boundary that filters the type and rate of exchange with the environment. Kenny systems are open in that there is a continual exchange of matters, energy and information. In open system, there are varying degree of interaction with in the environment from which the system receives input and gives back output in the form of mater, energy and information.

The present study aims at evaluating the effectiveness of progressive muscle relaxation technique on reducing of stress among clients with cancer at CSI Mission hospital at Neyyoor. General system theory is useful in breaking the process in to sequential tasks to ensure goal realization. Kenny explained that the system has three major aspects.

1. Input
2. Through put and
3. Output

Input

Input is any form of energy, information material or human that enters into the system through its boundaries. Through the process of selection the system regulates the type and amount of input received.

Before administering input the demographic variables and pre-test assessment of level of stress was assessed by perceived stress scale for cancer client evaluation for both control and experimental group samples. The input consists of progressive muscle relaxation technique among clients with cancer in experimental group for six days.

Throughput

It is the process that occurs between the input and output in such a way that can be readily used by the system.

It is the process of improvement in the level of stress reduction during the practice period of progressive muscle relaxation for six days

Output

It is energy information and material that is transferred to the environment processing the input, the system's output to the environment in an altered state.

The outcome of progressive muscle relaxation was evaluated by using the perceived stress scale cancer client evaluation. After the post-test there was a significant reducing the level of stress among experimental group than the control group. It indicates the effectiveness of progressive muscle relaxation technique in reducing the level of stress among experimental group.

Feedback:

It is the result of through put on the analysis of the post- test level of stress reduction of cancer clients show that progressive muscle relaxation technique should be modified or the same pattern can be followed once again.

CHAPTER – II

REVIEW OF LITERATURE

Review of literature helps to develop a strong knowledge base to carry out research in educational, clinical practice setting and for further development of knowledge in nursing science (Polit, 2008).

Review of literature refers to an extensive, exhaustive and systemic examination of publication prevent to the research project (B.T.Basavanthappa).

Before any research can be started whether it is a single study or an extended project a literature review of previous studies and experiences related to the proposed investigations should be done.

- ❖ Studies related to progressive muscle relaxation technique.
- ❖ Studies related to reducing stress.

SECTION-A

Studies Related to Progressive Muscle Relaxation Technique

Rogers LQ et al., (2010) facilitating exercise adherence among breast cancer survivors in a group setting objective of this study was to describe clinical observations, with research and derive during group exercise counselling for breast cancer survivors. Breast cancer diagnosis was a strong source of commonality among group participants.

Harry Mills et al., (2008) progressive muscle relaxation for stress reduction. Kinetic or movement related stress relief practices need not involve a lot of exertion to be effective. Progressive muscle

relaxation or PMR, is a stress relief technique that relies upon subtle rather than gross (Large) muscular movements to promote relaxation and tension relief.

Carol L. Baird et al., (2004) conducted a study to assess the effectiveness of guided imagery with progressive muscle relaxation to reduce chronic pain and mobility difficulties of osteoarthritis. Osteoarthritis (OA) is a common, chronic condition that affects most older adults. Adults with OA must deal with pain that leads to limited mobility and may lead to disability and difficulty maintaining independence. A longitudinal, randomized clinical trial pilot study was conducted to determine whether Guided Imagery (GI) with Progressive Muscle Relaxation (PMR) would reduce pain and mobility difficulties of women with OA. Twenty-eight older women with OA were randomly assigned to either the treatment or the control group. The treatment consisted of listening twice a day to a 10 to 15 minutes audio taped script that guided the women in GI with PMR. Repeated-measures ANOVA revealed a significant difference between the two groups in the amount of change in pain and mobility difficulties they experienced over 12 weeks. The treatment group reported a significant reduction in pain and mobility difficulties at week 12 compared to the control group. Members of the control group reported no differences in pain and non-significant increases in mobility difficulties. The results of this study justify further investigation of the effectiveness of GI with PMR as a self-management intervention to reduce pain and mobility difficulties associated with OA.

Webbsymth et al., (2000) conducted a study to assess the effectiveness of progressive muscle relaxation training in reducing stress related symptoms result of this study in the experimental group

of infertile women who underwent progressive muscle relaxation training had a significantly lower mean physical strain score and interpersonal strain scores and also had significant reduction in psychological strains score.

Patricia D.E. Berry et al., (1996) the results of another study supported the hypothesis that the efficacy of PMR in reducing stress related symptoms in geriatric populations. The results revealed that the experimental group showed significant improvement in the state of anxiety, muscle tension and sleeping hours.

L Baider et al., (1994) Progressive muscle relaxation and guided imagery in cancer patients. The aim of this study was to gather information on the immediate and long term effects of six sessions of group progressive muscle relaxation with clinical imagery on the psychological distress of self referred cancer patients.

SECTION-B

Studies Related to Stress

Kristine L. Kwekkeboom et al., (2007) Individual Difference Variables and the Effects of Progressive Muscle Relaxation and Analgesic Imagery Interventions on Cancer Pain Individual difference variables and the effects of progressive muscle relaxation and analgesic imagery interventions on cancer pain. This study examined variation in pain outcomes achieved with Progressive Muscle Relaxation (PMR) and analgesic imagery interventions among hospitalized patients with cancer pain .crossover design was used in which 40 hospitalized cancer patients received two trials of PMR, two trials of analgesic imagery, and two trials of a control condition. In comparing means between treatment and control

conditions, both PMR and analgesic imagery produced greater improvements in pain intensity, pain-related distress, and perceived control over pain than the control condition. However, individual responder analysis revealed that only half of the participants achieved a clinically meaningful improvement in pain with each intervention. Patients who achieved a meaningful improvement in pain with analgesic imagery reported greater imaging ability, more positive outcome expectancy, and fewer concurrent symptoms than those who did not achieve a meaningful reduction in pain. Similar relationships were not significant for the PMR intervention. Investigators should continue efforts to identify factors that moderate the effects of cognitive-behavioral pain coping strategies so that clinicians can identify the most beneficial treatments for individual patients.

Hee J. Yoo et al., (2005) conducted a study to efficacy of progressive muscle relaxation training and guided imagery in reducing chemotherapy side effects in patients with breast cancer and in improving their quality of life conducted a study was designed to assess the effectiveness of Progressive Muscle Relaxation Training (PMRT) and Guided Imagery (GI) in reducing the Anticipatory Nausea and Vomiting (ANV) and Post chemotherapy Nausea and Vomiting (PNV) of patients with breast cancer and to measure their effects on the patients' quality of life Efficacy of progressive muscle relaxation training and guided imagery in reducing chemotherapy side effects in patients with breast cancer and in improving their quality of life Efficacy of progressive muscle relaxation training and guided imagery in reducing chemotherapy side effects in patients with breast cancer and in improving their quality of life Efficacy of progressive muscle relaxation training and guided imagery in reducing

chemotherapy side effects in patients with breast cancer and in improving their quality of life .

Juk Lung Cheung et al., (2003) the effect of progressive muscle relaxation training on anxiety and quality of life after stoma surgery in colorectal cancer patients. The aim of the study was to evaluate the effects of use of Progressive Muscle Relaxation Training (PMRT) on anxiety and quality of life in colorectal cancer patients after stoma surgery. Fifty nine patients participated in the study and were randomized to a control group receiving routine care (n=30) and an experimental group receiving routine care and PMRT through two teaching sessions and practice at home for the first ten weeks. The use of progressive muscle relaxation training significantly decreased state anxiety and improved geuric quality of life in the experimental group ($P<0.05$) especially in the domains of physical health. The use of PMRT should be incorporated in the long-term care of colorectal cancer patient.

