

CHAPTER II

REVIEW OF LITERATURE

A comprehensive literature review on topics relevant to the study was done to increase understanding and assemble adequate amount of reviews for building the foundation of present study. The researcher had made use of various journals, texts, med line search and internet to avail the information pertaining to the related study. The literature review is organized and presented under following headings.

❖ **Definition of health, wellness & quality of life**

Studies on-

- ❖ Effect of cancer on stress level & quality of life of patients with carcinoma breast
- ❖ Side effects of chemotherapeutic drugs, stress level and quality of life of clients with carcinoma breast
- ❖ Interventions for maintaining desirable quality of life in cancer and breast cancer patients undergoing chemotherapeutic drugs.
- ❖ Scientific basis of intervention used in this study
- ❖ Usefulness of yoga in reference to quality of life and psychological wellbeing of patients with carcinoma breast

Definition of health, wellness & quality of Life

Nightingale stated that, health is a status in which a person is healthy or fit and is able to make optimal utilization of his/her strengths. (Nightingale, 1860/ 1969).

According to the World Health Organization, health is a state of total wellness of body, mind and social relationship with others and not only absence of illness.(WHO 1984)

According to Kozier & colleagues (2008) wellness is a condition of being healthy and individual's awareness of feeling healthy and energetic. Being in good health is being able to survive with no difficulty related to body & mind and other features of living beings. Wellness varies from one person to another. Something may be good for one person and bad for the other person. Further, wellness is based on the individual's

perspectives, perception, understanding, consciousness and additional factors that mark human beings as distinctive or special.

Anspaugh DJ, Hamrick MH, and Rosato F. (2010) have projected that wellness of an individual is composed of seven elements which are: his body, mind, social relationships, intelligence, spirit, work he does and the environment in which he lives. In order to understand best possible health and well being, an individual should work with factors which affect these elements.

According to Gotay C.C. et al. (1992) Quality of Life is the condition of well being that is comprised of two elements: 1) capability to perform activities everyday for being alive, which represent physiological and psychosocial wellness and 2) The patient's contentment with levels of performance and management of the disease.

Studies on effect of cancer on stress level & quality of life of women with carcinoma breast

Ouakinina S. et al. (2015) compared the reaction to stress at mental and autonomic levels, regulation of anger & patterns of affection between breast carcinoma patients and healthy individuals. Total fifty- two breast cancer patients were compared with thirty- three controls. They observed that breast carcinoma patients had lesser amount of anxiety related to affection style in comparison with healthy individuals. However they reported significant stress when encountered with any situation possessing warning.

Singh H et al. (2014) researched quality of life and aftereffects of chemotherapeutic drugs among one hundred thirty- one patients receiving treatment for cancer. They observed that overall health status scores improved with duration of chemotherapy cycles but scores related to sleeplessness, pain, loss of appetite, constipation and monetary problems did not improve.

Dehkordi A. et al. (2009) studied quality of life at different cycles of chemotherapy in 200 patients. Results showed that demographic characteristics i.e. age,

sex, income, type of work and results of quality of life had no correlation. However the quality of life scores of patients who received less than two cycles was significantly different than those received three to five cycles ($p < 0.001$).

Meta analysis by Malik AM & Kiran T. (2013) on prevalence of psychological problems in patients with breast cancer found that anxiety & depression levels were highest in breast cancer patients. They also had poor self body image and quality of life.

Farooqi YN & Chaudhry M. (2012) conducted a survey in Lahore city of Pakistan with an aim to study the varying levels of anxiety as well as depression in patients suffering with breast and uterus cancer. Patients with uterine cancer showed significantly elevated levels of depression & anxiety in comparison to breast cancer patients.

Yen J. et al. (2006) compared quality of life among patients having malignant and benign tumor in the breast. They observed that patients with malignant cancer had lower quality of life scores of symptoms of body and mind and higher stress scores compared to benign group. Both the groups depicted significant association between depression and quality of life scores. While receiving treatment for cancer, breast carcinoma patients had higher levels of emotional problems compared to the benign group.

Studies on side effects of chemotherapeutic drugs, stress level and quality of life in women with carcinoma breast

Lai XB, et al. (2017) did a qualitative research on breast carcinoma clients undergoing chemotherapy. Their study revealed various types of results. Some of the patients had many side effects during completion of chemotherapy treatment, while some faced greater adverse effects physically and mentally.

