CHAPTER I
INTRODUCTION

1.1 Background of the study

Breast cancer tops among cancers in women both in the developed and the developing countries. The incidence of breast cancer is increasing in the developing countries due to increased life expectancy, increased urbanization and adoption to western lifestyles. Although some risk reduction might be achieved with prevention, these strategies cannot eliminate the majority of breast cancers that develop in low- and middle-income countries where breast cancer is diagnosed at very late stages.

Women’s breasts are a part of their identity. Young girls growing up watch in awe and fascination as their bodies develop and change through pubescent stages of life. When they become mothers, their breasts may be used to feed their children and nurture them. Every day a woman as she grooms in front of the mirror her breasts affirm her that she is A WOMAN. Breast cancer is one such disease that can affect women and is yet be conquered. A disease is defined as the body’s signal to an individual to transform one’s lifestyle, thought processes and approach to life.

In many cultures, the breasts play a significant role in a woman’s sexuality and identification of herself as female. Although advances in the diagnosis and treatment of breast disorders are changing the prognosis for breast disease and cancer, women’s responses to possible breast diseases include fear of disfigurement and loss of sexual attractiveness and fear of death.

Unrecognized psychological morbidity can impair the quality of a woman’s life for years. Such psychological morbidity may be reduced by more open
communication with the woman, encouragement, expression of feelings, preoperative
diagnosis of the cancer, biopsy and a greater time allowance before mastectomy is
performed.

**Breast cancer in women**

Nearly 1.4 million cases of breast cancer were diagnosed across the world in
2008 when compared with about 500,000 cases in 1975. This represents about 11% of
all new cancer cases and 23% of all female cancers. It is predicted that the number of
cases may rise to 2.1 million by 2030 (WCRF International, 2008).

As per Ogaan Cancer Foundation - Mumbai (OCF), the breast cancer is the
leading cause of cancer-related deaths worldwide. In recent years it has also emerged
as the most common female cancer in the developing Asian countries. In the west one
in eight women runs the risk of developing breast cancer in her lifetime. In urban
India the risk is one in 30, just two years ago, it was one in forty. Breast cancer has
overtaken cervical cancer as the number one cancer in all women in India. In India,
61% breast cancer women are between 35-50 years of age, when compared to mostly
post-menopausal women in the west. 56% of Indian patients have large tumors at first
detection (2-5 cms) while in the west, they are usually small tumors. The majority of
cancers first detected in India are grade III cancers, and 42% have spread to the armpit
already, whereas in the west, they are caught in the early stages. 75% of breast lumps
are benign, yet 50% of women in India report for a checkup in advanced stages
Statistics show that lifestyle changes increase our chances to develop breast cancer,
but early detection greatly improves survival rates, and awareness is our biggest
weapon in this battle.
The leading cancer sites among females are breast (26.1%) followed by cervix uteri (21.1%) at Chennai (ICMR, 2006).

Incidence rates vary greatly worldwide, with age the standardized rates are high as 99.4 per 100,000 in North America. Eastern Europe, South America, Southern Africa, and western Asia have moderate incidence rates, but these are increasing. The lowest incidence rates are found in most African countries but in North America, the breast cancer incidence rates are also increasing.

Breast cancer survival rates vary greatly worldwide, ranging from 80% or over in North America, Sweden and Japan to around 60% in middle-income countries and below 40% in low-income countries (Coleman et al., 2008). The low survival rates in less developed countries can be explained as mainly due to lack of early detection programs, resulting in a high proportion of women presenting with late-stage disease, as well as due to lack of adequate diagnosis.

Anderson et al., (2008) stated that WHO promotes breast cancer control within the context of national cancer control programs and integrated to non-communicable disease prevention and control. WHO with the support of Komen Foundation is at present conducting a 5-years breast cancer cost-effectiveness study in 10 low- and middle-income countries. The project includes a program costing tool to assess affordability. It is expected that the results of this project would provide evidence for shaping adequate breast cancer policies in less developed countries.