Thomas G. Burish et al., (2002) conducted a study to Effectiveness of relaxation training in reducing the aversiveness of chemotherapy in the treatment of cancer. Progressive muscle relaxation training was used to reduce the conditioned negative responses developed by a 30 years – old cancer patient undergoing chemotherapy treatment. The result of this study is the progressive muscle relaxation training may be an effective procedure for reducing the adverse effects of cancer chemotherapy.

JC Hollond et al., (2001) conducted a study to randomized clinical trial of alprazolam versus progressive muscle relaxation in cancer patients with anxiety and depressive symptoms A randomized non-blinded study was performed in three cancer centers to test over a

ten days period the efficacy of (1) a triazolobenzodiazepine, alprazolam, 0.5 mg three times a day and (2) use of a behavioral technique in which patients were trained in progressive muscle relaxation at an initial session with a behavioral psychologist and then asked to listen at home to an audiotape of the session three times a day. Of 147 cancer patients who met entry levels of distress and completed the study, uncontrolled for site or disease stage, 70 were randomized to drug, 77 to relaxation. Results showed that both treatment arms resulted in significant (P less than .001) decrease in observer and patient-reported anxious and depressed mood symptoms. These findings confirm efficacy of both alprazolam and relaxation to reduce cancer-related anxiety and depression. As safe, inexpensive, and effective interventions, physicians should consider their use in cancer patients experiencing anxiety and depressive symptoms.

Karin Luebbert et al., (2001) conducted a study on the effectiveness of relaxation training in reducing treatment –related symptoms improving emotional adjustment in acute non-surgical cancer treatment. In this study, meta-analytic methods were used to synthesize published, randomized intervention–control studies aiming to improve patients' treatment-related symptoms and emotional adjustment by relaxation training. Mean weighted effect sizes were calculated for 12 categories, treatment-related symptoms (nausea, pain, blood pressure, pulse rate) and emotional adjustment (anxiety, depression, hostility, tension, fatigue, confusion, vigor, overall mood). Relaxation training also proved to have a significant effect on the emotional adjustment variables depression, anxiety and hostility. The interventions offered independently of medical treatment proved to be significantly more effective for the outcome variable anxiety.

Relaxation seems to be equally effective for patients undergoing different medical procedures (chemotherapy, radiotherapy, bone marrow transplantation, hyperthermia). According to these results training should be implemented into clinical routine for cancer patients in acute medical treatment.

Butler et al., (1999) Treatment stress, life events and emotional support in women with metastatic breast cancer related traumatic stress symptoms associated with past and current stressors. This study examined level of intrusion and avoidance symptoms and their relationships to past life stress current emotional support disease related variables, and age in 125 women with metastatic breast cancer. Efficacy of progressive muscle relaxation training and guided imagery in reducing chemotherapy side effects in patients with breast cancer and in improving their quality of life This study was designed to assess the effectiveness of Progressive Muscle Relaxation Training (PMRT) and Guided Imagery (GI) in reducing the Anticipatory Nausea and Vomiting (ANV) and Post chemotherapy Nausea and Vomiting (PNV) of patients with breast cancer and to measure their effects on the patients' Quality of Life (QoL). Patients and methods thirty chemotherapy-naive patients with breast cancer were randomized to the PMRT and GI group and 30 to the control group. Before each of six cycles of adjuvant chemotherapy, each patient was administered a self-report Multiple Affect Adjective Checklist (MAACL), and incidents of ANV and PNV for the first three post-chemotherapy days were recorded. All patients were administered the Functional Assessment of Cancer Therapy—Breast (FACT-B) at baseline and after three and six months. We found that the PMRT and GI group was significantly less anxious, depressive, and hostile than the control group. We also found that the PMRT and GI group

experienced significantly less ANV and PNV and that six months after CT, the QoL of the PMRT and GI group was higher than that of the control group.

Lin ML et al., (1998) the study in efficacy of a stress management program for patients with hepatocellulur carcinoma receiving transcatheter arterial embolization. Transcatheter arterial embolization a common treatment for patients with unrespectable hepatocellular carcinoma can provoke severe physical discomfort and psychological stress. The purpose of this study was to investigate the effect of a combination of health education, muscle relaxation and back massage on reducing physiological and psychological stress in HCC patients receiving TAE. A quasi experimental design was used. Forty patients with HCC (30 men and 10 women) with a mean age of 57 and 1 to 12 years were recruited and randomly assigned to the control or experimental group. After completing the stress management program, the experimental group had a greater mean increase in knowledge score than the control group (5.1 Vs 0.8, $P<0.0001$) and a greater mean decrease in worry score (-8.2 Vs 1.1, $P< 0.0001$). This stress management program effectively reduces the stress of HCC patients undergoing TAE.

Flemming (1995); Denovan (1996) Literature shows that number of research studies done on the effectiveness of progressive muscle relaxation anxiety and depressive symptoms in cancer patients and found to have reduction in anxiety and improvement in the stress related psychological intervention.

CHAPTER – III

RESEARCH METHODOLOGY

Research methodology is designed to develop or define and refine methods of obtaining, organizing or analyzing data (Polit, 2006). It is systematic way to solve research problems (Kothan, 1990).

This phase of the study deals with research design, variables, description of the setting, population sample, description of the sampling technique, description of the instrument designed for the study, pilot study, method of data collection and data analysis.

This study was designed to evaluate the effectiveness of progressive muscle relaxation technique on reduction of stress, patients with cancer.

RESEARCH APPROACH

Quantitative approach is a powerful design for testing hypotheses of casual relationship among variables.

The research approach used for the present study was a quantitative approach.

RESEARCH DESIGN

The research design is the plan of how, when and where data are to be collected and analyzed.

In this study quasi experimental design with one group pre-test, post- test control group design was used.

The diagrammatic representation of this design is as follows:

E O_1 X O_2 C $O_3 – O_4$

E - Experimental group

O_1 - Pre assessment level of stress among the experimental group

X - Progressive muscle relaxation technique

O_2 - Post assessment level of stress among the experimental group

C - Control group

O3 - Pre assessment level of stress among the control group

- - No intervention

O4 - Post assessment level of stress among the control group

Variables under study:

Dependent variable - Stress

Independent variable- Progressive muscle relaxation technique

SETTING OF THE STUDY

Setting is the physical location and condition in which data collection takes place in the study.

The study was conducted in CSI Mission Hospital, Neyyoor. It is situated 17km away from Nagercoil. It is a 300 bedded hospital which consists of ICU, casuality, diabetology, orthopaedic, paediatric ward, maternity, oncology, radiology, biochemistry lab, operation theatre, dermatology is available. The oncology unit has the bed strength of 50 nearly 20 to 25 patients are getting radiation therapy/ chemotherapy every day. Approximately 35 to 40 patients are

admitted in hospital per day, Investigators convenience and familiarity with the setting were added reason. The setup of the hospital is in a calm and pleasant environment.

POPULATION

Population is the aggregate of cases about which the researcher would like to make generalization.

Population refers to the entire aggregation of samples that meet the designated criteria. Population refers to the entire set of individuals who have some common characteristics and it is important to make a distinction between the target and accessible population.

In this study the sample comprised of all cancer clients admitted in CSI Mission Hospital, Neyyoor, during the period of study.