Bajpai J. et al.(2017) conducted retrospective audit of medical data of 133 patients suffering with cancer of breast and received TAC chemotherapy regimen during the year 2004 to 2008 to study demographic details, toxicity, and outcome analysis. The median age was 45 (21–67) years, 31% had coexisting diabetes and 12% hypertension. The delivered dose intensity was 94%. Discontinuation of chemotherapy rate was 15.8%, the most common reason was hematological toxicity. There were 32% cases of febrile

neutropenia and 1.5% Grade III thrombocytopenia, with 2% toxic deaths. Diarrhea occurred in 26% and cardiac toxicity in 1.5% patients.

Chan HK & Ismail S. (2014) studied symptoms of adverse effects suffered and perceived by patients receiving chemotherapy. Ninety cancer patients were surveyed. Results revealed that a maximum 78.9% suffered with sickness and vomiting. Other frequent and bothersome adverse effects reported were alopecia and appetite loss. 6.7% faced difficulty caused by damage of peripheral nerves. This was considered as the most important problem.

Aslam MS et al. (2014) explored common side effects of chemotherapy faced by cancer patients. They observed that most commonly reported side effects were feeling weak (95%), tiredness (90%), sickness (77%), alopecia (76%) and vomiting (75%). More than two- third of the patients had all these symptoms. Other key symptoms included: stomatitis, dryness of oral cavity and loss of sensation in fingers. Symptoms which occurred less frequently were loose stool, pain in abdomen and loss of memory.

A cross-sectional Study by de Souza BF et.al (2014) on symptoms of depression and adherence to chemotherapy revealed regular screening of females for breast cancer was needed. They recommended that preventive aspects and appropriate treatment for breast cancer would help in improving the quality of life.

Lôbo SA et al.(2014) conducted research on the quality of life related to health of females having breast cancer undergoing chemotherapy revealed that emotion was the most affected function and most patients had financial difficulties. The commonly reported symptoms were insomnia, fatigue, loss of appetite and impaired sexual satisfaction.

Gho SA et al. (2013) conducted a study to assess adverse effects of treatment given for breast carcinoma. Four hundred and thirty- two patients suffering with malignancy of breast gave their information regarding treatment received, their demographic characteristics, present exercise performing status and adverse effects of chemotherapy they faced during the treatment. The results showed that patients who had a lumpectomy reported less muscle pain, hot flushes and weight gain compared to

mastectomy patients. Patients who had an adequate amount of exercise had fewer side effects.

Ardebil MD et al. (2011) studied breast cancer patients receiving treatment for cancer to identify incidences of psychological distress and quality of life connected to health. They observed that patients who went through chemotherapy experienced more depression compared to those received radiation therapy.

Korpela J et al.(2011) researched QOL in female patients diagnosed with carcinoma of breast and were getting Epirubicine –docetaxel regimen chemotherapy. They observed that as treatment continued their psychological performance became better and apprehension about future reduced. Quality of life was reduced in some areas, with a little decrease in physical performance and memory. Patients reported that they went through emotional disturbances due to changes in bodily figure and alopecia.

Gokgoz S et.al. (2011) studied QOL in new cases of breast carcinoma clients with cancer confined to a small area and those having highly developed cancer. They observed that clients who were in the highly developed stage had poorer physical functioning, social functioning and sexual functioning compared to patients in the beginning stage. Those who received chemotherapeutic drugs had lesser overall global health status and had problems in many quality of life domains in comparison to those who got hormonal therapy.

Munir, F. et al (2011) conducted qualitative interviews, among breast cancer patients who had completed chemotherapy four months before, to discern the effects of chemotherapy on ability to perform activities of everyday livelihood and employment. They found that subjects of the study encountered difficulties with tiredness, depression, recall and concentration.

Agarwal PN et al. (2010) studied 97 breast carcinoma patients residing in Delhi to appraise the consequences of psychological & behavioral problems pre and post treatment. They observed that psychological problems were greater in subjects who were getting chemotherapy and radiation therapy post operatively compared to those getting

only chemotherapy. The difference was not significant. Less than half of the patients had psychological problems. The breast deformity and reduced sexual function were not significant issues.

Saniah AR & Zainal NZ (2010) studied different coping methods adopted by cancer patients having depression and anxiety during chemotherapy. The results revealed that patients receiving chemotherapy went through greater levels of depression and anxiety. These patients used a variety of methods to cope with their illness, adverse effects of chemotherapy, family troubles, and symptoms of depression and anxiety.

