



Breast Cancer and Posttraumatic Growth

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ABSTRACT

The current methods for early diagnosis and increased treatment options have improved survival rates in breast cancer. Breast cancer diagnosis effects individuals in physical, psychological and social dimensions either positively or negatively. In the literature, usually the negative effects encountered in the period after the diagnosis of breast cancer are mostly described, with limited data on the positive effects. Nevertheless, the identification of positive changes and defining its determinants is important in supporting and strengthening posttraumatic growth in this group. The objective of this review is to explain posttraumatic growth and its determinants in breast cancer during the post-treatment period in accordance with the relevant literature. In our evaluation, it was noticed that breast cancer survivors experience posttraumatic growth in the post-treatment period, but the literature is limited in explaining the nature of posttraumatic growth and its determinants. Both qualitative and quantitative research that will provide in-depth information on the subject, explaining culture-specific posttraumatic growth and related factors, are required.

Key words: Breast cancer, survivors, posttraumatic, growth

Breast cancer, is the most common type of cancer among women worldwide, and a disease that affects a woman's daily life during diagnosis, treatment and post-treatment periods in physical and psychosocial dimensions (1). Currently, with early diagnosis and improved treatment options for breast cancer, survival rates are increasing and disclosure of survivor's experience after treatment is gaining importance (2, 3). At this point first the concept of "survival" needs to be clarified. In biomedical medicine cancer survival is defined as the population that is disease-free at least for five years after treatment. However, in psychosocial definition survival is accepted as a process that begins with the time the patient is diagnosed and is defined in three stages. **1. Acute survival stage:** It is the period beginning at the time the patient is diagnosed. **2. Extended survival stage:** It is the period beginning after termination of treatment, when the patient enters the healing process and experience the fear of recurrence. **3. Permanent survival stage:** It is the period when a possible risk of recurrence is minimized (4). In this review, the concept of survivor is used for breast cancer patients who have completed the treatment process.

Breast cancer survival effects individuals in positive and negative way, in physical, psychological and social dimensions. In the literature the negatively affected survivors from breast cancer are often described, and efforts to explain the positive effect seem to be limited (5). Nevertheless, the identification of positive changes and defining its determinants is important in supporting and strengthening posttraumatic growth in this group. Based on this fact, this study was conducted in order to explain the posttraumatic growth and its determinants, in the aftermath of treatment for breast cancer. In addition, it is expected that this study will contribute to diagnosis of posttraumatic growth in breast cancer survivors.

The Concept of Posttraumatic Growth and Breast Cancer

Following life events containing high levels of stress and resulting in crisis most people not only experience negative changes but also positive changes at the same time. In the literature, the positive changes are discussed under the headings of "benefit finding", "posttraumatic growth" and "stress-related development" (6). At this point, the terminology that is used to express the positive changes should be clarified. Benefit finding and posttraumatic growth overlap conceptually, but they represent a number of structural differences (7). Benefit finding refers to a positive change in relationships, priorities in life and accepting life after a stressful experience. Posttraumatic growth, is a term used to describe positive psychological changes experienced as a result of an individual's efforts to cope with life crisis that exert high levels of stress, such as breast cancer (8). The differences between these two concepts are not clear, but "benefit finding" might begin at the time of diagnosis and is more focused on finding benefit from strength. On the other hand, posttraumatic growth may begin in weeks, months

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or even years following injury and is focused on the changes occurring in their own capacity during the fight with trauma and is a restructuring process. Posttraumatic growth defines both a process and a result. Posttraumatic growth is the experience after a traumatic (highly stress-forming) incident, and it does not express the stress encountered during life and growth. Therefore, stress-related growth terminology is accepted as a limited expression and the more inclusive statement of post traumatic changes is described as “trauma after development” (8, 9). In this study, the term “Posttraumatic Growth” is used to express the positive changes experienced by breast cancer survivors.

In order to clarify the terminology of posttraumatic growth “traumatic life events” should be disclosed. Traumatic life events refer to stressful experiences that threatens mental and physical well-being of individuals, and complicates one’s functionality and compatibility. This kind of experiences is often accompanied by helplessness, weakness, anger, anxiety and fear (8). Breast cancer is a life crisis that creates intense stress during diagnosis, treatment and post-treatment period, and threatens the physical and psychological integrity of a woman and is a traumatic experience that influences women in all aspects of life by disrupting harmony. In addition, it is described as a mortal, painful, intimidating and scary disease and at the same time causes death and realization of one’s own mortality. Facing the reality of death, leads to questioning of individuals’ lives, with the realization that routines, habits and values have lost their importance, therefore it can provide creation of new meanings in an individual’s life (10). Due to these features, crisis are turning points that include positive results and are experiences that help people to gain insight to sustain life in a more meaningful experience (11, 12).

