

## MAGNITUDE OF THE PROBLEM AND ITS STRESS PATTERN, QUALITY OF LIFE AND SUPPORTIVE INTERVENTION IN BREAST CANCER SUBJECTS- A CRITICAL REVIEW AND RESEARCH GAP ANALYSIS

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Received - 31.08.2017; Reviewed and accepted - 16.09.2017

### ABSTRACT

**Context:** Facing a breast cancer diagnosis can be overwhelming and the stress levels may skyrocket. Given that breast cancer is a significant stressor and psychosocial variables such as stress are associated with quality of life. With education and supportive care, one may be better able to deal with many issues and emotions experienced. **Supportive Intervention:** Emotional support offers a totally confidential environment in which the breast cancer patients can build a relationship to explore the problems, understand them, come to terms with them or resolve them. The role of Emotional Support is to build an alliance with one person, a two-way collaborative exchange that enables one to explore the situation, what's behind it or causing it, identifying what can be done and support one through decision making. One of the main roles of a mental health nurse is to help patients by providing emotional support and guidance. Nurses play a vital role in providing emotional support in hospital setting. Emotional support is one of the vital elements of nursing practice. **Research Gap Existence:** There have been an inadequate number of research studies with emotional supportive nursing interventions for breast cancer patients in India, and these interventions have not been well defined. It is quite important for psychiatric nurses to endure an effective role in implementing emotionally supportive interventions to assist breast cancer patients in stress adaptation and to improve their quality of life.

**Keywords:** Stress, Quality of Life, Supportive Intervention, Breast Cancer

### MAGNITUDE OF THE PROBLEM

In India, incidence rate of cancer has been estimated approximately 2.5 million every year, out of which 5.5 lakh deaths were reported [1]. Breast cancer is very common in women, and in today's world, every woman is absolutely at risk of developing cancer. Around 60% were affected in middle-income countries and below 40% from low-income countries [2].

In India, breast cancer occurrence has doubled in the past two decades. Predominately breast cancer cases are diagnosed in localities like Delhi, Bangalore, Mumbai, Chennai, Bhopal, Ahmadabad, and Kolkata. In India, breast cancer is a public health burden and a challenge. An approximate number of newly diagnosed breast cancer cases in India will reach 2,00,000 by 2030 [3]. Studies indicate that due to westernization the incidence rate of breast cancer increases in India.

### CAUSES OR RISK FACTORS OF BREAST CANCER

The cause of breast cancer remains idiopathic. Women with and without breast cancer were interviewed to obtain a detailed history of occupation [4]. Risk factors for breast cancer include older age, family history of breast cancer, early menarche and late menopause, exposure to radiation, elderly primi, obesity, oral contraceptives, and alcohol consumption [5].

Dietary patterns are highly involved in the risk of breast cancer. It produces depletion of a certain essential factor that normally protects against the development of breast cancer [6]. Dietary habits like high fat, low vegetables and fruits, low fiber and high carbohydrates may increase the risk of breast cancer [7]. Circulating sex hormones like oestradiol, dehydroepiandrosterone sulfate, androgens, testosterone and sex hormone binding globulin were strongly associated with breast cancer risk [8].

### STRESS AND BREAST CANCER RISK IN WOMEN

The research findings from diverse selected fields incorporating epidemiology, physiology and molecular biology analysed that stress may cause breast cancer. However, the precise

mechanisms behind the stress and breast cancer are not well defined. Distinguished epidemiological studies vary in stress assessment related to breast cancer. Physiological studies suggest a vivid connection between stress and breast cancer. Very limited information is available from the intracellular pathways which are involved in stress and breast cancer risk [9].

A meta-analysis validated that no association was determined between stressful life events and breast cancer risk. Magnitude and frequency of stressful life events in widowhood, divorce revealed no association with the incidence of breast cancer [10]. With reference to the literature, stressful life events develop breast cancer risk and entails death. Selective life events like divorce/separation, the death of husband, close relative or friends precipitates the risk of breast cancer. Major life events cause stress in breast cancer patients on account of the involvement of hormone [11].

A longitudinal study conducted at Denmark explored that women who experienced high level of stress gradually developed primary breast cancer. Significant hazard ratio was determined with high level of stress experienced by breast cancer women. High level of estrogen concentration is a known risk factor for breast cancer. Furthermore chronic exposure to stress impairs the estrogen synthesis, thereby; the incidence rate of breast cancer is lowered. High level of stress accounts for death in breast cancer patients [12].

Stressful life events and lack of social support was associated with breast cancer risk. Single stressful exposure had association with breast cancer risk, whereas several stressful exposures and minimal social support had no association with breast cancer risk [13].

Meta-analysis of six case controls and two cohort studies demonstrated no association between stressful life events like widowhood, divorce, self-rated intensity, the frequency of stressful events and primary breast cancer risk. Overall stressful life events may not be a contributing factor for the risk of breast cancer in women [14].

Stress triggering experiences such as severe and moderate threats, children's military service, the death of a close family member, financial difficulties, maternal death in childhood and serious financial difficulties served as a contributing factor for breast cancer risk in Serbia. Various types of stressors and exposure timing should be tested for further understanding levels [15].