Breast cancer is not infectious. But there is always a chance of inheriting it. The lifetime risk today in urban India is about three out of 100 in the general population. This is about six per 100 in women whose mothers have had breast cancer
before the age of 50. The risk is much higher if more than three blood relations have had breast or ovarian cancer. In such families, cancer may be transmitted through breast cancer genes BRCA1 and BRCA2.

**Hisham and Yip (2003)** conducted a prospective population-based study Spectrum of breast cancer in Malaysian women: overview, to verify the demographic patterns of breast cancer in Malaysia and other developing countries. The findings of such a study may have implications for future breast screening programs and for facilitating the understanding of differing risks of breast cancer among women around the world.

**Depression in women with breast cancer**

Breast cancer patients experience "normal" distress; however there are subsets who experience clinically significant depression. The researcher reviewed the evidence for the prevalence of depression in women with breast cancer from the last 20 years and summarized the medical literature on the pharmacology and psychotherapy of depression in this population.

Despite evidence that depression significantly impacts quality of life in breast cancer women, few studies focus on the epidemiology and treatment of major depression. The treatment studies have focused on distress and mixed depressive states.

Major depression is a frequent but under-recognized and under-treated condition among breast cancer patients, which causes amplification of physical symptoms, increased functional impairment and poor treatment adherence. More
research on the epidemiology and treatment of major depression in this population is needed.

**Gilbody et al. (2004)** stated that depression is a leading cause of disability worldwide. It is the third most common reason for consultation in primary care. The enhanced management of depression in primary care is central to the WHO strategy for mental health. Despite, the frequency of presentation and the availability of effective intervention in the diagnosis and the treatment of depression the non specialist practitioners often do not follow current guidelines potentially compromising the patient’s outcome.

**Somerset, Stout, Miller and Musselman (2004)** mentioned that major depression and depressive symptoms, although commonly encountered in patients with medical illnesses, are frequently under diagnosed and under-treated in women with breast cancer. Depression and its associated symptoms diminish the quality of life, adversely affect compliance with medical therapies, and reduce survival. Treatment of depression in women with breast cancer improves their dysphoria and other depressive symptoms, enhances quality of life, and may increase longevity. In this review, studies that investigate patho - physiologic alterations in patients with cancer and comorbid depression are discussed, and a few studies on treatment of depression and related symptoms in women with breast cancer are examined.

**Burgers, Corneliv, Lraham and Ramirez (2005)** conducted a five year observational cohort study on depression and anxiety in women with early breast cancer among 222 women and the result showed that nearly 50% of the women with early breast cancer had depression, anxiety, or both in the year after diagnosis, 25% in the second, third, and fourth year, and 15% in the fifth year. Long term depression
and anxiety, were associated with previous psychological treatment, lack of an intimate relationship, younger age, and severely stressful non-cancer life experiences.

Ganz et al, (2003) reported that young women have increased risk of psychosocial distress at diagnosis and follow-up. Psychosocial distress in young survivors are due to higher risk of the disease, receipt of more aggressive therapy and effects of disease or treatment on menopausal symptoms, fertility and family planning, genetic risk, role functioning at home or work, beauty, attractiveness and sexual functioning. Distress among young women with breast cancer may be further compounded by lack of information about the risks for many of these issues, lack of provider awareness and information, resources to address young women’s issues with patients and lack of peer group support.

Reddick, Nanda and Campbell (2005) investigated a study on examining coping strategies in women with breast cancer (n = 138) and concluded that the patients with better coping skills such as positive self-statements have lower levels of depressive and anxiety symptoms. The same study found racial differences in the use of coping strategies, with African American women reporting and benefiting more from the use of religious coping strategies such as prayer and hopefulness than did Caucasian women. Preliminary data suggest a beneficial impact of spirituality on associated depression, as measured by the Functional Assessment of Chronic Illness Therapy—Spiritual Well-Being (FACIT-Sp) and the Hamilton Depression Rating Scale.