SAMPLE SIZE

In this study 80 subjects was selected who fulfilled the inclusion criteria. Forty subjects for experimental group and another 40 subjects for control group.

SAMPLING TECHNIQUE

Purposive sampling was used for this study. According to Polit and Hungler (2004) Purposive or judgmental sampling is based on the belief that, researcher whose knowledge about the population can be used. The researcher wanted to select patients based on specific criteria this technique was found to be appropriate for the purpose of the study.

CRITERIA FOR SAMPLE SELECTION

Inclusion Criteria

Subject who had cancer and admitted in CSI Mission Hospital, Neyyoor.

- ✧ Subject who were willing to participate in the study
- ✧ The subject with cancer in the oral, thyroid and breast.
- ✧ Both male and female patients.
- ✧ Subject who understand the Tamil.

Exclusion criteria

- ✧ Subject who were not willing to participate in this study.
- ✧ Subject who diagnosed as leukemia.

DEVELOPMENT OF THE TOOL

The tool used for this study was divided into two sections.

Section-1

Demographic Data

Session 1 had items related to demographic and clinical data which included age, sex, education, occupation, area of residence, type of family, helping people, monthly income of cancer patient.

Section-2

The perceived stress scale was used to assess the level of stress among cancer clients.

DESCRIPTION OF THE TOOL

The perceived stress scale was used for the study. The perceived stress scale used to measure the level of stress. It consists of 4 scores. Patient marks point based on the score column.

SCORING PROCEDURE

It consists of 10 questions which were used to assess the level of stress among cancer patient by progressive muscle relaxation.

Out of 10 statements each questions carries 4 score. The minimum score was 0 and maximum score was4.

Based on the score from mean, t-distribution, standard deviation the subjects were classified as follows:

Tool

A modified perceived stress scale was used to determine the effectiveness of progressive muscle relaxation.

The response will score as follows:

Mild stress	-	0-20
Moderate stress	-	21-29
Severe stress	-	30-40

TESTING OF THE TOOL

Content Validity

Validity of the tool was established by submitting the tool to five experts in the field of medical surgical nursing and one specialized oncology consultant.

Reliability

The reliability of the tool was obtained by establishing test,-retest method. The r" value was 0.06. The score indicates a high correlation and hence the tool was considered as highly reliable.

PILOT STUDY

In order to find out the feasibility of the pilot study was conducted among 8 patients with cancer at C.S.I Mission Hospital at Neyyoor who fulfilled the inclusion criteria. It was carried out in the same way as the final study was conducted in order to test the feasibility and practicability it was conducted after obtaining permission from the institution 8 patients who met the inclusion criteria were selected by using purposive sampling method. After proper explanation and questionnaire were distributed and the doubts were cleared using progressive muscle relaxation technique reducing stress. The results were analysed based on the scores obtained by the patients. The calculated value r for the pilot study was 0.06 during the pilot study the investigator did not face any difficulties which indicate the reduction of stress. These subjects were excluded from the final study.

DATA COLLECTION PROCEDURE

Before starting the study, the researcher obtained formal permission from the hospital authority and the dissertation committee of Matha College of Nursing, Manamadurai to conduct the study. The period of study extended for six weeks. Each day data was collected from 3 to 4 samples and the researcher spent 20 minutes with each subjects. The subjects were divided in to experimental group 40 samples and control group 40 samples. First three weeks experimental

group participants were selected and followed by control group next three weeks. The pre test level of stress was assessed by perceived stress scale followed by progressive muscle relaxation technique for 20 minutes a day (morning session from (10am-12pm and afternoon session from 2-4pm) for six days. After the completion of last session (sixth day) stress level was assessed by perceived stress scale.

PLAN FOR DATA ANALYSIS

The data analysis was planned according to the objectives and hypotheses of the study by using inferential statistics.

Descriptive Statistics

Frequencies, percentage, mean, standard deviation was planned for analyzing pre- test, post- test assessment.

Inferential Statistics

Chi square was used to determine the association between demographic variables with stress scale.

Paired “t” test was used to determine the effectiveness of progressive relaxation technique.

PROTECTION OF HUMAN RIGHTS

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, and Manamadurai. Verbal permission was obtained from the study subject and the data collection was kept as confidential.

CHAPTER – IV

ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with analysis of the samples and interpretation of data to determine the effectiveness of progressive muscle relaxation technique on reduction of stress among patient with cancer admitted CSI Mission hospital at Neyyoor.

According to Polit (2007) analysis helps a researcher to make a sense of quantitative information. Statistical procedure enable researches to summarize, organize evaluate, interpret and communicate numeric information.

The obtained data has been classified, grouped and analyzed statistically based on the objectives of the study.

Objectives

1. To assess the pre test level of stress among cancer patients of experimental group and control group.
2. To assess the post test level of stress among cancer patients of experimental group and control group.
3. To evaluate the effectiveness of progressive muscle relaxation technique in reduction stress among cancer patients in experimental group.
4. To find out the association between the post test level of stress among cancer patient and selected demographic variables in experimental group.

5. To find out the association between the post test level of stress among cancer patient and selected demographic variables in control group.

Section – I - Distribution of samples based on the selected demographic variables among experimental group and control group.

Section – II - Distribution of samples based on the level of stress among experimental group and control group.

Section – III - Distribution of mean, standard deviation in the effectiveness of progressive muscle relaxation technique on reduction of stress among experimental group.

Section – IV - Association between the post-test level of stress in experimental group and their selected demographic variables.

Section – V - Association between the post-test level of stress in control group and their selected demographic variables.

SECTION - I

Table-1: Distribution of Samples Based on the Selected Demographic Variables among Experimental Group and Control Group.

(N=80)

Demographic Variables	Experimental Group (n = 40)		Control Group (n = 40)	
	f	%	f	%
Age (in years)				
a) Below 20 years	0	0	0	0
b) 21 -30 years	3	7.5	5	12.5
c) 31- 40 years	7	17.5	9	22.5
d) Above 40 years	30	75	26	65.0
Sex				
a) Male	21	52.5	23	57.5
b) Female	19	47.5	17	42.5
Education				
a) Illiterate	17	42.5	11	27.5
b) Primary education	8	20	17	42.5
c) Higher secondary	9	22.5	3	7.5
d) Degree	6	15	9	22.5
Occupation				
a) Employee	28	70	32	80
b) Un employee	12	30	8	20
Area of Residence				
a) Rural	29	72.5	32	80
b) Urban	11	27.5	8	20

Demographic Variables	Experimental Group (n = 40)		Control group (n = 40)	
	f	%	f	%
Type of Family				
a) Joint	3	7.5	39	97.5
b) Nuclear	37	92.5	1	2.5
Helping People				
a) Family members	18	45	32	80
b) Relatives	15	37.5	7	17.5
c) Friends	7	17.5	1	2.5
Monthly Income				
a) Less than Rs.1000	11	27.5	8	20
b) Rs. 1001 – 2000	4	10	5	12.5
c) Rs. 2001 – 3000	9	22.5	9	22.5
d) Rs. Above 3000	16	40	18	45

Table 1 Shows that out of 40 samples regarding age majority in experimental group 30 out of 40 (75%) were above 40 years in the control group 26 out of 40(65.0%) were above 40 years.

Regarding sex majority in experimental group 21 out of 40 (52.5%) were males and only 19 out of 40 (47,5%) were females .In the control group 23 out of 40 (57.5%)were males and 17 (42.5%) were females.