#### **SUPPORTIVE INTERVENTION ON STRESS IN BREAST CANCER PATIENTS**

Stress management education was delivered through group or individual setting in newly diagnosed breast cancer women. The stress management intervention had no impact on cancer-related traumatic stress levels. There was no difference between group and individual setting; the however individual setting was preferred by the participants. Further, preference-based stress management intervention is recommended for testing different treatment effects [16]. A randomized study compared group and individual stress management intervention for fatigue and emotional reactivity in newly diagnosed breast cancer patients. No differences were showed between the group and individual stress management on fatigue and emotional reactivity [17].

Research paper showed that preoperative short-course stress management training benefited the cancer patients by reducing the depression level and fatigue post operatively. However, anxiety, pain and sleep problems remained the same even after intervention. Psychological treatment within short spell reduces depression and fatigue.

#### **STRESS LINK WITH CORTISOL IN BREAST CANCER PATIENTS**

Posttraumatic stress also showed a positive relationship with cortisol.[13] Healthier women showed exceeding waist circumference, meagre explicit memory tasks, inadequate social support and higher perceived stress [18].

Salivary cortisol was checked after large core breast biopsy for three groups of women with no final diagnosis known for the benign and malignant disease. The result showed that women with the diagnosis had elevated salivary cortisol level. Women with benign disease had the highest cortisol levels. Malignant disease group had increased cortisol level when compared with diagnosis group [19]. A pilot study was conducted among breast cancer survivors and women without cancer who had a routine mammogram. Participants of both groups were checked for salivary cortisol, diurnal cortisol slopes, and cortisol response. Results indicated that breast cancer survivors had higher levels of cortisol at baseline than controls. The group difference was observed with decreased cortisol response in breast cancer survivors. Group differences were not seen in diurnal cortisol slopes [20].

#### **SUPPORTIVE INTERVENTION ON CORTISOL IN BREAST CANCER PATIENTS**

Psychosocial interventions like body mind spirit, Supportive-Expressive, and Social Support Self-Help was tested on stress marker, psychological distress, mental adjustment, emotional control and social support in breast cancer patients. Supportive-Expressive participants, Social Support Self-Help group, and control showed no effectiveness [21].

A systematic review of randomized controlled trials reported the effectiveness of the psychological intervention on biological variables among nonmetastatic breast cancer women. Psychological intervention influences cortisol and immune functional indicators like lymphocyte proliferation and cytokine production [22].

One of the literature analyzed the efficiency of cognitive behavioral stress management on serum cortisol and ability to relax among non-metastatic breast cancer women. Women after the cognitive behavioral stress management showed a greater reduction in cortisol level and higher progress in the ability to relax than controls [23]. Cognitive behavioral stress management intervention was studied for its effect on serum cortisol levels in

stage I or II breast cancer patients. Participants in the experimental group were benefited by a reduction in the levels of serum cortisol, while controls showed no change [24].

#### **STRESS CONNECTION WITH QUALITY OF LIFE IN BREAST CANCER PATIENTS**

A replicated research assessed the level of quality of life and psychological distress by administering stress management intervention with patients receiving radiation therapy. Psychological distress considerably decreased only at the initial level of stress elevation. The quality of life improved which shows the efficiency of stress management intervention [25]. The research studied the stress, coping and quality of life in recurrent breast cancer patients. Coping was regarded as the mediator between stress and quality of life. Ineffective coping pave the way for stress and poor quality of life. Additional analysis should be carried out on intervention with coping strategies to reduce stress and improve quality of life in breast cancer patients [26].

The review demonstrated that the course of radiotherapy for all types of cancer is the sources of stress. Elevation of stress level was observed in all types of cancer. While comparing the stress level between men and women, women showed a higher level of stress. Among all types of cancer, breast cancer patients showed highest stress levels. Therefore psychological support is required to decrease the stress levels and improve quality of life in cancer patients [27]. Health stress like advanced cancer stage, long-term duration of illness, treatment and social stress such as unemployment, recent immigration, older age were related to the quality of life. Comparatively, social stress revealed more relationship with quality of life than health stress. Quality of life is negatively affected by both health and social stresses due to the experience of perceived stress [28].

#### **QUALITY OF LIFE IN BREAST CANCER PATIENTS**

Quality of life was assessed during the breast cancer diagnosis for further long-term survivorship. It was assessed between women with and without breast cancer. After many days progress was observed on the general quality of life. There was an improvement in the quality of life in women without breast cancer. Only limited deficits were reported in cognitive functions of the women without breast cancer [29]. Breast cancer survivors were assessed for quality of life at Saarland, Germany. Quality of life was compared between breast cancer survivors and healthier women. Breast cancer survivors stayed with low quality of life than controls. Among the breast cancer survivors, younger women showed poor quality of life [30]. One of the surveys showed inadequate religious coping leads to poor quality of life in breast cancer patient during conservative surgery. Additionally, quality of life must be assessed in various types of surgical treatment for breast cancer [31].