Kathleen, et al (2005) did a study on receipt of depression care among low-income women with breast or gynecologic cancer. Twenty-four percent of women reported moderate to severe levels of depressive disorder (30% of breast cancer
patients and 17% of gynecologic cancer patients). Only 12% of women meeting the criteria for major depression reported to receive medications for depression, and only 5% of women reported seeing a counselor or participating in a cancer support group. Neither cancer stage nor treatment status was correlated with depression. Primary diagnosis of breast cancer, younger age, greater functional impairment, poorer social and family well-being, anxiety, co-morbid arthritis, and fears about treatment side effects were correlated with depression. Findings indicated the prevalence of depressive disorder among ethnic minority, low-income women with breast or gynecologic cancer and is correlated with pain, anxiety, and health-related quality of life. Because these women are unlikely to receive depression treatment or supportive counseling, a need for routine screening, evaluation, and treatment is stressed for this population.

McArdle, et al (1996) examined a study on psychological support for patients undergoing breast cancer surgery: a randomized study. On each self rating scale, psychological morbidity tended to fall over the 12 months period. For each scale, scores were consistently lower in patients who were offered support from breast care nurse alone compared with the other groups, which were similar to each other. Differences were significant or nearly so; P values were 0.015 (28 items general health questionnaire), 0.027 (anxiety and insomnia), 0.072 (severe depression), 0.053 (somatic symptoms), 0.031 (social dysfunction), 0.093 (hospital anxiety), and 0.003 (hospital depression). Support from breast care nurse can significantly reduce psychological morbidity, as measured by self rating scales, in women undergoing breast cancer surgery.

Quality of life (QoL) in women with breast cancer
Health-related QoL is now considered an important end point in cancer clinical trials. It has been shown that assessing QoL in cancer patients could contribute to improve treatment and be prognostic as several medical factors. Above all, studies of QoL can further indicate the directions needed for more efficient treatment of cancer patients. Among the QoL studies in cancer patients, breast cancer has received the maximum attention for several reasons.

Thus, when women develop breast cancer, all members of family might develop some sort of illnesses. In fact, breast cancer is a family disease. Other reasons could be added, but overall it is crucial to recognize that with increasing improvements in medicine and medical practice during recent years, studying the quality of life for any cancer has also increased.

Depression is misdiagnosed and under-treated among breast cancer population. Risk factors for depression in the 5 years after diagnosis are related more to the patient rather than to the disease or its treatment. The breast cancer stage (early and advanced) is not statistically significant in terms of rates of psychosocial distress except for recurrence. Risk factors of depression might impair quality of life such as fatigue, past history or recent episode of depression after the onset of cancer, cognitive attitudes of helplessness, hopelessness and resignation.

Body image impairment from mastectomy and sexuality aftermath generates higher rates of mood disorders. The link between increased risk of breast cancer and depression is controversial among the literature. Some studies suggested a protective factor, while others find a relation between stress, immunity and cancer occurrences or even mortality.
Reich, Lesur and Perdrizet-Chevallier (2004) stated that breast cancer survivors reported a higher prevalence of mild to moderate depression with a lower QoL in all areas except for family functioning. Treatment of depression in breast cancer women improved their QoL and might increase longevity. Antidepressant medications remained the cornerstone of depression treatment. The hypothetical link between their prescription and increased breast cancer risk was not supported by literature's data.

Breast cancer affects women's identities and therefore studying the QoL in women who lose their breasts is vital. It is believed that women play an important role in family and when a woman develops breast cancer all family members might develop some sort of illnesses. Thus the issue of 'survivorship' now has become an important topic in breast cancer care that demands the investigation of long-term effects of breast cancer diagnosis and its treatments.

The time of diagnosis, initial stages of adjuvant treatment course and the months immediately following the end of adjuvant treatment are the transition times of poor adjustment and decreased QoL in breast cancer patients.

Montazeri, Vahdaninia, Harirchi Ebrahimi, Khaleghi and Jarvandi, (2008) did a study on decreased health-related QoL as a result of chemotherapy side effects which may predict early discontinuation of treatment in patients with breast cancer. The studies on post-treatment adjustment of breast cancer survivors demonstrated that breast cancer patients might enjoy a good QoL.

