Pakistan Journal of Social and Clinical Psychology
2010, Vol. 8, No. 1, 3 - 17

POSTTRAUMATIC GROWTH AND MARITAL SATISFACTION AFTER BREAST CANCER: PATIENT AND SPOUSE PERSPECTIVE

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The present study examined posttraumatic growth (PTG) and marital satisfaction after the onset of breast cancer in patients and their spouses. It was hypothesized that patients and spouses differ in posttraumatic growth and marital satisfaction. The sample comprised 60 participants including equal number of patients and their spouses. Sample was recruited from a local hospital which offers specialization in Oncology. Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 2005) and the Dyadic Adjustment Scale (DAS) (Spanier, 1976) translated in Urdu were used for assessment. Analysis revealed that patients scored significantly higher on PTG compared to their spouses. Patients also showed significantly high marital satisfaction compared to their spouses. Positive relationship was found between posttraumatic growth and marital satisfaction. Findings of the present study highlight significance of post-cancer growth of the patient and spouse which is associated with marital satisfaction. Counseling services provided to patients and family can foster optimism, which in turn may facilitate effective coping with cancer.

Keywords: posttraumatic growth, marital satisfaction, breast cancer, spouse

Breast cancer is the most common cancer among women globally and is the second leading cause of death from cancer in women (WHO, 1998). Nearly 1 in 8 women develop breast cancer and among 97% of those who discover it, the disease has already advanced (Alters & Schiff, 2001; Donatelle, 2002). Between 1975–1990, Asia and Africa have experienced a more rapid rise in the annual incidence rates of breast cancer than North America and Europe (Sasco, 2001).

Women cancer patients are half of the total diagnosed with cancer, out of which 42.8% are diagnosed as cases of breast cancer (Parkin, Whelan, Ferlay, Ferlay, Raymond, & Young, 1997).

It is estimated that in Pakistan there are about 200,000 new cancer cases annually with the highest rate of breast cancer for any Asian population accounting to 40,000 deaths per year (Khan, 2000). Annually there are about 57 new cases of breast cancer among every 100,000 women, with 90,000 plus cases of breast cancer in Pakistan. The incidence of breast can-

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cer in Karachi (the biggest city), is reported to be 69 per 100,000. According to Karachi Cancer Registry, breast cancer is the most common cancer (34.6% of cancer cases) among females (Bhurgri, 2004). The age-standardized incidence rate (to the world population) was 69.1 per 100,000 averaged over the years 1998–2002, the highest recorded rate of breast cancer in Asia (Bhurgri, 2004). According to the Agha Khan University Cancer Surveillance for Pakistan (ACSP), the reported breast cancer was the most common among women (53.1%; Bhurgri et al., 2006). In Lahore, another major city of Pakistan, breast cancer was the most common female cancer (Aziz, Sana, Saeed, & Akram, 2003).

Receiving a diagnosis of breast cancer can be one of the most distressing events one ever experiences (Irvine, Brown, Crooks, Roberts, & Browne, 2006; Joly, Espié, Marty, Héron, & Henry-Amar, 2000; Maunsell, Brisson, Mondor, Verreault, & Deschênes, 2001). Patients deal with a number of negative experiences and these experiences may evoke negative psychological reactions among sufferers (Iqbal, Intekhab, & Saeed, 2002). Studies have reported that between 7% and 46% of women with early-stage breast cancer report clinically significant levels of depressive symptoms within the first 6 months of diagnosis, and between 32% and 45% of women report clinically significant anxiety (Brannon & Feist, 2000; Manne, Ostroff, Winkel, Goldstein, Fox, & Grana, 2004a).

