

Posttraumatic Growth and Personality Traits in Women with Breast Cancer



Shiksha Anand

Post Doctoral Fellow,
Department of Psychology,
Lucknow University,
Lucknow, India



Madhurima Pradhan

Professor,
Deptt. of Psychology,
Lucknow University,
Lucknow, India

Abstract

Breast cancer is a traumatic event and its diagnosis affects person's physical, psychological and social dimensions either positively or negatively. Posttraumatic Growth is a positive change in the identity, values, goals, and relations with others that enable an individual to function better than before the traumatic event (*Tedeschi et al, 1998*). Personality traits are posited to be important in shaping ones responses to traumatic events (*Morris et al, 2005*). This study explore the role of personality traits in posttraumatic growth and whether the personality traits predicting posttraumatic growth and its dimensions. Posttraumatic Growth Inventory (*Tedeschi and Calhoun, 1996*) was used for the assessment of posttraumatic growth. Big Five Inventory (*John and Srivastava, 1999*) was used which measures an individual on the big five factors of personality. The study included 100 breast cancer patients of post surgery aged 40 to 65 years. Results showed that personality traits of openness to experience, conscientiousness and agreeableness and Extroversion were found to be significantly positively related with posttraumatic growth and its dimensions while neuroticism was found to be negatively related with posttraumatic growth among breast cancer patients. Finding also showed that extroversion, and openness to experience are the significant predictors of Posttraumatic growth. Thus results shows that personality traits have been influencing the posttraumatic growth. It can be concluded that there is need of some intervention program which may enhance the posttraumatic growth among breast cancer patients.

Keywords: Personality Traits, Breast Cancer, Posttraumatic Growth.

Introduction

When the cells in the breast start to grow out of control, it causes breast cancer and these uncontrolled growths of cells usually form a tumor or a lump. Now a day, cancer of breast has surpassed cancer of cervical and becomes the most common cancer in India among women (*Kaarthigeyan, 2012*). One of the prominent reasons in this dreaded disease increment is changing lifestyle and food eating habits in urban and western cultures (*Velappan and Shumugam, 2017*). Due to the lack of awareness and proper facilities for early diagnosis, breast cancer is diagnosed in late and advanced stages among women from rural background (*Malvia, et al, 2017*). In India, many studies reveal that 45.7% cases are diagnosed at the advanced stage whereas in western countries breast cancer can be easily diagnosed in its early stages (*Kakarala et al, 2010; Leong et al, 2010*). Breast cancer occurs almost entirely in women, but men can get breast cancer (*American Cancer Society, 2019*), too.

It would be many people biggest fear that sitting in doctor's clinic and hearing the words of having cancer. However, accepting the news of cancer diagnosis not only helps in personal growth but also helpful in emergence of posttraumatic growth.

Review of Literature

The most common cancer in the world and among women is the cancer of breast. The breast cancer incidence is on rise among India (*Kaur, et al., 2011*). Among females of India Breast cancer has ranked number one cancer among all the cancers with age adjusted rate as high as 25.8 per 100,000 women and mortality rate as 12.7 per 100,000 women (*Malvia et al, 2017*). Along with this, one of the major risk factor for breast carcinoma among Indian women is young age. For India, the projection for the breast carcinoma during time periods 2020 reveals the figure to go as greater than 17,97,900 (*Malvia et al, 2017*).

The diagnosis of breast cancer is a biggest trauma in itself. The Breast carcinoma diagnosis is a traumatic event that effects the person

both physically and psychologically either positively or negatively (*Inan and Üstün, 2014*). In the previous literature, the studies often focused on the negative aspects of cancer diagnosis and a limited effort seems to explain the positive aspects of having breast cancer. A new area of research has aroused that promotes the possibility for a positive reaction to trauma, called Posttraumatic growth (*Tedeschi and Calhoun, 2004*). Despite of a traumatic event, the occurrence of positive changes and its determinants is essential in supporting and strengthening posttraumatic growth.

Posttraumatic growth expresses the positive changes that are experienced by the survivors of breast cancer. *Tedeschi & Calhoun (1996)* reported that those persons who were exposed to traumas like cancer diagnosis observed posttraumatic growth in their relationships, in perception towards themselves, in the outlook of their life, in their spiritual beliefs and in their appreciation of life. *Tedeschi and Calhoun (2004)* have defined PTG as "the experience of positive change that occurs as a result of the struggle with highly challenging life crises".