Casso, Buist and Taplin, (2004) who studied the QoL of 5–10 year breast cancer survivors diagnosed between age 40 and 49 had concluded that younger women who were long-term survivors of breast cancer had a high QoL across several
standardized measures. However, the long-term consequences of adjuvant therapy and
the management of long-term breast related symptoms could be the two areas that
might be important for clinicians and women with breast cancer to consider when
attempting to understand and optimize long-term QoL.

Meditation in Breast Cancer

Meditation is a focusing practice that suspends the normal stream of thoughts
occupying the mind. Usually, the attention is focused on a specific thing, such as the
breath or a phrase. Practicing meditation regularly is believed to calm the mind,
increase alertness, bring a person into a state of physical and psychological balance.
Meditation may help wipe out some repetitive thoughts about the past or future that
can clutter the mind once treatment ends. It may also reduce loneliness and decrease
the body's inflammatory response to stress which can trigger serious illness. Some
studies have been known to prove that meditation has helped to reduce stress, improve
moods, improve quality of sleep and reduce fatigue.

Biegler, et al (2009) did a study on cancer, cognitive impairment, and
meditation. They concluded that meditation programs have an effect on behavioral
and corresponding neuro-physiological modulations that may be particularly effective
in alleviating cancer-related cognitive impairment. These programs also have been
shown to reduce stress, fatigue, nausea and pain, and improve mood and sleep quality.

Janusek et al (2008) conducted a study on effect of mindfulness based stress
reduction on immune function, QoL and coping in women newly diagnosed with
early stage of breast cancer. The findings showed that women in mindfulness based
stress reduction group re-established their NK cell activity and cytokine production
levels. In contrast, breast cancer patients in the non-mindfulness based stress reduction group exhibited continued reductions in NK cell activity and IFN-gamma production with increased IL-4, IL-6, and IL-10 production. Moreover, women enrolled in the mindfulness based stress reduction program had reduced cortisol levels, improved QoL and increased coping effectiveness compared to the non-mindfulness based stress reduction group.

Carlson and Bultz (2008) examined the effect of mind-body interventions in oncology. The mind-body interventions included are hypnosis, imagery/relaxation, meditation, yoga, and creative therapies. The result concluded that hypnosis and imagery/relaxation to be effective for controlling pain and anxiety during cancer treatments. Meditation and yoga are supported for reductions in stress and improvements in mood, quality of life, and sleep problems. Creative therapies such as visual arts, dance, and music may help cancer patients express their feelings and cope with the demands of a cancer experience.

Targ and Levine (2002) conducted a study on the efficacy of mind-body-spirit group for women with breast cancer. The study examined the outcome for 181 women with breast cancer randomized to either a 12 week standard group support or a 12 week complementary and alternative medicine support intervention group. The study concluded that both interventions were associated with improved QoL and decreased depression.

Meditation’s benefits on psychological wellbeing among women with breast cancer is innumerable. Nurses working in the clinical and in the community need to select complimentary interventions to treat women with breast cancer who are depressed.
Nurses being the primary care giver can assess, identify and treat both physical and psychological problems. Since the expression of depression and QoL among women with breast cancer is seldom recognized, nurses have a pivotal role to play in the hospital and within the community to focus their attention on women with breast cancer to help them to overcome the transition.

1.2 NEED FOR THE STUDY

Breast cancer is the most common cancer in women worldwide, comprising 16% of all female cancers. It is estimated that 519,000 women died in 2004 due to breast cancer, and although breast cancer is thought to be a disease of the developed world, a majority (69%) of all breast cancer deaths occur in developing countries (WHO Global Burden of Disease, 2004).

Breast cancer is one of the most common causes of death in many developed countries among middle-aged women, and is becoming frequent in developing countries as well. It is the most common cancer in women and seen as a terrifying disease due to high mortality rate. Many patients experience psychological reactions, and may have psychiatric morbidities, especially depressive disorders. Although depressive disorders are common in breast cancer and worsen the disease course and treatment outcomes, these psychiatric disorders are ignored and left untreated. Understanding these common psychiatric disorders and associated psychosocial factors would help to plan for treatment and might result in more treatment success.