Regarding education, majority in experimental group 17 out of 40 (42.5%) were illiterate in the control group 17 out of 40 (42.5%) were primary education.

Regarding occupation, majority in experimental group 28 out of 40 (70%) were employee, in the control group 32 out of 40(80%) was employee.

Regarding area of residence, majority in experimental group 29 out 40 (72.5%) were rural in the control group 32 out of 40 (80%) were rural area.

Regarding type of family, majority in experimental group 37 out of 40 (92.5%) were nuclear in the control group 39 out of 40 (97.5%) were joint family.

Regarding helping people, majority in experimental group 18 out of 40 (45%) were family members in the control group 32 out of 40 (80%) were family members.

Regarding monthly income, majority in experimental group 16(40%) were Rs. above 3000 in the control group 18(45%) was Rs.3000.

SECTION – II

Table-2: Distribution of Samples Based on the Level of Stress among Experimental Group and Control Group

Level of Stress	Experimental Group				Control Group			
	Pre test frequency		Post test frequency		Pre test frequency		Post test frequency	
	f	%	f	%	f	%	f	%
Mild	0	0	20	50	0	0	0	0
Moderate	11	27.5	19	47.5	5	12.5	8	20
Severe	29	72.5	1	2.5	35	87.5	32	80

Table 2 Shows that in experimental group 20(50%) samples had mild level of stress in post test.11(27.5%) samples had moderate level of stress in pre test,19 (47.5%) samples had moderate level of stress in post test.29(72.5%) severe level of stress in pre test and 1(2.5%) of samples had severe level of stress in post test.

SECTION-III

Table-3: Distribution of Mean and Standard Deviation in the Effectiveness of Progressive Muscle Relaxation Technique on Reduction of Stress among Experimental Group

Measurement	Mean	SD	"t' Value
Pre test	31.4500	4.32020	13.599
Post test	20.9500	5.08366	

Significant at 0.05 levels

Table 3 shows that the mean pre test score is 31.4500 and the mean post test score is 20.9500. The obtained "t" value (significant at 0.05%) is 13.59, which is higher than the tabulated value significant at $p<0.001$.concluded that there was a significant difference pre test and post test level of stress in experimental group.

SECTION – IV

Table-4: Association between the Posttest Level of Stress in Experimental Group and their Selected Demographic Variables

(n=40)

Demographic Variables	Mild	Moderate	Severe	χ^2
Age (in years)				
a) Below 20 years	-			
b) 21 -30 years	-	3 (7.5%)		
c) 31- 40 years	4 (10%)	3 (7.5%)	1	3.584#
d) Above 40 years	16 (40%)	13 (32.5%)	(2.5%)	
Sex				
a) Male	10 (25%)	10 (25%)	1	0.955 #
b) Female	10 (25%)	9 (22.5%)	(2.5%)	
Education				
a) Illiterate	15(37.5%)	2 (5%)		
b) Primary Education	4 (10%)	4 (10%)		25.808*
c) Higher secondary	1 (2.5%)	8 (20%)	1	
d) Degree		5 (12.5%)	(2.5%)	
Occupation				
a) Employee	16 (40%)	12 (30%)	1	
b) Un employee	4 (10%)	7 (17.5%)	(2.5%)	3.709 #
Area of Residence				
a) Rural	15 (37.5%	13 (32.5%)	1	
b) Urban	5 (12.5%)	6 (15%)	(2.5%)	0.601 #

Table Cont…

Demographic Variables	Mild	Moderate	Severe	χ^2
Type of Family				
a) Joint	20 (50%)	3 (7.5%)	1	
b) Nuclear	13	16 (40%)	(2.5%)	3.585 #
Helping People				
a) Family members	(32.5%	5 (12.5%)		
b) Relatives	5 (12.5%)	10 (25%)	1	10.739 *
c) Friends	2 (5%)	4 (10%)	(2.5%)	
Monthly Income				
a) Less than Rs.100	4 (10%)	6 (15%)	1	
b) Rs. 1001 – 2000	3 (7.5%)	1 (2.5%)	(2.5%)	
c) Rs. 2001 – 3000	6 (15%)	3 (7.5%)		5.350 #
d) Rs. Above 3000	7 (17.5%)	9 (22.5%)		

 # = Not significant (at 0.05 level)

****= Significant (at 0.05 level)***

Table 4 shows the association between level of stress and demographic variables of patient with cancer patient. The result shows that the calculate value for stress and demographic variable that is Area of residence of cancer patients is greater than the table value (at 0.05 level). So, it is concluded that there is a significant association between level of stress and demographic variables such as area of residence of cancer patient. The calculated value is less than the tabulated value (at 0.05 level) for age, sex, religion, education, occupation, type of family, monthly income.

SECTION-V

Table-5: Association Between the Posttest Level of Stress in Control Group and their Selected Demographic Variables

(n=40)

Demographic Variables	Mild	Moderate	Severe	χ^2
Age (in years)				
a) Below 20 years		-	-	
b) 21 -30 years		2 (5%)	3 (7.5%)	
c) 31- 40 years		2 (5%)	7 (17.5%)	1.624#
d) Above 40 years		4 (10%)	22 (55%)	
Sex				
a) Male		4 (10%)	19 (47.5%)	2.30#
b) Female		4 (10%)	13 (32.5%)	
Education				
a) Illiterate		1 (2.5%)	19 (25%)	
b) Primary		2 (5%)	15 (37.5%)	6.622#
c) Higher secondary		2 (5%)	1 (2.5%)	
d) Degree		3 (7.5%)	6 (15%)	
Occupation				
a) Employee		7 (17.5%)	25 (62.5%)	0.352#
b) Un employee		1 (2.5%)	7 (17.5%)	
Area of Residence				
a) Rural		4 (10%)	28 (70%)	
b) Urban		4 (10%)	4 (10%)	5.625*

Table cont…

Demographic Variables	Mild	Moderate	Severe	χ^2
Type of family:				
a) Joint		8 (20%)	-	0.256#
b) Nuclear		31 (77.5%)	1 (2.5%)	
Helping People:				
a) Family members		6 (15%)	26 (65%)	
b) Relatives		1 (2.5%)	6 (15%)	4.174#
c) Friends		1 (2.5%)	-	
Monthly Income:				
a) Less than Rs.1000		2 (5%)	6 (15%)	
b) Rs. 1001 – 2000		1 (2.5%)	4 (10%)	
c) Rs. 2001 – 3000		1 (2.5%)	8 (20%)	.625#
d) Rs. Above 3000		4 (10%)	14 (35%)	

Table 5 shows the association between level of stress and demographic variables of patient with cancer patient. The result shows that the calculate value for stress and demographic variable that is area of residence of cancer patients is greater than the table value (at 0.05level). So, it is concluded that there is a significant association between level of stress and demographic variables such as area of residence of cancer patient. The calculated value is less than the tabulated value (at 0.05 levels) for age sex, religion, education, occupation, type of family monthly income.

CHAPTER – V

DISCUSSION

The aim of the study was to assess the effectiveness of progressive muscle relaxation technique on reduction of stress among patient with cancer. The methodology of the study was Quasi-Experimental design. The setting of the study was in the CSI Mission hospital Neyyoor. The sample size consists of 80 samples (40 samples are experimental group and 40 samples are control group).

The objectives of the study were:

1) To assess the pre test level of stress among cancer patients of experimental group and control group.

2) To assess the post test level of stress among cancer patients of experimental group and Control group.