Although researchers have extensively studied the negative effects of trauma, there has been much less attention paid to the possibility of positive impact of negative events. There is some clinical evidence suggesting that factors such as resilience, ability to fight, and positive thinking have positive impact upon the struggle to deal with traumatic and negative experiences, which may result in positive changes in views about oneself and one's relationships (Manne et al., 2004a; Manne, Sherman, Ross, Ostroff, Hayman, & Fox, 2004b). The term post-traumatic growth (PTG) was coined by Tedeschi and Calhoun (Tedeschi, Park, & Calhoun, 1998) and the concept has emerged in the field of positive psychology. It refers to as a "tendency of survivors of crises to report increased functioning and positive life changes arising from traumatic experiences" (Tedeschi & Calhoun, 2005). PTG is a surprising positive change in one's life after his/her encounter with the challenges, crises and adversities of life. It is a positive outcome of a trauma and is also considered as a high level of coping strategy for a better quality of life (Chesler, 2003). Post-traumatic growth has been reported in survivors of cancer, spousal bereavement, natural disaster and combat (Schaefer & Moos, as cited in Brule & Range, 2002). Patients with advanced cancer are reported to show improvement in interpersonal relationships and enhanced appreciation of life (Mystakidou, Parpa, Tsilika, Pathiaki, Galanos, & Vlahos, 2007; Schroevers & Teo, 2008).

Breast cancer is considered a family disease and its impact is not limited to the patient, rather couples have reported to face cancer and related distress reactions together (Baid-

er & De-Nour, 1984; Baider, Rizel, & De-Nour, 1986; Wimberly, Carver, Laurenceau, Harris, & Antoni, 2005). Diagnosis of cancer in one can impose numerous changes for both the individual diagnosed with cancer and his / her healthy spouse (Dorval, Maunsell, Brown, & Kelpatrick, 1999; Dorval, et al., 2005; Manne, 2005a, 2005b). A few studies have examined positive psychological changes in couples subsequent to the diagnosis of cancer (Manne et al., 2004a, 2004b). Weiss (2006) compared post-traumatic growth of breast cancer survivors and their spouses and found that both individuals experienced PTG but spouses evidenced lower levels of growth than did the survivors themselves. Posttraumatic growth has also been reported in parents subsequent to the onset of cancer in children (Barakat, Alderfer, & Kazak, 2005).

Being diagnosed with cancer can be extremely stressful and previous research has shown that the support provided by others help patients adjust to the cancer. Moreover, the support provided by the patient's intimate relation is considered the most significant (Coyne & DeLongis, 1986; Helgeson & Cohen, 1996; Sarason, Sarason, & Pierce, 1994). Studies have indicated a positive relationship between marital satisfaction and spousal support within both healthy couples (Abbey, Andrews, & Halman, 1995; Acitelli & Antonucci, 1994; Brunstein, Dangelmayer, & Schultheiss, 1996; Diener, 1984; Maunsell, Brisson, & Deschenes, 1995) and couples in distress (Abbey, Andrews, & Halman, 1995; Vinokur, Price, & Caplan, 1996; Walsh & Jackson, 1995). Findings have been substantiated by the studies carried out on patients with cancer (Hagedoorn, Kuijer, Wobbes, Bunnk, Dejong, & Sanderman, 2000; Helgeson & Cohen, 1996; Hodgson, Shields, & Rousseau, 2003; Lichtman, Taylor, & Wood, 1988).

Marital satisfaction refers to the subjective evaluation of one's experiences in marriage (Rosen-Garden, 2006) and it has been viewed to have protective influence on the couple coping with breast cancer (Costar, 2005; Hagedoorn et al., 2000; Hoskins, Baker, Sherman, & Bohlander, 1996). Marital satisfaction is instrumental in decreasing distress in breast cancer patients (Weihs, Enright, Howe, & Simmens, 1999) and has been reported to increase after the onset of breast cancer (Dorval, Maunsell, Brown, & Kelpatrick, 1999).