Browall M et al. (2009) in Sweden, studied 75 women who had reached their menopausal state and were suffering with breast cancer. This was to identify the daily distressing problems faced by these women during adjuvant chemotherapy and the coping methods adopted by them to manage these problems. Results revealed that the distressing problems were: vomiting, tiredness, loneliness and separation, unidentified fear and the restrictions caused by chemotherapy. Women generally used acceptance, relaxation measures and diversion methods to manage their problems.

Frith H et al. (2007) conducted interviews with 19 women suffering with breast cancer to explore their views regarding loss of hair caused by chemotherapy, expected response to it, and plans for management of changes in their outlook caused by alopecia. The results revealed that the women were expecting hair loss and had thought about how to adopt various approaches to handle baldness caused by hair loss before it had happened.

Lemieux J et al. (2008) conducted a review on the effects of alopecia on different aspects of QOL such as apprehension, emotional discomfort, perception of body, sexual orientation, self-respect, societal performance and total QOL and back to job consequences. They observed that loss of hair was the greatest adverse effect. It greatly influenced their self image.

Pandey M et al. (2006) studied levels of stress, anxiety means apprehension and depression in one hundred and seventeen female clients receiving chemotherapy. They

observed that 16.23% of the patients were going through depression and 15.38% were having symptoms of anxiety. Being from the upper class affected the anxiety and feminine gender affected the depression.

Luoma ML & Hakamies-Blomqvist L.(2004) conducted a qualitative phenomenological research study among advanced breast cancer patients. The results revealed that patients expressed restrictions in functions of the body which resulted in their reliance on others, which caused less independence. They tried to maintain their self sufficiency by doing actions which they could do by themselves or by altering their inward regulation. The alteration in their outlook and deteriorated condition influenced their capability to perform their roles and tasks. This made them modify their style of living and changed their participation in social activities group leading to feeling of loneliness and isolation.

De Jong N, et al. (2004) did work on the prevalence of fatigue among cancer patients undergoing chemotherapy. The results revealed that development of tiredness in body was the same in all patients. As tiredness increased, their strength to do their everyday's work reduced. Patients who had total removal of breast felt higher measures of tiredness compared to patients who had lumpectomy.

El-Sharkawi FM.*et al.* (1997) compared QOL of breast cancer patients who were undergoing treatment in Egypt. Patients were divided in four groups namely: those who underwent only surgery, those had surgery and also got radiation therapy, had surgery and chemotherapy, had surgery, got radiation and also chemotherapy. The results revealed significant differences in four areas of QOL of women who got treatment after breast surgery in comparison to women who had only surgical treatment i.e. mastectomy. Patients who had all three treatments, the total QOL was greatly influenced compared to those who had radiation. Patients who had radiation therapy had lesser influence on their QOL compared to the chemotherapy group. Patients who got all three treatments expected poorer QOL.

Foltz AT et al.(1996) conducted a descriptive, retrospective study on occurrence and seriousness of chemotherapy side effects . Fifty-nine patients who received minimum

of one cycle of chemotherapy in the hospital participated in the study. The results revealed that approximately half of the patients expressed that they had loss of hair, tiredness, vomiting, and changes in taste, loss of appetite, sleeplessness and constipation after receiving chemotherapy.

Research studies on interventions for maintaining a desirable quality of life in cancer and breast carcinoma patients receiving chemotherapeutic drugs.

Fan-Ko S. et al. (2017) researched the efficacy of intervention on relaxation of body muscles and therapeutic walking on quality of life, depression, suicidal ideation on patients suffering with carcinoma of breast and receiving chemotherapy. The results revealed that relaxation of body muscles and therapeutic walking was helpful in decreasing depression in patients with breast cancer.

Yekta Z P et al. (2017) studied the effects of Benson's relaxation and rhythmic breathing techniques on the anxiety level of patients undergoing breast surgery. The results revealed that both techniques were effective in reducing the patients' anxiety during post operative period. Benson's relaxation technique reduced somatic anxiety only. On the other hand, the breathing technique reduced cognitive as well as somatic anxiety. They concluded that both techniques were effective in reducing postoperative anxiety in patients who had breast surgery i.e. removal of breast.

Naeini EE et al. (2016) studied the effect of stress management training on hardiness, revealed that training on stress management increased the hardiness and its components (such as commitment, control, and challenge) in women with cancer of breast.

