

## **RESEARCH ARTICLE**

# FACTORS CONTRIBUTING TO AND ASPECTS OF POST-TRAUMATIC GROWTH ASSOCIATED WITH BREAST CANCER

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#### Manuscript Info

#### Abstract

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*Key words:-*Breast Cancer, Posttraumatic Growth, Adaptive Coping, Social Support, Sequelae One in eight people receive a diagnosis of breast cancer, making it one of the most frequent malignancies. Post-traumatic growth (PTG), which is defined by positive changes in functioning in a variety of life dimensions, is often brought on by this traumatic event. The research that has previously been done on PTG and breast cancer is critically examined in this work. After a thorough search using reliable resources, 25-30 articles were found; six of them were chosen based on predetermined standards. The results showcase that post-traumatic growth in the areas of greater appreciation for life and better relationships is common among breast cancer survivors. There are multiple factors involved in this occurrence. Though extreme sequelae may have the opposite effect on PTG, perceived emotional intensityand mild sequelae all positively influence PTG. Coping mechanisms, especially those that are adaptive, are proven essential to PTG. The PTG process is aided by social resources like contact with PTG models (cancer survivors), support from one's spouse and co-workers, and quality of marital support.In PTG, demographic considerations also come into play. There is a positive correlation between higher PTG and younger age, lower education level, and lack of college degree. However, the analysis resulted in mixed results over the association between time since diagnosis and PTG, which calls for additional qualitative study in the area. Given the limitations of self-report measures, the subjectivity of researcher interpretations, and the emphasis on a Western population, care must be taken when interpreting these results. However, our analysis provides significant insights for clinicians and researchers and underscores the potential for promoting posttraumatic growth in breast cancer patients and survivors.

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#### Introduction:-

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Cancer is a genetic disease that is the result of a DNA mutation. There are various kinds of cancer, and breast cancer is one of them. It is a disease in which cells in the breast grow out of control. 1 in 8 cancer diagnoses are that of breast cancer, thus being the most commonly diagnosed cancer globally. Breast cancer, due to its impact on the functioning of the patients, can be described as a traumatic experience. However, despite the unpleasant consequences of this experience, patients also experience some positive changes as a result of their struggle with the adverse event of their diagnosis. This is known as post-traumatic growth, which occurs due to the process of

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rebuilding old assumptions and goals about one's life or looking for their alternatives after exposure to an undesirable traumatic event renders them unattainable. The term post-traumatic growth was coined by Tedeschi and Calhoun(1996), who defined it as the positive change in previous functioning post experiencing a traumatic event. According to them, posttraumatic growth has the following aspects- enhanced interpersonal relationships, increased appreciation for life, sense of increased personal strength, greater spirituality, and positive changes in life priorities or goals. This posttraumatic growth following a diagnosis of breast cancer has been correlated to several factors ranging from individual differences to psychosocial predictors, such as age, coping mechanism, time since diagnosis, social support available, level of education, connection to other models who have survived cancer, etc. Comprehending the process or factors involved in the perception of posttraumatic growth in breast cancer patients and survivors can be helpful for generating helpful clinical implications to benefit the patients. Therefore, in this study, I will be critically analysing a part of the presently available research on posttraumatic growth associated with breast cancer.

## **Objective:-**

The objective of the present study was to critically analyse existing research on posttraumatic growth associated with breast cancer in order to assess the factors contributing to PTG and its various aspects which can be expected to be observed in breast cancer patients.