3) To evaluate the effectiveness of progressive muscle relaxation technique in reduction Stress among cancer patients in experimental group.

4) To find out the association between the post test level of stress among cancer patient and selected demographic variables in experimental group.

5) To find out the association between the post test level of stress among cancer patients and selected demographic variables of control group.

1. The first objective was to assess the pre test level of stress among cancer patients of experimental group and control group.

Table-II Shows that the experimental group 29(72.5%) of samples had severe level of stress.11 (27.5%) were having moderate level of stress.In control group 35(87.5%) of samples had severe level of stress,5(12.5%) of samples had moderate level of stress in pre test.

2. The second objective was to assess the post test level of stress among cancer patients of experimental group and control group.

Table II shows that the experimental group 20(50%) samples had mild level of stress, 19(47.5%) of samples had moderate level of stress, 1(2.5%) of samples had severe level of stress. In control group post test stress level the majority of the subjects 32(80%) of samples had severe level of stress, 8(20%) of samples had moderate level of stress.

Patricia DE Berry (1996) the results of another study supported the hypothesis that the efficacy of PMR in reducing stress related symptoms in geriatric populations. The results revealed that the experimental group showed significant improvement in the state anxiety, muscle tension and sleeping hours.

According to researcher, there was dramatic reduction in the post test stress level among the subjects in experimental group when compared to the control group. In experimental group pre test 29(72.5%) and posttest 1(2.5%), In control group pre test 35(87.55), post test 32(80%).

3. The third objective was to evaluate the effectiveness of progressive muscle relaxation technique in reduction stress among cancer patients in experimental group.

Table III shows that, there is reduction in stress level after doing progressive muscle relaxation technique, as the post test level of stress is (20.9500) is lower than the pre test level (31.4500) and the calculated t' value(13.599) is higher than table value at 0.05 level. So it is concluded that the progressive muscle relaxation technique is effective in reducing stress level.

Juk Lung Cheung et al., (2003) the effect of progressive muscle relaxation training on anxiety and quality of life after stoma surgery in colorectal cancer patients. Fifty nine patients participated in the study and were randomized to a control group receiving routine care (n=30) and an experimental group receiving routine care and PMRT through two teaching sessions and practice at home for the first ten weeks. The use of progressive muscle relaxation training significantly decreased state anxiety and improved geuric quality of life in the experimental group ($P<0.05$) especially in the doucamis of physical health. The use of PMRT should be incorporated in the long-term care of colorectal cancer patient.

According to researcher's point of view there were no one had severe level of stress in post test among experimental group. Majority of the samples had mild level of stress in post test among experimental group. Believed that progressive muscle relaxation technique was very effective Researcher method for reducing stress.

4. The fourth objective was to find out the association between the post test level of stress among cancer patient and selected demographic variables in experimental group.

H_1 There is no significant association between level of stress and demographic variables of cancer patient.

Table IV shows the association between level of stress and demographic variables of patient with Cancer. The results shows that the calculate value is greater than the table value (at 0.05%level).so it is concluded that there is a significant association between level of stress and demographic variables such as education and helping people.

According to researcher's point of view follow progressive muscle relaxation technique was helps in the dramatic reduction of stress level.

5. The fifth objective was to find out the association between the post test level of stress among cancer patients selected demographic variable in control group.

Table V shows the association between level of stress and demographic variables of patient with cancer patients. The result shows that the calculated value for stress and demographic variable that is Area of residence of cancer patients is greater than the table value (at 0.05 levels). So, it is concluded that there is a significantly association between the level of stress and demographic variables such as Area of residence.

H_2 There is no significant association between level of stress and demographic variables of cancer patient.

Hence, the researcher conclude that the calculated value is less than the tabulated value (at 0.05 levels) for age, sex, occupation, type of family, monthly income. So there is no association between level of stress and demographic variables such as age, sex, occupation, type of family, monthly income.

CHAPTER – VI

SUMMARY, IMPLICATIONS, RECOMMENDATIONS AND CONCLUSION

SUMMARY

A Quasi experimental study was conducted to assess the effectiveness of progressive muscle relaxation technique on reduction of stress among patients with cancer who are admitted in CSI Mission Hospital, Neyyoor. The research design was quasi experimental design. Sample size was 80 (40 samples are experimental group, 40 samples are control group) purposive sampling technique was used to select the patients.

The aim of the study was to examine whether interactive progressive muscle relaxation therapy may be considered on effective treatment for the attenuation of stress in cancer patient.

Review of literature enabled the investigator to develop the conceptual framework, methodology, setting for study and plan for data analysis. The conceptual model/Framework adapted for this study was based on the J.W. Kennys model, The Tool was developed after an extensive review of literature and considering the opinion given by the medical and the nursing experts.

The tool for data collection consists of two sections.

Section-I: Consists of demographic details.

Section II: Consists of a perceived stress scale for assessing the level of stress among clients with cancer patient.

The gathered data was tabulated, grouped and analysed. Biostatistical methods (paired ‘t’ test and chi-square) were used for analysis.

MAJOR FINDINGS OF THE STUDY

In Experimental Group

- ✧ Majority of the subjects 30(75%) were at the age between above 40 years.
- ✧ Majority of the subjects21 (52.5%) were male.
- ✧ 42.5% of the subjects (17) illiterates.
- ✧ Majority of the subjects 28(70.0%) were employee.
- ✧ Majority of the subjects 29(72.5%) were rural area.
- ✧ Majority of the subjects 37(92.5%) were nuclear family.
- ✧ 45%of the subjects (18) were family members.
- ✧ 40% of the subjects(16) were above Rs.3000

The case of control group:

- ✧ Majority of the subjects 26 (65%) were above 40 years.
- ✧ Majority of the subjects 23 (57.5%) were male.
- ✧ 45%of the subjects (17) were primary education.
- ✧ Most of the subjects 32 (80%) were employee.
- ✧ Majority of the subjects 32 (80%) were rural area.
- ✧ Majority of the subjects39 (97.5%) were joint family.
- ✧ Majority of the subjects 32 (80%) were family members.
- ✧ 45% of the subjects (18) were above Rs.3000.

IMPLICATIONS

The study has implications in various areas such as Nursing practice, Nursing education, Nursing administration and Nursing research.

Nursing Practice

- Based on the findings progressive muscle relaxation technique can be administered to patients in cancer ward and the nurses use the progressive muscle relaxation technique as the alternative therapy to reduce stress.
- Nurses may be encouraged to update their knowledge continuously through in service education while in clinical practice.
- The nursing administrator can encourage the nursing personal to conduct research on progressive muscle relaxation technique.
- Nurse should contribute to the evidence based nursing research through the experience gained from the application of progressive muscle relaxation therapy while caring clients with stress.

Nursing Education

- The findings of present study would help the nursing students to administer progressive muscle relaxation technique as nursing intervention in managing the stress.
- The nurse educators could teach the various types of progressive muscle relaxation technique.

- It is essential to add progressive muscle relaxation technique in complementary therapeutic modalities in the nursing curriculum.
- Nurse educators can arrange in service education programs for the nurses who are all working in the hospitals and rehabilitation centers to update their knowledge regarding progressive muscle relaxation technique ,thereby they can effectively supervise the training nurses and nursing students while giving progressive muscle relaxation technique for clients.