Janusek LW et al.(2008) researched the effect of stress reducing intervention based on mindfulness i.e. concentration on immunity, quality of life (QOL), and coping ability in new cases of breast carcinoma. The results revealed that women who practiced the stress reducing intervention had reduced cortisol level, improved quality of life &

increased coping capability compared with women who did not practiced the intervention.

Charalambous A et al. (2015) researched the effect of stress lowering methods such as guided imagery and progressive muscle relaxation in patients suffering with carcinoma of breast & prostate and receiving chemotherapy. The results showed that scores of apprehension and depression differed significantly in both groups. The cortisol and amylase level of the intervention group decreased gradually whilst the control groups' increased.

Shayan A et al. (2016) researched the effectiveness of stress management techniques on stress level & quality of life of females diagnosed with malignancy of breast. The results revealed that the experimental group reported higher quality of life scores in domains of quality of life such as physical, emotional and social and overall QOL scores.

Sona P et al. (2016) studied the efficacy of the family empowerment model – based performance scales of women who were suffering with carcinoma breast undergoing chemotherapy. The analysis revealed that the implementation of family-centered empowerment improved the general performance scales (physical, role, cognitive, emotional and social) in patients who received intervention ($P < 0.05$). Two groups did not differ with regard to specific function scales after the intervention in terms of body image, sexual performance and sexual pleasure ($P > 0.05$). But after coming back the attitude was improved in the intervention group.

Schmidt ME et al. (2015) researched the efficacy of resistance exercise during chemotherapy. Study subjects comprised of 100 carcinoma breast patients scheduled to start chemotherapy. They were randomized in to the experimental group who practiced resistance exercise or to the control group who practiced relaxation. The analyses of data showed that overall and physical tiredness of patients in the control group increased greatly during chemotherapy. But the experimental group had no deterioration. Resistance exercise was also beneficial in improving role function and social function.

Chen S F et al. (2015) researched the effectiveness of relaxation techniques using guided imagery among patients diagnosed with carcinoma breast revealed that experimental groups had a significant decrease in insomnia, pain, anxiety and depression. They reported that seven days of relaxation with guided imagery was effective in improving the symptoms of distress, sleeplessness, sadness, bodily symptoms and anxiety and also could reduce psychological distress

Hosseinpour A. et al. (2014) assessed efficacy of stress management training comprising of psychological and behavioral aspects on the anxiety & depression in females with malignancy of breast. Analysis showed that stress management training was significantly effective on reducing anxiety and depression in patients ($p < 0.05$). They recommended that psychological and behavioral stress management training for women with cancer could be taken as an efficient method to improve their psychological wellbeing.

Loh SY et al. (2009) conducted a clinical trial in Kuala Lumpur on the effectiveness of self-management intervention on psychological impairment, such as apprehension, depression and stress in new cases of breast cancer. Analysis of data revealed that all variables related to psychological impairment decreased significantly in the intervention group. But in the control group it increased or remained similar to the baseline. Women who had greater amount of physical activity had significantly less stress compared to those with less physical activity.

Taleghani F. et al. (2009) researched the efficacy of exercise based intervention on QOL of patients diagnosed with malignancy breast and going through chemotherapy. The results revealed, the mean scores of the quality of life-physical aspect was greater in the group that received intervention ($p = 0.001$) than of control group.

Aghabarari M et al. (2008) studied the effectiveness of exercise on fatigue means exhaustion among patients with carcinoma breast and getting chemotherapy. Results revealed that in the experimental group the posttest average scores in four dimensions of fatigue namely behavioral, emotional, sensory and intellectual became less than of control group.

Wilson RW et al.(2006) researched the efficacy of exercise and intervention to manage stress among cancer patients undergoing chemotherapy. They observed that intervention group reported significant improvement in mental health and reduction in body pain ($p < 0.05$) .

Cohen L et al. (2004) studied the efficacy of yoga based on Tibetan philosophy consisting of breathing, visual and concentration techniques and postures among lymphoma patients. They observed that patients who practiced Tibetan Yoga had significantly lesser sleep disruptions than the control group. The Intervention group had better quality of sleep, increase in sleep period and lesser intake of sleeping medicine.

Luebbert K et al. (2001) reviewed studies which focused on the effectiveness of relaxation on side effects caused by cancer treatment and emotional adaptation. They observed that relaxation was effective significantly in emotional adaptation concepts such as apprehension, depression, and animosity. Studies reported that relaxation was helpful for the cancer patients undergoing treatment such as chemotherapy, irradiation, bone marrow transplant etc.