Posttraumatic Growth Areas in Breast Cancer

Posttraumatic growth is grouped under three headings including changes of the individual in self-perception, relationships and life philosophy (spiritual, existential) (8). **Changes in self-perception** may be in the form of a sense of personal empowerment, autonomy, self-esteem development, flexibility and being able to see and to create new opportunities (13). In two studies conducted with a quantitative method, the second area that breast cancer patients reported improvement in is personal empowerment (7, 14). In another study conducted with long-term survivors of breast cancer, it has been determined that 79.2% of the survivors gained at least one benefit from cancer experience and one of the benefit area is in personal characteristics (7). In other studies conducted on the subject, the property of personal empowerment defined by survivors are described as: the ability to express oneself, self-improvement, awareness of positive personality traits and personal power, self-confidence, flexibility, confidence in their body, development of problem solving and positive thinking skills (7, 15, 16). However, the limited number of studies describing personal empowerment and the application of quantitative method in majority of these studies mandate further research on defining the nature of personal empowerment.

Another posttraumatic growth area is the change in interpersonal relationships. **The development of interpersonal relationship** is in the form of increased sense of compassion, improvement in the ability of empathy, increasing desire to help individuals with similar experience and increased sense of intimacy in relationships (8, 13). In two studies conducted with a quantitative method, the first area that breast cancer survivors reported personal improvement in is the development in interpersonal relationships (7, 14). After treatment, women defined finding meaning in their existing relationships with other women and

deepening of their relationship as positive changes (17). In the literature, the effort to combat a traumatic event, such as cancer, is stated to strengthen the bond between spouses (18). In a review that compiled quality of life studies on breast cancer survivors by Russell et al. (19), the desire to help newly diagnosed breast cancer patients and supporting women for early diagnostic activities are examples of development in this field. The social support to the individual provided by her environment acts as a buffer against stress life and is known to support coping. In addition, social support is described as an important factor in survivors who experience the long term negative impact of cancer and its treatment and social support is reported to be an important determinant of the improvement in quality of life (20). At this point, supporting the strengthening of interpersonal relationships is important in coping with the post-treatment period.

Posttraumatic growth may involve the philosophy of life. **Changes in philosophy of life** includes being thankful they live, spiritual and existential development (13). In studies conducted with breast cancer survivors, change in the philosophy of life and development in spiritual matters are described (16, 21). In these studies, survivors reported that they gained features such as changes in life perspective, increased appreciation of life, in the spiritual dimension feeling closer to god, trust in god, forgiveness, patience, gratitude and sacrifice as change in philosophy of life, that they confronted the fact that life is actually an opportunity offered to people and stated that they made changes in their lifestyles. The lifestyle changes described are nutrition alterations, regular exercise and stress management. In the study, it is described that positive gains in breast cancer survivors improve both the quality and the quantity of life (7, 15, 16). Similarly, Bower et al. (22), showed changes in the process of posttraumatic growth in time and approximately 75% of breast cancer survivors experience a change in their approach to life, and in their life priorities and gain healthy living habits. Spirituality is one of the frequently studied subject area, which is related to development in philosophy of life in breast cancer.

Spirituality is the endeavor to question and accept the individual herself and her relationships with other people, her place in the universe, the meaning of life, the meaning of experience, awareness, values, and purpose in life. At the same time, it is a result of the information gained in a lifetime and contains elements that form the purpose of life, and are meaningful to the individual (23). Increase in religious rituals and beliefs are noted as spiritual development (8). The studies conducted in breast cancer survivors regarding spirituality state that spirituality is a multidimensional concept (21) and these dimensions are described as; maintenance, belief, coping and support (21, 24). Another spiritual change after breast cancer is described as convergence to god and deepening of faith in god (21). In our country, a study conducted in a group that completed treatment could not be reached. In a qualitative study conducted in women with breast cancer during chemotherapy, the patients defined the disease as coming from god and they state an increase in their faith in god after diagnosis (25). In another study from our country conducted in cancer patients, 80 % of patients expressed an increase in belief in God (26). Spirituality is an important psychological resource to cope, adapt and increase in quality of life (27). Beliefs as a spiritual dimension, may contribute to psychological well-being and harmony of an individual in the aftermath of treatment of breast cancer by providing hope, stamina and support, and by reducing the feeling of helplessness. At this point, the efficacy of praying on the psychological well-being of breast cancer survivors is emphasized (28, 29). In another study, breast cancer survivors have described religious beliefs and spirituality as sources of help in coping (30).