Nursing Administration

1. The nurse administrator has a key role and responsibility in organizing inservice education programme for the staff nurses.
2. The nurse administrator should take responsibility to arrange adequate library and internet facilities to improve the skills and knowledge regarding progressive muscle relaxation technique among nurses.
3. Short term specialization courses on stress reducing nursing and training programmes must be initiated in the hospitals for the nurses regarding progressive muscle relaxation technique.
4. In the administrative level periodic conferences, symposium, seminars can be arranged to update the knowledge, skills and practice of the nurses.

Nursing Research

1) With the help of such research studies, new strategies can be developed to improve and upgrade the knowledge of the staff nurses.

2) Research study provides a guideline for other researcher in considering the other aspects of progressive muscle relaxation technique.

3) Nurse researches should identify the constraints barriers in practicing progressive muscle relaxation technique and the ways to solve the problem doing future research.

RECOMMENDATIONS

Based on the findings of the study, the investigator proposed the following recommendations for the study.

The previous reviews and the present study indicate the progressive muscle relaxation technique is one of the best option to reduce the stress since it has no side effects and non invasive. So this study strongly recommended using. Progressive muscle relaxation technique for reducing stress among cancer patient.

1) A comparative study can be conducted to find out the effectiveness between progressive muscle relaxation technique and each of the pharmacolological method.

2) A comparative study would be useful if conducted to establish the relative effectiveness of music therapy and progressive muscle relaxation technique.

3) A similar study can be replicated on a large sample.

CONCLUSION

As for this research is concerned, the interventional study proved that there was a significant reduction of stress among cancer patient. The pre test and post test mean and standard deviation value calculated, since the standard deviation and standard errors were zero. The paired t' test was applied for identifying the significance. The reduction of stress was statistically very highly significant (p.0.005). From the above results and the hypotheses. The progressive muscle relaxation technique significantly reduce the stress was accepted. Therefore the progressive muscle relaxation technique is very effective form of non-pharmacological intervention to relieve stress among cancer patients as it is a non invasive and no side effects. The findings of the present study agree with the findings of previous clinical study, regarding progressive muscle relaxation technique.

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APPENDIX – I

LETTER SEEKING EXPERTS OPINION FOR CONTENT VALIDITY TOOL

From

Mrs.A.M.LEETHU,
M.Sc. (Nursing) II Year,
Matha College of Nursing
Manamadurai.

To

Through Principal

Respected Madam/ Sir,

Sub: Requesting opinion and suggestion of experts for content validity.

****

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 Dr.M.G.R.Medical University, Chennai.

PROBLEM STATEMENT

"A study to evaluate the effectiveness of progressive muscle relaxation technique on reduction of stress among patient with cancer admitted in CSI Mission Hospital at Neyyoor."

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

Enclosures:

a. Statement of the problem
b. Objectives
c. Research hypotheses
d. Research methodology
e. Description of the tool
   i. Part I : Demographic variables
   ii. Part II : Perceived stress scale.

Thanking you with anticipation,

Place: Manamadurai, Yours sincerely,
Date:

(A.M.LEETHU)

APPENDIX – II

LIST OF EXPERTS OPINION FOR CONTENT VALIDITY

1. **Prof.Mrs.Shabeera Banu, M.Sc. (N), (Ph.D.),**
   Principal,
   Matha College of Nursing,
   Manamadurai.

2. **Dr. Sudhakaran, MBBS, MD, DM, RT**,
   CSI Mission Hospital,
   Neyyoor.

3. **Mrs. Regina, M.Sc. (N), (Ph.D.)**
   Principal,
   Thandai Rover College of Nursing,
   Perambalur.

4. **Prof. Mrs. Devakirubai, M.Sc. (N), (Ph.D.)**
   Professor in Medical Surgical Nursing,
   Sacred Heart College of nursing,
   Madurai.

5. **Mrs.Manjula, M.Sc. (N),**
   Lecturer,
   Sacred Heart College of Nursing,
   Madurai.

6. **Prof.Mrs.Kalaikuruselvi, M.Sc. (N), (Ph.D.)**
   Vice Principal,
   Matha College of Nursing,
   Manamadurai.

7. **Prof.Mrs.Thamaraiselvi, M.Sc. (N), (Ph.D.)**
   Vice Principal,
   Matha College of Nursing,
   Manamadurai.

8. **Prof.Mrs.Saraswathi, M.Sc. (N), (Ph.D.)**
   Principal,
   Ramachandra Naidu College of Nursing
   Sankarankoil,
   Tirunelveli District.

9. **Prof.Mrs.Helen Rajamanickam, M.Sc. (N),**
   Professor
   Matha college of Nursing,
   Manamadurai.

APPENDIX-III

LETTER SEEKING PERMISSION TO CONDUCT STUDY AT CSI MISSION HOSPITAL, NEYYOOR

To

Dr.Mr.Sudhakaran, M.B.B.S., M.D., D.M .R.T..
CSI Mission Hospital,
Neyyoor.

Respected Sir/madam,

Sub: Requisition for giving permission to conduct the research in your esteemed organization

****

I wish to state that **Mrs.A.M.LEETHU,** one of our final year M.Sc. Nursing Student, Matha College of Nursing, Manamadurai has to conduct a 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 evaluate the effectiveness of progressive muscle relaxation technique on reduction of stress among patient with cancer admitted in CSI Mission Hospital at Neyyoor."

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

Thanking you,

Yours faithfully,

Place: Manamadurai
Date:

(Prof. Mrs. SHABERA BANU)
M.Sc. (N), (Ph.D.)
Principal

APPENDIX – IV (A)

PART – A

Demographic Data

1. Age

a) Below 20 yrs

b) 21-30 yrs

c) 31-40yrs

d) Above 40 yrs

2. Sex

a) Male

b) Female

3. Education

a) Illiterate

b) Primary education

c) Secondary education

d) Higher education

e) Graduate education

4. Occupation

a) Employed

b) Un employed

5. Monthly Income

a) Below 1000

b) 1001 – 2000

c) 2001 – 3000

d) Above 3000

6. Area of Living

a) Rural

b) Urban

7. Type of Family

a) Joint

b) Nuclear

8. Support People

a) Family members

b) Relatives

c) Friends

9. Type of marriage

a) Consanguineous

b) Non Consanguineous

PART – B

Perceived Stress Scale (PSS)

For each Question Choose from the Following Structures

0 - Newer
1 - Almost never
2 - Some times
3 - Fairly offer
4 - Very offer

SI. No	Tools	0	1	2	3	4
1.	How often have you been upset because of something that happened unexpected					
2.	How often you flet that you were unable to control the important things in your life					
3.	How often have you felt nervous & stressed					
4.	How often have you felt that things were going your way?					
5.	How often have you felt confident about you ability to handle your personal problems					
6.	How often have you found that you could not cope with all the things you has to do					
7.	How often have you been able to control irritation in you life?					
8.	How often have you felt that you were on top of things?					
9.	How often have you been angered because of things that happened that were outside of your control.					
10.	How often have you left difficulties were piling up so high that you could not over come them?					

FIGURING YOU PSS SCORE

You can determine your PSS score by following these directions:

First, reverse your scores for questions 4,5,6,7,8 . On these 4 questions 1 change the score like this,

0=4, 1=3, 2=2, 3=1, 4=0

Total score can range from 0 to 40 with higher indicating higher perceive stress.