The research tested the patient stated satisfaction and quality of life in later alloplastic breast reconstruction adopting round versus shaped cohesive silicone gel implants. Patients were contacted through mail, letter and incentive gift cards. This study proved that patient stated satisfaction and quality of life had no difference between two types of silicone prosthesis [32].

Quality of life was compared between breast cancer patients subjected for mastectomy with chemotherapy and mastectomy adjuvant radiation therapy. Results revealed the quality of life was affected in both groups with no group difference on psychosocial well-being of quality of life. Physical complains and daily activities had group differences. They reported not able to have fun, normal life. The highest proportions worried about future and both groups were dissatisfied with lives [33]. Long-term quality of life throughout chemotherapy and mistletoe therapy was studied in breast cancer patients. Findings showed the low quality of life in the course of chemotherapy and mistletoe therapy due to chemotherapy side effects. The functional scale demonstrated improvements, while symptom scale showed no improvements [34].

Newly diagnosed breast cancer patients were assessed for quality of life with continuous follow-up at Turkey. Women with

progressive stage and chemotherapy had a lower quality of life than those in early stage and hormone therapy [35]. Review paper showed the outcome of quality of life in breast cancer patients in the course of diagnosis, during and after treatment. Patients on chemotherapy and adjuvant hormonal therapy had a poor quality of life [36].

#### SUPPORTIVE INTERVENTION ON QUALITY OF LIFE IN BREAST CANCER PATIENTS

Quality of life intervention was tested for its effectiveness on self-efficacy, outcome expectations and self-regulatory skills in breast cancer survivors. The relationship between social cognitive variable, positive coping behavior, and quality of life were explored. Findings imply women were benefited from treatment protocol [37].

A meta-analysis was conducted on psychosocial and psycho educational support to assess the quality of life with initial stages of breast cancer. Results imply no significant effect on quality of life with psychosocial support. Psycho educational support was efficient in improving quality of life [38].

Breast cancer patients receiving chemotherapy were tested for a relationship between individual characteristics, disease characteristics, psychological factors, social support and quality of life at Taipei. Individual characteristics such as some children, and social status, disease characteristics like cancer stage and chemotherapy, psychological factors and social support from both relatives and health professionals were related to the quality of life. Among all factors, psychological factor affects the overall quality of life [39].

#### RESEARCH GAP ANALYSIS ON EMOTIONAL SUPPORT FOR BREAST CANCER

Many breast cancer scientists reviewed and critically analyzed the gap related to the issues and new challenges existing in breast cancer. Ten major gaps were identified. Research gaps were related to the genetic link, lifestyle changes, screening, molecular metastasis, molecular mechanisms of tumor, chemotherapy, and radiotherapy sensitivity markers, personalization, biomarkers, supportive treatment on the emotional impact of breast cancer treatment and its side effects and bioinformatics support [40].

Long-term breast cancer survivors demand the need for informational and emotional support. Type of support required was based on the factor of age. Oncology teams should provide support. Nurses must significantly contribute to fulfilling the needs of breast cancer survivors. There have been inadequate nursing researches on informational and emotional support for long-term breast cancer survivorship. Breast cancer nurses should explore the kind of support needed by the women from oncology teams [41].

Clinical nurse specialists provide emotional care and support for patients and families. Previous research work failed to explain the concepts of emotional care, support and social interaction [42]. Psychiatric nurses have skills and opportunities to render emotional support for breast cancer patients. They help patients to discover meaning in life, decrease complaints and increase coping skills.

Breast cancer women need supportive emotional intervention. They should be allowed to talk about illness-related issues, reactions and also to express anxiety, fear, and despair. Negative senses of emotions are usually reported by verbal, nonverbal and narrative communication. Emotional support should be given during the entire phase of cancer diagnosis and treatment. Written emotional disclosure improves physical and psychological adaptation in breast cancer. Home-based emotional, expressive writing in breast cancer patients suggested accessibility, availability, and utility. Nurse-led telephone support should have appropriate timing, feasibility and remote access connection for breast cancer patients in contemporary scenario.

There are many ways to express emotional impact of breast cancer. Family and friends can support during the treatment of breast cancer. Support groups either face to face or online

reported significantly decreased depression, increased life span, convinced attitude towards illness. Emotionally breast cancer women faced a tough time, the challenge during and after treatment and concerned about changes in physical, psychological and social well-being.

Very rarely information is available related to emotional support for breast cancer patients. Scientific rationale behind emotional support was not well defined in any of the literature. The promising findings of formerly reported emotional support must be replicated for its evidence. Hitherto emotional support was not tested on stress, but certain literature shows its impact on quality of life [42].

Still, research gap exists with different modes of emotional support on stress and quality of life in breast cancer patients. Studies are inadequate with different methods of emotional support on stress and quality of life for breast cancer women in India. There is a lack of research work on the comparison of different modes of emotional support on stress and quality of life. Furthermore, research should be conducted to draw an evidence-based practice in nursing and to fill the existing research gap. It is explicitly important for psychiatric nurses to take an active role in endowing and exercising emotional support intervention to aid breast cancer patients in stress adaptation and betterment in the quality of life.

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