Sanjay Sharma (2012) stated that according to ICMR, studies the incidence of breast cancer has nearly doubled in the last 24 years. One in every 22 women is likely to suffer from breast cancer. In India, almost 80 percent patients are in
advanced stages when they come to hospitals. Social taboos regarding breast cancer prevent women from talking to friends and families.

**Times of India (2012)** reported that the International Agency for Research on Cancer (IARC) has projected that India could see around 250,000 new cases by 2015. Considering the magnitude, October has been designated the breast cancer awareness month.

**Swaminathan, Shanta, Ferlay, Balasubramanian, Bray and Sankaranarayanan, (2011)** stated that breast cancer has been the most common cancer in Chennai since 2002 and it burden is predicted to increase by 73% in the next 10 years. It is also predicted that it would dislodge cervical cancer to emerge as the most common cancer in Tamil Nadu in 2016.

**IMPACT OF BREAST CANCER**

Most people can vividly remember how they felt when they were told they had breast cancer. Whatever patient’s initial feelings are they may go on to experience many different emotions over time. It is natural to be anxious when they are coping with a potentially life-threatening illness. Stress and tension can make them touchy and irritable, stop eating and sleeping properly, make their muscles tense and their heart race. Concentrating may become difficult. Sometimes anxiety can become so overwhelming that it leads to panic attacks, causing further fear and worry. There’s no list of right or wrong, good or bad feelings to have and no other they must have them in. The way they feel about cancer and how it has affected them and their body will change over time.

**BODY IMAGE**
Body image changes constantly throughout their life, illness can affect how they feel and prompt feelings that affect self-confidence. They may have a very different view of their body after their diagnosis and treatment from the one they had before. Breast cancer treatment may remind them with temporary or permanent visible experiences. They include scars, changes to the skin after radiotherapy, hair loss during chemotherapy or re-growth after and lymphoedema. They may also gain or lose weight as a result of treatment. All these make them feel less content about their body and lose confidence in the way they look. Changing feelings about their body image and self-esteem can affect their feeling about their sexuality and relationships with others. Sharing feelings with their partner, being honest and talking openly could help in understanding each other. If they could explain to each other how they feel, however awkward or difficult it is, they would be able to respond better to their needs.

**SELF-ESTEEM AND CONFIDENCE**

Illness can affect how they feel about themselves and could affect their confidence. Breast cancer can cause them with long-term visible reminders of their experiences. It can cause them to feel unsure about themselves or others who see them; they may begin to avoid situations where they have to cope with other people’s responses regarding their appearance. Having low or damaged self-esteem could result in problems in their relationships with friends, family, partners and co-workers. Sharing feelings with their healthcare team or a counselor could help them to feel more confident and comfortable.
FEELINGS AFTER TREATMENT

At the end of hospital-based treatment there may be permanent changes to the way they look or feel and they may probably need some time to come in terms with it. Although they may be relieved that it’s over, they may be anxious about losing regular contact with their specialist team. Healthcare team should understand that need for support doesn’t end when the treatment is finished. It is important to give plenty of time to rest, recuperate and adjust. This can sometimes take longer than expected, but it may vary from person to person.

- Loss of self

Patients may feel that life as they knew has been disrupted by the diagnosis of breast cancer and that they have lost a sense of who they are. It is uncommon for people to feel their body has let them down or they need to exert some control over their lives at a time when they feel unsure about the future and the changes in their body. During this time patients may experience a number of emotions such as anger, fear, shock and disbelief.

- Relating to Environment

The way patients relate to others can be affected as they recover. Those around them may be eager for them to return to the person they knew before diagnosing. Struggling with changes to patient’s identity can make it difficult for them to relate to others and for others to relate to them. This could cause loneliness.

- Loss of identity

Losing the patient’s identity can affect a number of areas of their life. Fatigue may restrict their ability to be as active as they would like to be. It might reduce the hours
of their ability to work could affect their social life, both of which could heighten their feelings towards isolation. The difficulty to work for longer hours and maintaining relationships would be challenging and it could add to their feeling of loss that they experience. It’s important to know that many people experience these types of issues. The patient tries to identify the areas that have the biggest impact and makes some gradual changes.