Low Stress	0-20
Moderate Stress	21-29
Severe Stress	30-40

APPENDIX – IV (B)

பகுதி – அ

தன்விபரக் குறிப்பு

1. ***வயது***

   அ) 20க்கும் குறைவாக

   ஆ) 21-30 வயது

   இ) 31-40 வயது

   ஈ) 40 வயதிற்கு மேல்

2. ***இனம்***

   அ) ஆண்

   ஆ) பெண்

3. ***கல்வி***

   அ) கல்வி அறிவில்லாதவர்

   ஆ) இடைநிலைக் கல்வி

   இ) உயர்நிலைக் கல்வி

   ஈ) பட்டப்படிப்பு

4. **வேலை**

   அ) வேலையிலிருப்பவர்

   ஆ) வேலையில்லாதவர்

5. மாதவருமானம்

அ) ஆயிரத்துக்கும் கீழ்

ஆ) 1000-2000

இ) 2000-3000

ஈ) 3000க்கு கீழ்

6. வாழுமிடம்

அ) கிராமம்

ஆ) நகரம்

7. குடும்பத்தின் வகை

அ) கூட்டுக் குடும்பம்

ஆ) தனிக் குடும்பம்

8. உதவி செய்பவர்

அ) குடும்ப உறுப்பினர்கள்

ஆ) உறவுக்காரர்கள்

இ) நண்பர்கள்

பகுதி – ஆ

மன அழுத்தத்தை அளவிடும் அளவுகோல்

0 - இல்லை
1 - குறைவாக
2 - சில நேரங்களில்
3 - அதிகமாக
4 - மிக அதிகமாக

வ.எண்.		0	1	2	3	4
1.	நீங்கள் எத்தனை முறை எதிர்பாராத விதத்தில் உங்களுக்கு நேர்ந்ததை நினைத்து மனம் உடைந்து போகிறீர்கள்?					
2.	நீங்கள் எத்தனை முறை உங்களுடைய வாழ்வில் முக்கியமான வி\யங்களை கட்டுப்படுத்த முடியவில்லை என நினைக்கிறீர்கள்?					
3.	நீங்கள் எத்தனை முறை படபடப்புடனும், கவலையுடனும் இருக்கிறேன் என நினைக்கிறீர்கள்?					
4.	நீங்கள் எத்தனை முறை உங்களுடைய சுயபிரச்சனைகளை தன்னம்பிக்கையுடன் கையாள முடியும் என நினைக்கிறீர்கள்?					
5.	நீங்கள் எத்தனை முறை உங்கள் காரியங்கள் உங்களுடைய போக்கில் போகிறது என நினைக்கிறீர்கள்?					
6.	நீங்கள் எத்தனை முறை நீங்கள் செய்ய வேண்டியவைகள் உங்களில் செய்ய முடியவில்லை என உணர்கிறீர்கள்?					
7.	நீங்கள் எத்தனை முறை உங்கள் எரிச்சலூட்டும் வி\யங்களை கட்டுப்படுத்த முடியும் என நினைக்கிறீர்கள்?					
8.	நீங்கள் எத்தனை முறை சில காரியங்கள் தலைக்கு மீறி போய்விட்டது என நினைக்கிறீர்கள்?					
9.	எத்தனை முறை நீங்கள் உங்களின் கட்டுப்பாட்டை மீறி நடந்த வி\யங்களால் கோபப்பட்டிருக்கிறீர்கள்?					
10.	எத்தனை முறை நீங்கள் உங்களை மிஞ்சிய பிரச்சனைகளிலிருந்து வெளிவர முடியாத அளவிற்கு தள்ளப்படுகிறீர்கள்?					

APPENDIX – V (A)

PROGRESSIVE MUSCLE RELAXATION TECHNIQUE

(Protocol)

1. Introduction about Progressive Muscle Relaxation Technique

It is the relaxation technique, which is basically involves squeezing a particular muscle group firmly and maintaining tension. Quickly so that muscle, relax immediately. From this you are easily able to make difference between the feeling of tension and relaxation. It is important to remember that only the specific muscle group at a time should be tensed. The rest of the body should remain in a relaxed position. Begin with tensing and relaxing your hands, then arms, shoulders and so on, until your entire body is relaxed. This exercise be practiced while sitting in a comfortable chair or lying down on a flat surface and wear loose clothing. The setting for relaxation training should be quiet and free from distracting Noises.

2. Practical use of Progressive Muscle Relaxation Technique

- ❖ Reduces pulse rate and Blood Pressure
- ❖ Decreases perspiration and Respiratory rate
- ❖ It is used as an anti-anxiety pill

3. Focus Areas

During the progressive muscle relaxation technique you will be following on 17 muscle groups in the body includes.

1. Fore arm and elbow
2. Face, Throat and Shoulders including concentration in the forehead, Cheeks, Nose, Eyes, Jaws, Lips, Tongue, and neck.
3. Stomach and lower back.
4. Thighs, calves, and feet followed by complete body relaxation.

Instruction to be followed before Progressive Muscle Relaxation Technique:

1. Lie down on the bed and relax
2. Begin by practicing deep breathing exercise that is to relax your mind and body.
3. Dim the lights.
4. Keep your eyes closed.
5. Throw away your tension, say that I am feeling calm and rested.
6. Relax you body. Let the tension dissolve away.
7. All the body parts and its muscle to be tensed for the counts 1-2 3-4-5 and release your tension for the count of 1-10

Instructions for Progressive Muscle Relaxation Technique

1. Hands, Fists, and Forearms

- ✧ Clench the tension in your fist tighter and tighter.
- ✧ Notice the tension in your fist, hand and forearm.

- ✧ Now relax repeat the entire procedure with your left fist, then both fist. Note the difference between
- ✧ Tense and relax

2. Elbows

- ✧ Bend your elbows and point your fingers towards ceiling.
- ✧ Tense your muscles as hard as you can relax and straighten out your arms.

3. Forehead

- ✧ Wrinkle your head by raising your eyebrows.
- ✧ Now relax and smooth it out.
- ✧ Let yourself imagine your entire forehead and scalp becoming smooth and at rest.

4. Eyes

- ✧ Close your eyes now and squeeze them tightly.
- ✧ Relax your eyes.

5. Jaw [jaw, tongue, lips]

- ✧ Now clench your jaw, bite hard, notice the tension through your jaw.
- ✧ Relax the jaw, when it is relaxed, your lips will be slightly apart.
- ✧ Now press your tongue to the roof of your mouth.

- ✧ Feel the ache in the back of your tongue
- ✧ Relax
- ✧ Press your lips now, purse them into an 0.
- ✧ Relax your lips and notice that you re forehead, scalp, eyes, jaw, tongue, and
- ✧ Lips are all relaxed.

6. Neck and Shoulders

- ✧ Press your head back against your pillow feel tension in your neck hold the
- ✧ Tension
- ✧ Note the difference
- ✧ Roll your head slowly to the right then left
- ✧ Straightened your head and bring it forward, then relax and note the difference.
- ✧ Press your chin against your chest.
- ✧ Feel the tension in your throat and in the back of your neck.
- ✧ Relax allowing your head to return to a comfortable position.
- ✧ Now raise your shoulders.

- ✧ Keep the tension as you hunch your head down between your shoulders and
- ✧ Raise your shoulder.
- ✧ Relax your shoulders.

7. Chest and Lower back

- ✧ Completely relax your body.
- ✧ Now breath in and fill your lungs completely.
- ✧ Now exhale, let your chest become loose and let the air out with a hiss…
- ✧ Continue and repeat this for several times.
- ✧ As you inhale, tighten your stomach muscles, pull stomach in and hold it then relax.