There are some researches carried out in Pakistan on medical aspects of cancer (e.g., Ahmed, Mahmud, Hatcher, & Khan, 2006; Khan, 2000) as well as the psychological impact of the disease and its treatment on the patients (Iqbal, Intekhab, & Saeed, 2002; Kausar & Akram, 1998; Kausar & Ilyas, 2000; Nausheen & Kamal, 2006; Rehman & Riaz, 2005; Rehman, Taj, Bashir, & Maqsood, 2004). Focus of the researchers in Pakistan so far has been confined to the patients and on negative psychological implications of cancer. With the emergence of positive psychology and health psychology, there has been a shift of attention towards exploration of positive aspects of adversities in one's life. Recently, Pakistani researchers have also begun to pay attention to exploration of positive aspects of traumatic events. In a recent study, Kausar and Rasool (2009) examined posttraumatic

growth and inclination of cancer patients towards religion and identified PTG among patients particularly in two dimensions of PTG, i.e., relating to others and appreciation of life. Moreover, the patients had shown greater inclination towards religion post-cancer onset.

In Pakistan, very little research attention has been paid to the implications of cancer for spouses (Iqbal, Qureshi, & Siddiqui, 2001) and research on couples i.e., patients and spouses is non-existent. Spouse is directly affected by the disease of his wife, thereby the way spouse deals and appraises his wife's disease may influence patient's outlook towards her condition. It has been reported that familial social support is important in reduction of depressive symptoms in female cancer patients in Pakistan (Nausheen & Kamal, 2006). The current study, therefore, aimed to examine posttraumatic growth and marital satisfaction in patients and their spouses subsequent to the diagnosis of breast cancer in patients. The present study also aimed to explore relationship between posttraumatic growth and marital satisfaction. It was postulated that:

a. Patients and spouses differ in posttraumatic growth and marital satisfaction.
b. There is a positive relationship between posttraumatic growth and marital satisfaction.

Method

Sample

The current study employed between group design and was a cross sectional research. Two groups of participants with equal number of breast cancer patients and their spouses were assessed for posttraumatic growth and marital satisfaction.

Thirty women diagnosed with breast cancer and their spouses constituted the sample. Cancer patients included were those aware of their diagnosis; had not undergone mastectomy; were hospitalized and were receiving curative chemotherapy, radiation or both. Those couples included were who could understand Urdu language (Pakistani national language) so that they could comprehend and respond to the questionnaires. Patients and spouses with any previous psychiatric history were excluded from the study. Patients were recruited from Nuclear Medicine, Oncology and Radiation Institute (NORI), Islamabad, Pakistan. Permission for data collection was sought from the hospital's medical superintendent after having explained nature of the study. Patients were approached through oncologists and spouses were approached through the patients. Spouses were either spending most of their time with the patients or were frequent visitors. Nature of the research was explained and written consent from patients and their spouses was taken. All patients were from middle or lower socio-economic class. Majority of the patients and their spouses were educated up to Matric (10^{th} grade). The patients and spouses ranged in ages from 30-65 and 35-65 years, respectively.

Instruments

1. Post-traumatic Growth Inventory (PTGI)

Post traumatic growth inventory was

Table 1
Demographic Characteristics of the Sample (N = 60)

Variables		Statistics	
		Patients (*n* = 30)	Spouses (*n* = 30)
Age in years			
	M	42.70	49.90
	SD	7.57	8.38
	Range	30-65	35-65
Education			
	Up to Primary	12 (40.0%)	7 (23.3%)
	Up to Matric	10 (33.3%)	12 (40.0%)
	Up to Bachelor	7 (23.3%)	8 (26.7%)
	Masters	1 (3.3%)	3 (10.0%)
Duration of marriage (in years)			
	M	19.33	
	SD	7.67	
	Range	4 - 31	
Number of children			
	0 - 3	15 (50.0%)	
	4 - 7	15 (50.0%)	
	Range	0 - 7 children	