DEPRESSION

Depression is a common condition and may occur at different times in a person’s life. It is a term used to describe a broad range of feelings, from being low in spirits to having no will to live. Depression can be a normal response to trauma and a way of coping as they adjust to what has happened, when they would gain energy and their mood would lighten. If they find that negative thoughts are interfering with their life and don’t go away within a few weeks, or keep coming back, it may indicate that they are depressed. If patients or their relatives are worried because of any of the following symptoms, then they should talk to hospital team members, who could refer them to a counselor, psychiatrist or psychologist for help and support.

- Loss of enjoyment and interest in everyday things and experiences.
- Lack of interest in their appearance.
- Persistent thoughts such as ‘I can’t be bothered’ or ‘what’s the point?’.
- Withdrawing from others (not going out or socializing).
- Feeling more tearful and irritable than usual.
- Difficulty in concentration.
- Disturbance in sleep or wanting to sleep all the time.
- Loss of appetite or over-eating.
• Feeling very low in mood or even suicidal ideation.

ISOLATION

Sharing experiences with other people who are in a similar situation can help them feel less isolated and encourage them to talk together about their feelings. There are many different ways of obtaining support and they can find out more in the service sections. There may be local support groups in their area where they can meet other patients with breast cancer. Their breast care nurse will be able to advise them on what professional support is available in their area.

RELATIONSHIPS AND FAMILY

The diagnosis and treatment of breast cancer is almost certain to have an impact on those close to the patient. How well they adjust can influence them to cope during treatments. If having a partner, they may find the roles within their relationship change. Some partners become overly protective while others may take on an almost parental role. They may feel they need to find out everything they can about breast cancer, or remain positive at all times, which does not allow them to discuss any negative thoughts or difficult issues. Others may cope by continuing with life as if nothing has happened. For some partners, it may not be the diagnosis they find most difficult but the new role they take on. For example, it may become their partner’s job to manage the home or get children ready for school whereas earlier it might have been a shared responsibility. It is important to recognize that this may create difficulties in their relationship. On the other hand, it can also bring them closer together. Whatever the partner response is, it is important that they both try to talk about their concerns.
Children can respond in many different ways depending on their age and character. They may be worried about the patient or scared that they too may be at risk of developing breast cancer. Patients might find that they are unable to do the things they did before their diagnosis. They are often a good source of both practical and emotional support.

**FATIGUE (EXTREME TIREDNESS)**

Fatigue is extreme tiredness and exhaustion that doesn’t go away with rest or sleep and may affect them physically and emotionally. It is a very common side effect of breast cancer treatment and may persist for weeks or months after treatment has finished. People who suffer from fatigue have no energy at all and find it difficult to do simple everyday tasks. For this reason it can affect the independence and quality of life of the individual. Everyone’s experience of cancer fatigue is different. It is important to know their current limits and not expect too much of themselves.

**SLEEP DISTURPTION**

Sleep patterns often become disrupted around the time of diagnosis and this may continue during treatment and long after it has ended. In most cases sleep patterns eventually return to normal. The main causes of sleep disruption are stress and anxiety resulting from the cancer diagnosis and the side effects of treatment (Breast Cancer Care (BCC), 2012).

**Bower, (2008)** stated that behavioral symptoms are a common adverse effect of breast cancer diagnosis and treatment and include disturbances in energy, sleep, mood, and cognition. These symptoms cause serious disruption in patients' quality of life and may persist for years after treatment. Patients need accurate information about
the occurrence of these adverse effects as well as assistance with symptom management. This review considers four of the most common behavioral sequelae of breast cancer, namely fatigue, sleep disturbance, depression, and cognitive impairment. Research on the prevalence, mechanisms, and treatment of each symptom is described, concluding with recommendations for future studies.

**Schairer, Brown, Chen, Howard, Lynch, Hall and Storm, (2011)** reviewed studies of long-term suicidal risk among breast cancer survivors and concluded that the cumulative probability of suicide rate was 0.20% in 30 years after breast cancer diagnosis.