### Methodology:-

The research strategy adopted included searching reliable and reputable databases, such as Such as Google Scholar, PubMed, ResearchGate and MDPI, which provided access to scientific and academic research papers related to the current topic of interest. The key terms 'breast cancer' and 'post traumatic growth' were used to generate results. From a vast abundance of literature available, 25-30 articles were thoroughly read, out of which a total of six were selected to be critically analysed. The inclusion criteria for study selection was set such that studies which quantitative, as well as a mix of qualitative and quantitative methods, were included. However, it was necessary for the studies to have original, primary data and for them to have been conducted within the past twenty years. Out of the research articles selected, the earliest publication was in 2002, whereas the latest was in 2022, while other articles were published in the duration between, which allows us to gather old as well as new information and comprehend how the area of research has developed over time. The inclusion criteria adopted included articles solely focused on breast cancer and those which clearly stated the keyword 'posttraumatic growth'. Studies which recruited breast cancer patients/survivors and others, but where data could be separately extracted from the former, also fell under the inclusion criteria. Consequently, one of the studies selected measures the posttraumatic growth associated with breast cancer in survivors as well as their husbands, albeit the latter data is not usefulto our study. As per Tedeschi and Calhoun's (1996) definition of posttraumatic growth, only those studiesconducted with individuals who had sufficient time following treatment for rumination and reflection to occur and for PTG to develop, that is, individuals who were at least 6 months post-diagnosis of cancer or 3 months post-completion of treatment, were included in the present critical analysis. After initially scanning the search results, it was found that most accessible academic research was conducted on population, which is why only those studies were included which were conducted in the Western context.

Now, the data gathered from the six academic articles selected on the basis of this criteria will be critically analysed to generate conclusive observations.

Firstly, it is important to note the aspects of posttraumatic growth which are most influenced by the experience of breast cancer. Bellizzi and Blank(2006) aimed to examine the role of contextual, disease-related and intraindividual variables in influencing the association between breast cancer and posttraumatic growth, and found that breast cancer survivors are more likely to observe positive changes beyond previous levels of functioning in their relationships, purpose in life, and appreciation for life. The findings of Lelorain et al. (2012) and Michalczyk et al. (2022) also suggest that growth post breast cancer mostly arises in the form of "better appreciation for one's life which is no longer taken for granted" and secondly, slightly lesser, in the form of relating with others. Bellizzi and Blank (2006) also found that perceived emotional intensity, that is, the impact of breast cancer on their life, significantly contributes to posttraumatic growth in relating with others. The authors suggested that this could be attributed to women's tendency to greatly attach importance to their relationships, which when threatened by illness, could lead to great attention on the same, reflection, and even adapting to the new situation.Posttraumatic growth was thus women found to be higher in women with invasive rather than localised cancer. This is in line with the

findings from Lelorain et al.'s (2012) study, which highlight an higher posttraumatic growth in individuals having had chemotherapy and currently reporting somewhat or very troublesome sequelae, which implies that negative aspects also lead to PTG. However, whileLelorain et al.'s (2010) findings support the association with chemotherapy, they also highlight that although 'somewhat troublesome sequalae' were positively correlated to posttraumatic growth, 'very troublesome sequelae' were rather inversely correlated. This suggests that some degree of stress and loss is necessary to promote positive changes, but only to a certain extent. Along the same lines, authors found a rather insignificant association between posttraumatic growth after breast cancer with happiness quality of life, which can be explained by the simple fact that although PTG arises from a traumatic event, it still exists in the same realm as traumatic memories and perceived stress, which reduce overall quality of life and happiness.

Next, we need to consider the psychological and social factors involved in the model of posttraumatic growth associated with breast cancer sinceLelorain et al. (2012) found that "women without psychological and social resources remain trapped in their cancer and cannot process their experience to derive benefits from it". One such psychological factor is coping, andDanhauer et al. (2013)found that the use of adaptive-coping strategies was associated with higher posttraumatic growth and every domain of PTG, showcasing that such strategies allow for recognition of positive changes by providing relief from distress and encouraging self-disclosure, support-seeking and rebuilding of one's goals and assumptions. This finding is consistent with the results of Bellizzi and Blank (2006), and Lelorain et al. (2010) as well. Similarly, both Lelorain et al. (2012) and Michalczyk (2022) highlight the importance of cognitive efforts and engagement in processing traumatic events and distancing themselves from the stressful aspects of disease and treatment. Lelorain et al.'s (2012) study also mentions how deliberate/active rumination plays a central role in giving rise to PTG rather than intrusive/passive rumination over making sense of the cancer. Moreover, the researchers sought to examine the influence of internal locus of control on PTG associated with breast cancer but found no association between the two.