used to assess the positive growth of cancer patients. PTGI (Tedeschi & Calhoun, 2005) is a 21-items inventory that measures the positive changes that an individual experiences after a traumatic event. The inventory comprises of 5 factors assessing major domains of post-traumatic growth, i.e., relating to others better (7 items, α = .82), recognizing new possibilities (5 items, α = .88), a sense of personal strength (4 items, α = .83), spiritual change (2 items, α = .65) and greater appreciation of life (3 items, α = .74). Items are rated on a 6-point Likert scale (0 = "I did not experience this change as a result of my/my partner's cancer," to 5 = "I experienced this change to a very great degree as a result of my/my partner's cancer"). The respondents' ratings indicate the extent of change a particular event has brought to their life (Calhoun, as cited in Chris, Irene, & Ch'ng, 2007). PTGI was translated into Urdu after seeking formal permission from the authors. The inventory was translated by a team of psychologists who were required to translate items in such a manner that Urdu translation conveys same conceptual meanings as does the corresponding English item and the terminology is in common usage rather than having literal translation. Translated items were finalized on the basis of majority translators' consensus. Discrepancy on items was

resolved through discussion between translators. Reliability analysis (internal consistency) for Urdu version was carried out in the present study which showed reasonably high reliability for PTGI subscales i.e., α value ranging from .65 – .88.

2. Dyadic Adjustment Scale (DAS)

Marital satisfaction was assessed using the Dyadic Adjustment Scale (Spanier, 1976). The DAS is a 32-items scale comprising of four subscales, i.e., consensus (13 items, α = .89), satisfaction (10 items, α = .68), cohesion (5 items, α = .73), and affectional expression (4 items, α = .69). Responses are recorded along a series of 5 and 6 point Likert scales, two yes/no questions, and one final question, in which persons were asked to endorse among six provided statements that best reflects their expectation of relationship continuity. Scale scores over 99 suggest stability in marriage and overall satisfaction. However, elevated totals (i.e., DAS > 120), may indicate inordinate self-sacrifice or idealization of the relationship and higher total score represents higher marital quality. Formal permission from the author was taken to translate scale into Urdu language and to use in the present study. Same method of translation for both assessment measures, i.e., PTGI and DAS was adopted. Internal consistency of DAS for the present study was reasonably high (ranging from .69 – .89).

3. Demographic and Disease Relation Information Questionnaires

Two separate sets of demographic and disease related questionnaires were prepared for patients and spouses. To avoid undue distress to the patients, disease related information such as duration of diagnosis, type and duration of treatment, stage of cancer, and any other physical illness in the patient was sought from the spouse.

Procedure

Patients and their spouses were approached at the hospital after having attained permission for data collection. Patient and spouse were separately assessed on the same day. Interview schedule was used as a method of data collection. It took about forty five minutes to complete assessment on each participant and it took four months to complete data collection.

Results

Data were analyzed using descriptive and inferential statistics. Data indicated that majority of the patients had received diagnosis of cancer 7-8 months ago and had started treatment straightaway. In majority of the cases, disease had progressed to second and third stage as indicated in Table 2.

Since there was varied number of items in different subscales, both in PTGI and DAS, therefore, in order to make scores on different subscales comparable, scaled scores were computed by using the scaled score formula: scaled score = ((X/I) / Option)×10, where X = Total score on a particular category, I = No. of items in specific category Option = No. of response options for each specific category (McKinlay, Brooks, Bond, Martinage, & Marshall, 1981). For

the subsequent analyses scaled scores were used.

Independent sample *t*-test was used to compare patients and spouses on post-traumatic growth and marital satisfaction. It was revealed that patients reported significantly more post-traumatic growth as compared to their

Table 2
Disease Related Information (*n* = 30)

Variables		Statistics
Duration of Diagnosis (in months)		
	M	7.73
	SD	3.01
	Range	1 – 12
Duration of Treatment (in months)		
	M	7.07
	SD	3.00
	Range	1 – 12
Stage of Cancer		*f* (%)
	Stage 1	5 (16.6)
	Stage 2	11 (36.7)
	Stage 3	9 (30.0)
	Stage 4	2 (6.7)
	Not known	3 (10.0)
Type of Surgery		
	Lumpectomy	10 (33.3)
	None	20 (66.7)
Type of Treatment		
	Radiation	11 (36.7)
	Chemotherapy	12 (40.0)
	Radiation & Chemotherapy	7 (23.3)