**Fobair, Stewart, Chang, Banks and Bloom, (2006)** conducted a study on breast cancer treatment that may have severe effects on the bodies of younger women. Surgical treatment may disfigure and chemotherapy may cause abrupt menopause. One of the studies was conducted on the relation between body image and sexual problems in 546 young women with breast cancer. Half of the 546 women experienced two or more body image problems at some point of time (33%), or at least one problem most of the time (17%). Among sexually active women, greater body image problems were associated with mastectomy and possible reconstruction, hair loss from chemotherapy, concern with weight gain or loss, poorer mental health, lower self-esteem, and partner's difficulty in understanding one's feelings.

**Carlson, Speca, Patel and Goodey, (2003)** conducted a study on the growth of clinical treatment and wellness programs based on mindfulness meditation in relation to QoL mood, symptoms of stress, and immune parameters. A study was conducted among 49 patients with breast cancer and 10 patients with prostate cancer who participated in an 8-week mindfulness based stress reduction (MBSR) program
that incorporated relaxation, meditation, gentle yoga, and daily home practice and there was a change in Total Mood Disturbance (TMD). The scores represented a 13% reduction of overall mood disturbance for the participants after practicing meditation.

**Miller, et al (2005)** conducted a study on Psychiatric sequel following breast cancer chemotherapy. The results showed that women receiving chemotherapy in addition to surgery were more likely to be diagnosed with adjustment disorders. Prevalence of depression, anxiety, cognitive, and sleep disorders were not dependent on receipt of post-surgical chemotherapy treatment. These findings support the need for heightened awareness for mental conditions following chemotherapy.

**Vera Lucia, et al., (2005)** undertook a study on depression and anxiety in caregivers of terminally-ill breast and gynecological cancer patients. The result showed that anxiety was detected in 74.4% of caretakers and depression in 53.4% and the findings concluded that caring for terminally-ill cancer patients led to high prevalence of anxiety and depression.

**Lengacher et.al, (2009)** conducted a randomized controlled trial of mindfulness-based stress reduction among 84 survivors of breast cancer. All subjects were within 18 months of treatment completion with surgery and adjuvant radiation and chemotherapy to a six-week mindfulness-based stress reduction program. Results showed that compared with usual care, subjects assigned to mindfulness-based stress reduction had significantly lower adjusted mean levels of depression (6.3 vs 9.6), anxiety (28.3 vs 33.0), and fear of recurrence (9.3 vs 11.6) at six weeks, along with high energy (53.5 vs 49.2), physical functioning (50.1 vs 47.0), and physical role functioning (49.1 vs 42.8) among breast cancer survivors within 18 months of treatment completion; a six-week mindfulness-based stress reduction program
resulted in significant improvements in psychological status and quality of life compared with usual care.

Alferi et al. (2001) examined the factors predicting the use of complementary therapies in a multi-ethnic sample of early-stage breast cancer patients. The study was conducted among 231 black, Hispanic, and non-Hispanic white patients with early-stage breast cancer. The result reported that most of the women used one or more complementary therapies, most commonly psychotherapy, support group, meditation, and spiritual healing. Use of psychotherapy related to age, education, and elevated distress. Use of complementary therapies did not relate to expectation of recurrence, dissatisfaction with medical care, or concerns about the consequences of chemotherapy.

The professional experience of the researcher shows the effects of complementary therapies which are the highly expected forms of intervention by nurses while providing care for the patient. The researcher during her clinical experience found that the women with breast cancer were noted to be often aloof, angry, irritated, preoccupied with disease and poor personal hygiene. So, the investigator felt a need to help these women introspect themselves with the help of meditation practice that quietens their mind, releases physical distress, and allow them to experience greater vitality and well-being. Thereby, the women are made to realize the importance of meditation and integrate it into their day-to-day practice.