Social resources are equally important as psychological resources for PTG.Bellizzi and Blank's (2006) study emphasizes the significance of being married or in a committed relationship and being employed for PTG associated with breast cancer. They suggest that the presence of a supportive partner and a social network at one's workplace an facilitate coping and provide emotional assistance. (Weiss, 2002)went on to further examine the quality of the marital support and found that it is positively correlated with posttraumatic growth, especially in the 'Relationship with Others' domain. The findings also indicated no correlation between marital commitment, depth of commitment and marital conflict, and posttraumatic growth of breast cancer survivors. Lelorain et al.'s (2012) studyhighlights the crucial role of other people around for reaping the benefits of PTG associated with breast cancer. This is because PTG models can lend an empathetic ear and help patients engage in emotional disclosure, which is an extremely important aspect in the process of developing positive growth. This is supported by the findings of Weiss's (20020 study, which emphasize the contribution of such PTG models in facilitating cognitive processing of the trauma and also highlight that surprisingly, these models mostly came into the patients' lives through external interventions like physicians or friends rather than through the means of their own initiative.

Lastly, the articles selected also sought to measure the influence of demographic information on PTG associated with breast cancer. Danhauer et al. (2013) discovered that posttraumatic growth increases over time, such that time since diagnosis was positively associated with greater posttraumatic growth. The researchers found that PTG "increased most in the first year following diagnosis corresponding to the time when one's assumptions about the world and oneself are likely to be most challenged". However, contrarily, Weiss (2002) suggests that survivors closer to diagnosis reported higher PTG than those more distant from their diagnosis. Moreover, the authors also found that there exists a negative correlation between education level of breast cancer survivors and the posttraumatic growth experienced by them, which can be explained by the negative correlation between education and spirituality and the positive correlation between spirituality and PTG. This is in line with the findings of Bellizzi and Blank (2006), who especially saw greater PTG in women without a college degree. Along with this, it was also discovered that younger breast cancer survivors reported more posttraumatic growth than older ones, which can be attributed to their lack of comorbidities or other stressors such as loss of loved ones.

## **Conclusion:-**

Our critical analysis led to the discovery of some overarching themes related to posttraumatic growth following breast cancer. First, it has been demonstrated that posttraumatic growth is likely to arise in the domains of better appreciation for one's life and relationship with others. The analysis has also concluded that perceived emotional

intensity, moderate sequelae, chemotherapy, adaptive coping and cognitive engagement, presence of a spouse and marital quality, workplace social support, contact with PTG models, less education, less age were all positively associated with PTG following breast cancer. On the other hand, the data suggested mixed conclusions for the association between time since diagnosis and PTG, which calls for further research.

Moreover, most of the studies selected used a quantitative methodology, which calls for further qualitative research in this field. Additionally, caution should be maintained towards the validity of the tools used for quantitative measurement and analysis in the studies selected, such as self-report measures, emotional intensity measure and interpretation of researchers due to their subjective nature. Another limitation is that all the studies undertaken for analysis were conducted on a Western population, thus not providing any insights into cultural differences in PTG associated with breast cancer. Moreover, majority of the participants belonged to a privileged socioeconomic strata and many of them were being provided with several resources from the cancer centres where they were being treated. Lastly, the cancer patients and survivors involved in these studies were all female, which calls for further study into other genders' experiences with breast cancer. Such factors limit the generalizability of our results. However, the conclusions generated by our critical analysis have great potential for clinical implications, such that the information found can be used to provide breast cancer patients with resources that are linked to higher posttraumatic growth and encouraging them to recognise the positive changes.

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