Table 3
Independent Sample t-test Comparing Patients and Spouses on Posttraumatic Growth

PTG subscales	Patients (*n* = 30)		Spouse (*n* = 30)			
	M	*SD*	*M*	*SD*	*t*	*p*
New possibilities	5.10	1.44	4.40	1.52	1.82	0.07
Relating to others	6.57	1.13	5.93	0.78	2.51	0.01
Personal strength	6.40	1.52	5.90	1.34	1.34	0.18
Spiritual change	7.07	1.33	6.47	1.35	1.72	0.09
Appreciation for life	7.03	1.03	5.90	1.32	3.69	0.001
Total PTG	32.17	3.89	28.60	3.45	3.75	0.001

df = 58.

spouses. Patients scored significantly more than their spouses on two areas of growth, i.e., "relating to others" and "appreciation for life" (Table 3).

Analysis pertaining to comparison of patients and spouses on marital satisfaction indicated significant differences in the level of marital satisfaction reported by them. It was found that patients scored significantly higher than their spouses on two aspects of marital satisfaction, i. e., "affectional expression and "consensus" compared to their husbands (Table 4).

In order to examine relationship between posttraumatic growth and marital satisfaction, patient and spouse data were collated and Pearson correlation analysis was carried out. Analysis revealed significant positive relationship between overall posttraumatic growth and marital satisfaction and also among specific domains of post-traumatic growth and marital satisfaction (Table 5).

Table 4
Independent Sample t-test Comparing Patients and Spouses on Marital Satisfaction (MS)

Marital satisfaction subscales	Patients (n= 30)		Spouses (n=30)			
	M	*SD*	*M*	*SD*	*t*	*p*
Consensus	52.8	7.08	48.27	5.90	2.69	0.001
Satisfaction	32.5	3.63	32.73	3.26	.261	0.79
Cohesion	15.6	4.23	14.97	3.90	.60	0.55
Affectional expression	9.3	1.89	8.13	1.961	2.34	0.02
Total MS	110.2	12.94	104.10	10.04	2.03	0.04

df = 58.

Table 5
Correlation between Posttraumatic Growth (PTG) and Marital Satisfaction (MS) (Patient and Spouse Sample Collated, N = 60)

Variables	*Total MS*	*Consensus*	*Satisfaction*	*Cohesion*	*Affectional expression*
Total PTG	0.35**	0.39**	0.17	0.01	0.41**
New possibilities	0.19	0.19	0.12	0.14	0.22*
Relating to others	0.23*	0.26*	0.30*	0.09	0.18
Personal strength	0.34**	0.29*	0.10	0.28*	0.30**
Spiritual change	0.28*	0.30**	0.16	0.04	0.27**
Appreciation for life	0.01	0.24*	0.11	0.36**	0.25*

* $p < .05$. ** $p < .01$.

Discussion

The present study assessed post-traumatic growth and marital satisfaction in patients and spouses with post breast cancer diagnosis. Analyses revealed that posttraumatic growth and marital satisfaction occurred both in patients and their spouses. These findings are consistent with earlier research (Baider & De-Nour, 1984; Baider, Rizel, & De-Nour, 1986; Dorval, Maunsell, Brown, & Kelpatrick, 1999, Dorval et al., 2005; Manne et al., 2004a, 2004b; Northouse 1988; 1989; Northouse & Swain, 1987) which has provided empirical evidence suggesting that post-traumatic growth occurs in people during period of crisis and that positive changes take place during and immediately after a traumatic experience. Tedeschi and Calhoun (2005) argue that people who witness a traumatic event do not necessarily get negatively affected and that they may also undergo positive changes.