The most important factor that shapes the person's responses towards trauma is Personality. Some of the personality features may influence the PTG development. The Big Five traits are so universal that they show up when people are asked to describe themselves and that are associated with predictable patterns of behavior and social outcomes (*John and Srivastava, 1999*).

Some of the empirical studies revealed that the Big Five personality traits i.e., Openness to experience, Conscientiousness, Extraversion, Agreeableness were found to be positively related to PTG while Neuroticism has been negatively related with PTG (*Tedeschi and Calhoun, 2004; Linley and Joseph, 2004*). A study done by *Wilson and Boden (2008)* states that personality traits contribute to Posttraumatic growth. Another study conducted by *Bozo et al (2009)* on postoperative breast cancer women reveals the relationship between personality traits and PTG. *Onder (2012)* in his study found that there is a relationship between PTG and some basic personality traits (conscientiousness, agreeableness and openness to experience). Results of the study done by *Neacsu and Popescu (2013)* revealed significant positive relation between PTG and extraversion, openness to experience, conscientiousness and agreeableness and also found to be significantly negatively correlated with neuroticism. In another study conducted by *Lelorain et al., (2010)* revealed that Personality factors, such as openness and optimism, also positively related with PTG.

The above estimated studies reveal that personality traits have a significant association with PTG and also it influences the process of PTG.

Method

Research Questions

The study focuses on the fact that how posttraumatic growth and personality traits are related to each other among breast cancer patients. The present study addresses the following questions:

1. How the Posttraumatic growth and Personality traits are related to each other?
2. Whether Personality traits would predict Posttraumatic Growth?

Objectives of the Study

1. To find out the relationship between Posttraumatic Growth and Personality traits among breast cancer patients.
2. To explore Personality traits as predictor of PTG.

Hypothesis

1. There will be positive relationship between posttraumatic growth and personality traits like openness to experience, conscientiousness, extraversion, and agreeableness.
2. There will be negative relationship between posttraumatic growth and personality trait i.e., neuroticism.
3. Personality traits would predict the dimensions of posttraumatic growth with different weightage.

Variables

Criterion Variable

Posttraumatic Growth: Posttraumatic growth has been operationally defined as five dimensions namely relating to others, New Possibilities, Personal Strength, Spiritual Change, and Appreciation of Life. PTG is an indication that persons who experience it are living life in ways that, at least from their point of view, are fuller, richer and perhaps more meaningful.

Predictor Variable

Personality traits: Personality traits have been operationally defined in terms of big five factors:

1. Openness to experience: a tendency of the individual to be imaginative, sensitive, original in thinking, attentive to inner feelings, appreciative of art, intellectually curious, and sensitive to beauty.
2. Conscientiousness: tendency to act dutifully, show self-discipline, and aim for achievement against a measure or outside expectation.
3. Extraversion: indicated by positive emotions and tendency to seek company to others.
4. Agreeableness: tendency of being sympathetic to others and have a desire to help others and in return they expects others to be helpful.
5. Neuroticism: People who have the tendency to experience fear, nervousness, sadness, tension, anger, and guilt are at high end of neuroticism.

Nature of Study

The present study is co-relational in nature.

Sample

The study was conducted on 200 post-operative breast cancer patients undergoing the treatment of chemotherapy and radiotherapy. The sample was collected from King George Medical University (KGMU), Lucknow and Lucknow Cancer Institute (LCI). The respondents in the present research have the age range of 40-70 years.

Tools

Posttraumatic Growth Inventory

The Posttraumatic Growth Inventory was developed by *Tedeschi and Calhoun (1996)* for assessing positive outcomes reported by persons who have experienced traumatic events. This is a 21-item self-report inventory with 6-point likert scale.

Big Five Personality Inventory

The Big Five Inventory was developed by *John and Srivastava (1999)*. It is a 44-item inventory that measures an individual on the Big Five Factors of

personality (Goldberg, 1993) having 5-point likert scale.

Result and Discussion

Table 1: Showing The Correlation between PTG and Its Dimensions and Personality Traits.