Studies related to scientific basis of intervention used in this study

Kang DH et al.(2011) conducted study on the efficacy of relaxation technique on the immunity and patients' choice on kind of relaxation technique. The results showed that maximum patients' first choice was the deep breathing succeeded by the continuing relaxation and use of the imagery and visual techniques. They concluded that continuous relaxation practice affects immunity of patients.

Another study by Matousek RH et al. (2011) on the efficacy of the stress reducing intervention based on mindfulness i.e. concentration on alteration in the morning cortisol level among clients suffering with carcinoma of breast and completed their prescribed treatment. The results showed that after practicing the stress reducing intervention the morning cortisol level was increased in post test. There was also significant decrease in stress level and symptoms of depression and medical problem.

Demiralp M. et al. (2010) researched the efficacy of the continuing muscle relaxation technique on quality of sleep and tiredness in patients receiving chemotherapy for the malignancy of breast. The outcome revealed that intervention group reported reduction in tiredness and enhancement in quality of sleep in comparison to the control group.

Studies related to usefulness of yoga in reference to quality of life and psychological wellbeing of women with breast cancer

Shahriari M et al. (2017) conducted a randomized controlled trail on the effect of the continuing muscle relaxation, use of imagery and deep diaphragmatic breathing on the QOL in the elderly suffering with cancer. Fifty elderly breast or prostate cancer clients were allocated into the study and control group. The intervention was given to the study group only. The assessment of QOL of both was done pre, post and six weeks following intervention. Data analysis revealed a significant enhancement in total Quality of life ($p < 0.001$) and performance of physical activities after the intervention. They concluded practice of relaxation techniques improved the QOL of elderly ailing with breast or prostate cancer.

Galantino ML et al. (2012) researched the efficacy of Iyengar yoga on measures of comprehension outcomes and quality of life (QOL) in female who completed treatment for cancer of breast and were alive. The participants practiced Iyengar yoga consisting of relaxation, breathing and stretching twice in a week for twelve weeks. The results revealed that the yoga classes were helpful in improving the cognition during chemotherapy.

Milanti A et al. (2015) conducted a quasi experimental study in Jakarta, Indonesia on the effect of the psycho-education on psychological distress level of clients receiving chemotherapy for breast and cervical carcinoma. The experimental group received video on psycho-education along with optimistic reassessment, instruction and relaxation material, during chemotherapy. Results revealed that clients in the experimental group had significantly decreased level of distress compared to the control group.

Sackett L et al. (2015) compared the efficacy of the yoga and common muscle strengthening training in terms of enhancement in movement of shoulder joints and muscle power in females suffering with beginning stage breast cancer and going through treatment i.e. irradiation, or chemotherapy after breast surgery. Seventy - seven patients were divided into the yoga and the control (common muscle strengthening training) groups by simple random method. Both group received intervention for two months. Results showed that participants in both the groups had increase in muscle power and elasticity. The yoga group reported higher increase in muscle power and flexibility in comparison to control group.

Chui PL et al.(2015)) researched QOL of clients undergoing chemotherapeutic drugs for breast carcinoma and compared it among those who were using Complementary and Alternative Medicine (CAM) and not using(CAM). Results revealed that out of 546 patients, 70.7 % reported that they were using CAM. Overall health status and five domains of QOL had no difference in both groups. Patients using CAM had greater monetary difficulty in comparison to those not using CAM. While comparing side effects of chemotherapy, those using CAM had greater side effects than not using CAM.

McCall M et al. (2015) did a qualitative study in Canada on the benefits, obstacle and essence of yoga practice among patients who were going through treatment. Data was collected from 10 male and female patients by extensive interview. Maximum patients reported that yoga was helpful in decreasing stress and side effects of treatment. It promoted self empowerment, mindfulness of body and self. The obstacles in practicing yoga reported by patients were insufficient time, planning time and financial difficulties.

Chakrabarty J et al. (2015) conducted a clinical trial on the effectiveness of pranayama which means breathing exercises on tiredness caused by cancer in breast malignancy patients having radiotherapy. The experimental group practiced pranayama in the morning and evening for five days a week for six weeks. They practiced Nadi Sodhana for five minutes (21-25 cycles), Sheethali for five minutes (50-60cycles) and Brahmari for eight minutes (10 cycles). Fatigue was assessed using cancer fatigue scale. The results revealed that both groups had significant difference in fatigue scores. The

patients in the experimental group experienced less fatigue. They concluded that pranayama could be recommended as complementary therapy for breast cancer patients going through chemotherapy.