Findings of the current study revealed significant differences in the level of post-traumatic growth in patients and spouses. Patients exhibited higher level of post-traumatic growth as compared to their spouses. Our findings are in line with existing literature, which has shown higher growth in patients compared to their spouses. Weiss (2006) compared breast cancer survivors' and husbands' post-traumatic growth and found that husbands evidenced lower levels of growth than cancer survivors. Analysis of our data indicated that patients with breast cancer reported more positive changes in their lives as compared to their spouses.

Researches have shown that spouses are affected and do experience more psychological distress compared to the patients (Baider, et al., 1986; Baider et al., 2004). In the current study, patients showed growth in different aspects of post-traumatic growth, i.e., relating to others, spiritual change and appreciation for life. For a cancer patient, value of life, social support of significant others and focusing on spirituality is understandable and their growth in these areas could be instrumental in their adaptive coping with disease. Northouse and colleagues in a series of studies (Northouse, 1988, 1989; Northouse & Swain, 1987) have provided empirical support to our findings as patients in their studies were also appreciative of life after the diagnosis of cancer.

Another major finding was pertaining to marital satisfaction post breast cancer diagnosis. It was found that patients showed more marital satisfaction compared to their spouses. Findings are supplemented by earlier research (Baider, Cooper, & De-Nour, 2000; Baider, Ever-Hadani, Goldweiz, Wygoda, & Peretz, 2003) which also reported stability in marital relationships after diagnosis of breast cancer. Dorval and colleagues argue that breast cancer can be a growth experience for couples under certain conditions (Dorval, Maunsell, Brown, & Kelpatrick, 1999). Similarly, Thornton (2002) illustrated that some couples facing cancer perceive that their marital relationship improved post-cancer and the couples had become even closer. In the present study, compared to spouses, patients showed higher marital satisfaction in terms of consensus and affectional expression.

Ability to express at the time of crisis has been considered important factor (Barbato, Graham, & Perse, 2003) which may either enhance or reduce spouses' satisfaction in their relationship.

The present study demonstrated positive relationship between post-traumatic growth and marital satisfaction. Earlier studies on breast cancer patients extend support to our findings which have documented that marital satisfaction helps reduce distress in patients (e.g., Weihs, Enright, Howe, & Simmens, 1999). However, Manne and colleagues (Manne et al., 2004b) found no change in marital satisfaction subsequent to cancer diagnosis.

The current study was a pioneering effort to examine positive implications of cancer for the patients and their spouses in Pakistan. Despite being a small scaled study with stringent inclusion criteria, findings have important implications for cancer management. In Pakistani society, family is considered as the sole support provider at the moments of crisis. Therefore, our findings highlight importance of spousal support for female breast cancer patients' effective coping. Contrary to the general notion in Pakistan, the current study provides empirical evidence suggesting that cancers do not necessarily have negative implications for the survivors and their spouses. It is therefore important to focus on positive implications of cancer which might affect patients' compliance with treatment as well as the process of recovery. In this regard, provision of counseling services for cancer patients and families in hospitals are required, which at present are non existent in Pakistan. Moreover, it is important that psychological services providers build upon the strengths of the patients and their relatives in order to enable them to come to terms with stress associated with the disease in an effective manner.

Limitations and Suggestions

Despite significance of the present study for focusing on positive aspects of cancer, one needs to exercise caution in interpreting the findings due to some limitations. The present study was conducted in a short span of time, thereby had smaller sample size. Future research should include bigger sample size in order to help generalizations of the findings. The present study was cross-sectional in nature and included breast cancer patients without mastectomy, which limits generalizations of the findings only to patients without mastectomy. The future research should include patients with mastectomy in order to examine differential impact of cancer for both types of patients. Assessment of the patients and their spouses was based on self-report quantitative measures. It is advisable that the findings of the present study be extended using qualitative methods to gauge subjective emotional and cognitive processes underlying post-traumatic growth of the patients and their spouses. It is also suggested that future research expand itself by including other family members and also looking at relationship of post-traumatic growth with the way patients and their relatives cope with cancer.

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Received February 2009
Revision received December 2009