	Openness to experience	Conscientiousness	Extraversion	Agreeableness	Neuroticism
New Possibilities	.905**	.919**	.920**	.863**	-.796**
Relating to Others	.891**	.915**	.916**	.868**	-.782**
Personal Strength	.911**	.925**	.921**	.871**	-.788**
Spiritual Change	.865**	.865**	.872**	.821**	-.774**
Appreciation of Life	.869**	.894**	.898**	.852**	-.757**
PTG (Total)	.920**	.938**	.939**	.887**	-.806**

The above table 1 shows the relationship between the Posttraumatic Growth and the Personality traits. The first dimension of PTG that is, New possibilities was found to be positively significantly related with all the five traits of personality i.e, openness to experience (r=.905**), conscientiousness(r=.919**), extraversion(r=.920**), agreeableness(r=.863**), while negatively related with neuroticism (r=-.796**). Similarly, the second dimension of PTG i.e Relating to others was tend to be positively related with the personality traits like openness (r=.891**), conscientiousness(r=.915**), extraversion(r=.916**), agreeableness(r=.868**), while negatively related with neuroticism (r= -.782**). Likewise, the third dimension of PTG (Personal strength) was also found to be significantly related with the four personality traits (Openness, r= .911; Conscientiousness, r= .925; Extraversion, r= .921; Agreeableness, r= .871) while tend to be negatively related with neuroticism (r= -.788). Moreover, Spiritual Change (4th dimension of PTG) was again found to be positively related with Openness (r= .865), Conscientiousness (r= .865), Extraversion (r= .872), and Agreeableness (r= .821) while negatively related with Neuroticism (r= -.774). Similarly, the last

dimension of PTG i.e, Appreciation of life has been found to be again positively related with openness (r=.869**), conscientiousness(r=.894**), extraversion(r=.898**), agreeableness(r=.852**), while negatively related with neuroticism (r= -.757**). Overall PTG was also found to be positively related with Openness, conscientiousness, extraversion, and agreeableness while negatively related with neuroticism. The results indicate that those women who are with open personality style influence to think in précis ways that may clarify the positive relationship between openness and PTG. Those women who were extrovert show more openness and clear approach with an affinity towards new experiences which may be reason why extraversion was found to be positively related with PTG. According to the *Eysenck's (1976)* Personality theory, the personality trait Neuroticism is interrelated with decreased tolerance for stress or negative stimuli. The women with this trait tend to have low amount of rumination and are unable to take decisions, which shows its negative relationship with PTG. A study done by *Lelorain et al, (2010)* also described that PTG has been found to be associated with the positive personality traits.

Table 2: Showing the Different Predictors of PTG

Model	Variables	R	R Square	Adjusted R Square	Beta (B)	F	Sig.
1	Openness to experience	.939	.882	.882	.490	10.170	.000
2	Extraversion	.949	.900	.899	.468	9.404	.000

The above table 2 shows the different predictors of PTG. The table indicates Openness to experience with 88% of the variance (R= .939; R²= .882; F= 10.170; P= .000) emerged out as the positively related significant predictor of PTG. When the Extraversion is entered in the regression equation, it came out as 90% of variance (R= .949; R²= .900; F= 9.404; P= .000). The remaining 10% variance in the criterion remained unexplained by the predictors not used in this study, which implies that some other variables may have some contribution in the prediction of PTG among breast cancer patients.

The relative weights with which each predictor variable predicts the criterion, independent of other factors is revealed by beta coefficients. The beta coefficients for openness to experience is the greatest, i.e., .490 which means that the openness to experience predict PTG to the greatest extent among

breast cancer patients followed by positive predictions of extraversion having the beta coefficient .46.

Conclusion: The women who are undergoing the breast cancer diagnosis and treatment, the Posttraumatic growth are a potential product for them. During this there may be multiple outcomes that women can experience like higher personal strength, increased spirituality and appreciation of life etc. However, not all the women would experience the same, so it is the responsibility of health care providers to be attuned to their patients while undergoing treatment and after treatment

Limitation and Suggestion

1. The present study was conducted on only breast cancer patients. The future researches could also be done on other cancer patients.
2. There may be some other variables which influences the posttraumatic growth, they can also be studied in further researches.

3. There is a need of further researches that contribute to the need to develop some intervention programs for them to enhance their posttraumatic growth.