Moqimi M et al. (2013) researched the effectiveness of yoga on reduction of stress and increase in Quality of Life (QOL) in patients suffering with carcinoma of breast. Twenty seven patients, who had completed their standard medical therapies, including surgery (modified radical mastectomy), chemotherapy and radiation therapy, were allocated into the yoga and control groups by random method. The yoga was given for 32 sessions (16 weeks). The results revealed, the yoga intervention group had a significant decrease in emotional and sexual disturbance and experienced an improvement in positive body image in comparison with the control group ($p < 0.05$). In addition, significant enhancement in functional, emotional and body image well-being was reported by the experimental group after yoga intervention when compared to the baseline condition ($P \text{ value} < 0.05$). The results provided an evidence that yoga had beneficial outcomes on breast cancer patients' quality of life.

Jung TC et al. (2014) researched the efficacy of the yoga exercise in advancement of mental and physical health among patients going through chemotherapy for carcinoma breast. The experimental group received instructions on yoga exercise which was to be performed for one hour, two days in a week for two months. The control group received regular care. The data analysis showed no significant improvement in depression or anxiety levels after implementation of eight weeks intervention.

Castellar JI et al. (2014) conducted an observational study on the efficacy of pranic meditation on female survivors of breast carcinoma for excellence in life quality and mental health. Seventy - five women were allocated to pranic meditation and control groups. The pranic meditation was practiced twenty minutes, two times in a day, for eight weeks after training. The results showed that intervention group's mean quality of life scores significantly increased that included physical, role, emotional, and social functioning as well as overall health status, tiredness, hurt, sleep disturbances, body image, arm & breast symptoms, reduction in adverse effects of chemotherapy therapy.

Gaston –Johansson F et al. (2000) studied the efficacy of intervention consisting of Comprehensive Coping Strategy Program (CCSP) on the quality of life of clients, who had completed primary treatment for breast carcinoma, twelve months prior. One hundred ten patients in various stages of cancer, planned for higher chemotherapeutic dosage and stem cell transfusion were allocated into the experimental and the control groups by simple random method. The experimental group received teaching on intellectual reframing, enrichment of managing ability, and relaxation using directed imagery, fifteen days prior to entering the hospital with reinforcing at designated times of treatment and twelve weeks after leaving hospital. The analysis revealed that clients who got CCSP exhibited significant increase in the mean scores of global quality of life and physical, emotional, role, cognitive & social functions ($p < 0.05$) and mental & spiritual health ($p < 0.01$) in comparison to control group. 51% patients utilized CCSP to manage mental issues and 60% used to handle sleep issues.

In a randomized controlled clinical trial done by Mustian KM et al. (2013) on the efficacy of a standardized yoga intervention among post-treatment cancer survivors. Four hundred and ten survivors who were encountering modest to higher levels of disturbances in sleep during the period of two and twenty four months after cancer treatment namely surgery, irradiation & chemotherapy were randomly allocated to general care group and general care & one month yoga intervention consisting of breathing techniques, yoga postures and meditation. The analysis revealed that yoga group had greater enhancement in overall sleep pattern and individual sleep quality, difficulty in functioning during day, getting up during sleep, effective sleep and usage of drugs at post test (all $p = 0.05$) in comparison to general care group. They concluded that yoga program was useful in enhancing quality of sleep, and decreasing usage of sleep inducing drug in patients who recovered from cancer.

Hoffman C Jet al. (2012) conducted a clinical trial on the efficacy of the mindfulness-based means becoming aware of all coming thoughts and feeling, stress reducing training on mood and QOL of patients who had finished medical treatment for breast malignancy. Two hundred and twenty- nine patients who had surgery, chemotherapy and radiotherapy were randomized into the eight weeks of intervention or

to control group. Assessment was done at zero, eight, and 12 weeks for each outcome measure. The results revealed experimental group had statistically significant improvements in outcome in comparison to control group at eight and twelve weeks.

Summary: This chapter included review of literature on definition of health, wellness & quality of life and studies related to effect of cancer on stress level & quality of life of patients with carcinoma breast, side effects of chemotherapeutic drugs, stress level and quality of life of clients with carcinoma breast, interventions for maintaining desirable quality of life in cancer and breast cancer patients undergoing chemotherapeutic drugs, scientific basis of intervention used in this study and usefulness of yoga in reference to quality of life and psychological wellbeing of patients with carcinoma breast.