8. Thighs, calves and feet followed by complete body relaxation

- ✧ Tighten your buttocks by holding them in or contracting them. Note the Tension and now relax.
- ✧ Stretch your legs feel tension in the thighs and now relax and feel difference.
- ✧ Now your toes towards your head by making your calves muscle tense and relax.

You are completely relaxed now keep lying down. Don’t move your eyes should be closed and enjoy this peaceful experience. After a few minutes tell yourself, when I getup I will be fresh and alert, then count slowly from one to three then from 3 to 1.Now slowly open your eyes and turn over on your sides keep lying down for a few more minutes. Then slowly sit up with the support of your arm.

APPENDIX – V (B)

தசைகளை தளர்த்தும் பயிற்சி

1. முன்னுரை

தசைகள் தளர்த்தும் பயிற்சி குறிப்பிட்ட தசைகளை வலுப்படுத்தி மன அழுத்தத்தை குறைக்கிறது. இதன் மூலம் மன அழுத்தத்தையும் பயிற்சியின் மூலம் பெற்றுக்கொள்ளும் பயன்பாடுகளின் வித்தியாசத்தையும் உணரலாம். இந்த பயிற்சியை உட்கார்ந்தோ அல்லது படுத்துக் கொண்டோ மேற்கொள்ளலாம். இப்பயிற்சியை மேற்கொள்ளும்போது அமைதியான இடத்தில் செய்யும்.

2. தசை தளர்த்தும் பயிற்சியின் பயன்பாடுகள்

- ✧ நாடித் துடிப்பு மற்றும் இரத்த அழுத்தத்தைக் குறைக்கிறது.
- ✧ அச்சத்தை போக்கும் மருந்துகள் போல் செயல்படுகிறது.

3. செய்ய வேண்டிய உறுப்புகள்

இப்பயிற்சியை மேற்கொள்ளும்போது உடம்பில் உள்ள வகையான தசைகளை பின்பற்ற வேண்டும்.

- ✧ முழங்கை

- ✧ முகம், தொண்டை, தோள்பட்டை, நெற்றி, கன்னங்கள், மூக்கு, கண்கள், தாடை, உதடு நாக்கு மற்றும் கழுத்து
- ✧ வயிறு
- ✧ தொடை, பாதம்

4. தசைப் பயிற்சி செய்யும் முன் பின்பற்ற வேண்டிய முறைகள்

- ✧ படுக்கையில் நிமிர்ந்து படுத்துக் கொள்ளவும்
- ✧ ஆரம்பத்தில் மூச்சை இழுத்து பின் மெதுவாக விடவும்
- ✧ விளக்குகளை அணைத்துக் கொள்ளவும்
- ✧ மன அழுத்தங்களை எறிந்துவிட்டு, நான் அமைதியாக இருக்கிறேன் என்று சொல்ல வேண்டும்
- ✧ உடமை ஓய்வாக வைத்துக் கொள்ளவும்

5. தசைத் தளத்தும் பயிற்சியை மேற்கொள்ள வேண்டிய படிகள்

- ✧ கைகள் மற்றும் மணிக்கட்டு, கைகள் மற்றும் மணிக்கட்டை இறுக்கமாக அழுத்தவும்
- ✧ ***முழங்கை***
  - ▪ முழங்கையை இறுக்கமாக மடக்கவும்
  - ▪ தசைகள் இறுக்கமாக இருப்பதை உணரவும்
  - ▪ பின் மெதுவாக முழங்கையை தளர்த்தவும்

- ***முழங்கை***
  - முழங்கையை இறுக்கமாக கொள்ளவும்
  - பின் மெதுவாக விடவும்
  - உங்களுடைய மனதில் நெற்றி மற்றும் தலையில் அழுத்தம் குறைவதை உணர முடியும்.
- ***கண்கள்***
  - கண்களை இறுக்கமாக மூடவும்
  - கண்களை மெதுவாக திறக்கவும்
- ***தாடை (தாடை, நாக்கு மற்றும் உதடு)***
  - தாடையை இறுக்கமாக வைத்து, இறுக்கமாக கடிக்கவும், பின் அழுத்தத்தை உணரவும்.
  - தாடையை மெதுவாக தளர்த்தவும்.
  - பின் நாக்கை மேல்வாயில் வைத்து அழுத்தவும்.
  - நாக்கின் பின் பகுதியில் வலியை உணரவும்.
  - பின் மெதுவாக தளர்த்தவும்.
  - வாயை இறுக்கமாக அழுத்தவும்
  - பின் மெதுவாக தளர்த்தவும்.

- ***கழுத்து மற்றும் தோள்பட்டை***

  - பின் தலையை தலையணைக்கு எதிராக அழுத்தி உங்கள் அழுத்தத்தை உணரவும்.
  - கழுத்தை வலப்பக்கம் மற்றும் இடப்பக்கம் மெதுவாக சுழற்றவும்.

- ***தலையை நேராக உயர்த்தி முற்பக்கம் கொண்டுவரவும் பின் அதன் வித்தியாசத்தை கவனிக்கவும்***

  - தாடையை நெஞ்சுக்கு நேராக அழுத்தவும்
  - உங்கள் தொண்டை மற்றும் பின்பக்க கழுத்துப் பகுதியின் அழுத்தத்தை உணரவும்.
  - பின் மெதுவாக தளர்த்தவும்.
  - உங்கள் தோள்பட்டையை உயர்த்தவும்.
  - பின் அழுத்தத்தை நிலைப்படுத்தி தலையை கீழாக வைக்கவும்.
  - பின் மெதுவாக தோள்பட்டையை தளர்த்தவும்.

- ***மார்பு மற்றும் முதுகு***

  - உடம்பை முழுவதுமாக தளர்த்தவும்
  - காற்றை உள் இழுக்கவும்

- பின் மெதுவாக காற்றை வெளிவிடவும்
- சில நேரத்திற்கு இப்பயிற்சியை தொடர்ந்து மேற்கொள்ளவும்
- மூச்சை உள்வாங்கி, வயிற்றுப் பகுதியை இறுக்கமாக வைத்து பின் மெதுவாக தளர்த்தவும்.

✧ ***தொடை, பாதம்***

- பின் பக்க பகுதியை இறுக்கமாக வைத்து பின் தளர்த்தவும்.
- கால்களை இறுக்கமாக வைத்து அழுத்தத்தை தொடையில் உணரவும்
- பின் விரல்களை இறுக்கமாக சேர்த்து தலைக்கு நேராக வைத்து பின் மெதுவாக தளரவிடவும்.

நீங்கள் முழுவதுமாக மன அழுத்தத்திலிருந்து விடுபட்டபின் கீழே இருக்கவும். நகராமல் இருக்கவும், உங்கள் கண்களை மூடி உங்கள் மகிழ்ச்சியான அனுபவத்தை உணரவும். சிறிதுநேரம் கழித்து உங்களுக்கு நீங்களே சொல்லவும். எப்பொழுது நான் எழும்பினாலும் நான் உற்சாகமாகவும், விழிப்பாகவும் இருப்பேன் என்று சொல்லவும் பின் மெதுவாக ஒன்றிலிருந்து மூன்று மற்றும் மூன்றிலிருந்து ஒன்று என்று எண்ணவும். பிறகு மெதுவாக கண்களை திறக்கவும். பின் உங்கள் கைகளின் உதவிகளால் மெதுவாக எழும்பவும்.