References

- American Cancer Society. *Cancer Facts and Figures 2019*. Atlanta, Ga: American Cancer Society; 2019.
- Bozo O, Gundogdu E, Buyukasik-Colak C. The moderating role of different sources of perceived social support on the dispositional optimism—posttraumatic growth relationship in postoperative breast cancer patients. *Journal of Health Psychology*. 2009;14(7):1009–1020.
- Eysenck, H. J. (1976). *The measurement of personality*. Lancaster: MTP.
- Inan and Üstün (2014). Breast Cancer and Posttraumatic Growth. *Journal of Breast Health*. 2014; 10: 75-78
- John, O.P., and Srivastava, S. (1999). The Bid-Five trait taxonomy: History, measurement, and theoretical perspectives. In L.A. Pervin and O.P. John (Eds.), *Handbook of Personality: Theory and Research* (Vol.2, pp. 102-138). New York: Guilford Press.
- Karthigeyan K. Cervical cancer in India and HPV vaccination. *Indian Journal of Medical Paediatric Oncology*, 2012; 33: 7–12.
- Kakarala M, Rozek L, Cote M, Liyanage S, Brenner DE. Breast cancer histology and receptor status characterization in Asian Indian and Pakistani women in the U.S.: a SEER analysis. *BMC Cancer* 2010; 10: 191.
- Lelorain, S., Bonnaud-Antignac, A., and Florin, A. (2010). Longterm Posttraumatic growth after breast cancer: prevalence, predictors and relationships with psychological health. *Journal of Clinical Psychological Med Settings*; 17:14-22. (PMID: 20082122)
- Leong SP, Shen ZZ, Liu TJ et al. Is breast cancer the same disease in Asian and Western countries? *World J Surg* 2010; 34: 2308–24.
- Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, 17(1), 11–21.
- Malvia, S., Bagadi, S. A., Dubey, U. S. and Saxena, S. (2017), Epidemiology of breast cancer in Indian women. *Asia-Pacific Journal of Clinical Oncology*, 13: 289-295. doi:10.1111/ajco.12661
- Morris B. A., Shakespeare-Finch, J., Rieck, M. & Newbery, J. (2005). Multidimensional nature of posttraumatic growth in an Australian population. *Journal of Traumatic Stress*. 20, 18, 575–585.
- Navneet Kaur, Amit Attam, Sudipta Saha, S. K. Bhargava (2011). Breast Cancer Risk Factor Profile in Indian Women. *JIMSA Vol. 24 No. 4* pp. 163-165.
- Neacsu and Popescu (2013). A meta-analytical investigation of relationship between personality traits and post-traumatic growth. *European Journal of Psychology*. Retrieved from <https://www.academia.edu/4615518/> A meta-analytical investigation of the relationship between personality traits and posttraumatic growth.
- Onder (2012). The mediating role of coping strategies in the basic personality traits—PTG and locus of control—PTG relationships in breast cancer patients. Unpublished master thesis. The Graduate School of Social Sciences, Middle East Technical University.
- Shreshtha Malvia, Sarangadhara Appalaraju Bagadi, Uma S. Dubey and Sunita Saxena (2017) Epidemiology of breast cancer in Indian women. *Asia-Pacific Journal of Clinical Oncology* 2017; 13: 289–295 doi: 10.1111/ajco.12661
- Tedechi, R. G., Park, Cl. L., & Calhoun, L. G. (Eds.). (1998). *Post-traumatic growth: Positive changes in the aftermath of crisis*. Mahwah, NJ: Lawrence Erlbaum.
- Tedeschi, R.C. and Calhoun, L.G. (2004). The foundations of Posttraumatic growth: New considerations. *Psychological Inquiry*, 15, 1-18.4
- Tedeschi, R.G. and Calhoun, L.G. (1996). Posttraumatic Growth Inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, 9, 455-471.
- Velappan, A. and Shumugam, D (2017). Analysis of Demographic Characteristics and Treatment Outcome of Breast Cancer Patients in a Tertiary Cancer Centre. *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)* Volume 16, Issue 5 Ver. IX (May. 2017), PP 25-28. e-ISSN: 2279-0853, p-ISSN: 2279-0861.
- Wilson and Boden (2008). The Effects of Personality, Social Support and Religiosity on Posttraumatic Growth. *The Australasian Journal of Disaster and Trauma Studies*, 1. Retrieved from <https://www.researchgate.net/publication/286986318>. The effects of personality social support and religiosity on posttraumatic growth.