In addition, in the post-treatment period, spirituality was found to be associated with quality of life, distress, social support and benefit finding (28). As a result, in studies regarding spirituality in breast cancer patients and survivors, the positive effects on coping, patient compliance, mental health status and quality of life are expressed. It is stated that the spiritual dimension should not be ignored during different stages of management of breast cancer patients (31-33). In conclusion, supporting all aspects of spiritual development and change in the philosophy of life in survivors developing psychosocial adjustment is important in the post-treatment period.

Determinants of Posttraumatic Growth

The identification of factors associated with posttraumatic growth is important in increasing the effectiveness of treatment. In a review that examined posttraumatic growth in cancer survivors, personal factors (demographic characteristics, etc.), event related factors (incident clinical features, etc.), environmental factors (social support, etc.), cancer, and mismatch between one's perception of herself and the world, emotions and behaviors (such as avoidance), coping (cognitive and emotional processes, positive reinterpretation, etc.) are determined as factors influencing posttraumatic growth (34). In a study conducted in patients with breast cancer in our country, social support and using problem-oriented methods in coping were associated with a higher level of development. In the same study, the income level was negatively correlated with development of depression (12). In a study conducted with breast cancer survivors (1 to 5.5 years after diagnosis) and their spouses, breast cancer was defined to result in the same level of stress in both women and their spouses. It has also been shown that women experienced more spiritual development than their spouses (14). In another study conducted with long-term (10 years) breast cancer survivors by Mols (7), posttraumatic growth was negatively correlated with radiotherapy. The cross-sectional nature of the study, and the fact that majority of the samples (72%) have received radiotherapy were stated as a limitation in the generalization of these results. In another study, tumor size, number of positive lymph nodes, mastectomy and endocrine treatment were positively correlated with posttraumatic growth (35). In a study regarding the type of treatment, a greater growth was disclosed in patients receiving chemotherapy. This relationship is described as being associated with the perception of severity due to treatment-induced stress, side effects, and losses (36). In another prospective study examining posttraumatic growth, it was determined that the growth patients experience increases over time and the determinants of growth are associated with younger age, expression of emotion and intellectual processes (oriented to the cause of cancer) (16). In another study conducted with long-term survivors of breast cancer, posttraumatic growth was found to be associated with mental health dimension of quality of life and happiness. In the study, the nature of mental health was especially associated with the level of personal empowerment and strengthening of relationships with others. Also in this study, positive affect and adaptive coping strategies (active, positive, relationship, religion, and denial) were associated with improvement in the positive direction. These findings are described in two ways. First, the effect of coping strategies over positive changes perceived according to cancer experience continues on the long-term. Another explanation is the finding that coping describes 25% of the variance in posttraumatic growth in analysis after controlling for personality traits. As a result, the study described post-traumatic growth to be associated with positive personality traits and the experiences during diagnosis and treatment process (36). In a qualitative study including breast cancer survivors who have completed treatment, sense of hope and achieving vital aims were reported to aid in the development of posttraumatic growth (15). In an-

other study evaluating growth in breast cancer survivors who have completed treatment for at least six months ago and who have never experienced any stressful situation, higher posttraumatic growth was defined in women who have experienced breast cancer. It has been stated that a stressful life event should be lived for the development of posttraumatic growth, but that the development was independent of whether the incident was perceived as a traumatic experience or not. In the same study, the development of posttraumatic growth was found to be associated with better psychosocial quality of life and decrease in depression (37).

In conclusion, women do not experience only negative effects after breast cancer treatment but also go through psychosocial empowerment. Studies on the evaluation of this aspect defined as posttraumatic growth are required. In the survey, it was found that in most studies posttraumatic growth was assessed using the quantitative method, the posttraumatic growth scale (PTGI) developed in 1996 by Tedeschi and Calhoun (38). The development of both strategies to help medical staff in measuring and diagnosing growth, and evaluation tools are required. Also in this area, qualitative and quantitative research that compares the size of growth can be made to provide in-depth knowledge of culture-specific properties. The identification of positive changes that occur in women in especially the field of self-perception in posttraumatic growth, and the determinants of these changes experienced in three dimensions will provide important data for the empowerment and support of women in the post-treatment period. Another area to be investigated is the effects of personality traits of survivors, their methods of coping and their experiences during the diagnosis and treatment periods, on the development of growth during the post-treatment period.

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