Nurses are competent in general and specialized care. Mental health care rendered is seldom projected as the work of psychiatric nurse. The nurse’s holistic approach towards mental health care would improve the QoL among women with breast cancer.
The hidden and felt need of women with breast cancer has the need of meditation in the Indian scenario with minimum resources. Hence the study problem was chosen for the study. Many studies have identified psychological problems and impairment of QoL in breast cancer patients. Meditation is highly effective as a model, hence being used as an intervention in this study.

1.3 STATEMENT OF THE PROBLEM

A study to evaluate the effectiveness of meditation on depression and quality of life among women with breast cancer subjected to mastectomy admitted in selected hospitals at Chennai.

1.4 OBJECTIVES

The objectives of the study are to,

5. evaluate the effectiveness of meditation on depression among women with breast cancer subjected to mastectomy.

6. determine the effectiveness of meditation on QoL among women with breast cancer subjected to mastectomy.

7. identify the relationship between depression and QoL among women with breast cancer subjected to mastectomy.

8. associate the selected background variables with depression and QoL among women with breast cancer subjected to mastectomy.

1.5 OPERATIONAL DEFINITIONS

Effectiveness: Art of estimating the outcome of meditation on the depression and QoL. The outcome is compared and measured in terms of Aran Beek’s depression
inventory (1996) and modified QoL by the City of Hope National Medical Center (2003). These scales are used in both the groups of women. The measurement was done during pretest, after one month, and three months during period of study. The outcome was compared in terms of depression and QoL and to check their performance of meditation that was correlated them.

**Meditation:** Practice of basic and nine chakras in one’s body leading to mono concentration helps in relaxation. The practice was provided through video assisted teaching to the study group one day prior to surgery, second and third post-operative day followed by enaction. The package consists of basic and nine centers mediation which involves a total body scan, unchanged position and flow of positive thinking on health. The basic meditation includes Agna, Moolathara and Thuria. The nine center meditation has the steps of Moolathara, Swathitana, Manipooraga, Anagatha, Vishukthi, Agna, Thuria and Thuriathetha. Performance assessment is done at one month and three months interval during the study period. The video is shown to the control group after the third months’ assessment.
Basic and Nine centers meditation

**Depression**: The subjective feeling of unhappiness and hopelessness are measured by Beck Depression Inventory- II (BDI-II) to grade the level of depression. The tool has got 21 items, and in each item there are four options with a total score of zero to sixty three. The level of depression score 1-13 denotes minimal depression, 14-19 mild depression and 20-28 moderate depression and 28-63 severe depression. The item of the tool includes sadness, pessimism, sense of failure, guilt, self dislike, social withdrawal, self accusation, insomnia, anorexia, fatigue, weight loss, and loss of libido as self rated by woman themselves to grade the level of depression. The scale was used to assess the level of depression during pretest, after one month and three months for the study and the control groups.

**Quality of Life (QoL)**: Change in one’s lifestyle after being diagnosed with breast cancer is measured by modified QoL breast cancer patient version. This tool is developed by the City of Hope National Medical Center. It has 40 items ordinal scale representing the four domains including physical, psychological, social and spiritual well-being. The scoring is based on a scale 0- worst outcome to 10- best outcome and it has got reverse anchors. QoL is graded in terms of 0-80 very poor, 81-160 poor, 161-240 average, 241-320 good, 321- 400 very good. The scale was used after applying BDI at pretest, after one month and three months for the women of both the study and the control group.

**Women selected for the study**: Females of 21-60 years diagnosed as breast cancer in the stage I or II or IIIa as per TNM classification and also subjected to mastectomy.
Mastectomy: Women those who are subjected for modified radical mastectomy (removal of the breast) admitted in the surgical ward.

1.6 NULL HYPOTHESES

\( NH_1 \): There is no significant difference in the depression among women with breast cancer subjected to mastectomy who participate in the meditation than those who do not.

\( NH_2 \): There is no significant difference in the QoL among women with breast cancer subjected to mastectomy who participate in the meditation than those who do not.

1.7 ASSUMPTIONS

- Individual is viewed as holistic adaptive system.
- Women with illness encounter psychological morbidity.
- Meditation enriches all-round personality development.
- Early detection of depressive symptoms among women improves their well-being.