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Coping Strategies and Posttraumatic Growth in Mastectomy Patients

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Abstract:
Coping and posttraumatic growth are crucial factors associated with life stressors like undergoing treatment like mastectomy. The objective of the study is to determine if there are significant differences in coping strategies and post traumatic growth between middle aged women (45-55 years) and older women (56-66 years) who have undergone mastectomy. The study also aims to observe a relationship between Coping Strategies and Posttraumatic Growth in middle-aged women (45-55 years) and older women (56-65 years). A purposive sampling method was used to draw the sample of 50 women who have undergone mastectomy between the age group of 45-65 years from the cosmopolitan city of Hyderabad. Brief COPE Inventory was used to find out the coping strategies employed. Posttraumatic Growth Inventory was used to determine whether posttraumatic growth occurred. Results showed significant differences between coping strategies of denial, behavioral disengagement, self distraction and substance abuse between the two groups. Wherein, middle-aged women were higher in these four coping strategies when compared to older women. Results also showed higher level of Posttraumatic Growth in Older Women. It was found that Coping Strategies are partially correlated to Posttraumatic Growth.

Keywords: *Coping Strategies, posttraumatic growth, mastectomy*

1. Introduction

Stress has an influence on our living, may it be stress related to daily hassles or related to life events. Stress has both physiological and psychological risk factors and at the same time related effects. Stress is defined as the body's non-specific reaction to disturbing events in the environment (Selye, Harper & Row, 1974; Rosenhan & Seligman, 1989). Stressor is nothing but the events that trigger stress. Given the dynamic nature of stress and stressor, coping is a complicated mental process by which a person deals with stress, solves problems, and produces decisions (Šprah & Šoštarič, 2004). Coping Strategies refer to the precise efforts, behavioral and psychological, that people use to master, endure, decrease, or minimize stressful events (Folkman & Lazarus, 1980). According to Folkman & Lazarus (1980), Coping Strategies can be divided into two broad types; problem-focused and emotion-focused coping. Problem-focused coping aims at problem solving or doing something to change the source of stress. Emotion-focused coping aims at decreasing the emotional distress that is accompanying the situation.

Coping strategies and the patient's pre-morbid personality can influence the patient psychologically that can present itself as a stressful life event (Mahapatro & Shubbangi 2005). Coping is seen as an imperative determinant to cancer which can be related to both psychological morbidity and survival time (Ornish, Weidner, Fair, Marlin, Pettengaill, Raisin & Carver, 1985). Coping Strategies can be demonstrated as positive life reframing (Thomas & Marks 1995). Diagnosis of cancer itself is a stressor, in addition to that the related treatments like Mastectomy can affect the physical, psychological and social aspects of the person. Succeeding a mastectomy, the patient is probably inclined to suffer from pain, fatigue, body-image alteration, stress or depression, and decrease in self-esteem (Harmer, 2000).

Mastectomy the removal of the entire or a part of the breast tissue from a breast, surgically, as a way to treat or prevent breast cancer. Mastectomy has five different types (Breastcancer.org). They are "Simple" or "Total" Mastectomy, Modified Radical Mastectomy, Radical Mastectomy, Partial Mastectomy, and Subcutaneous Mastectomy (Breastcancer.org). A Mastectomy is a harsh approach to an aggressive breast cancer disease which can significantly hamper an overall image and self-esteem of a woman because the breast is an imperative organ in a woman's body (Mahapatro & Shubbangi 2005; Jamison, Wellisch & Pasnau 1978). Research analyses indicated that coping strategies were the variables strongly associated with post mastectomy distress (Meyerowitz1983).

About one in fifteen women develop breast cancer (Tarrier, Living with Breast Cancer and Mastectomy). Breast cancer and Mastectomy produce two sources of psychological stress, one to do with the individual existence and survival, and the other to do with

the femininity and self-image (Tarrier, Living with Breast Cancer and Mastectomy). The most common reaction to Mastectomy is anxiety and depression (Tarrier, Living with Breast Cancer and Mastectomy). The most common reason for Mastectomy is breast cancer (A.D.A.M Encyclopedia)Women who have a very high risk of developing breast cancer may choose to have a preventive (or prophylactic) mastectomy to reduce the risk of breast cancer (A.D.A.M Encyclopedia)

Diagnosis and treating cancer calls for major adjustment in physical, emotional, behavioral, financial and occupational realms as well. Such changes can be a source of serious distress for the individuals and their support system and requires adaptive coping.

Alterations in occupational status are another repercussion which may occur, such a change has the potential to affect the relationship between patient and others and also the society (Kraus, 1999). Research suggests that patients undergone Mastectomy undergo the feeling of not having body balance which is the main factor in physical attractiveness, and which leads to absence of mental peace (Crouch & McKenzie 2000). These factors result in reduction of quality of life to a great extent (Crouch& McKenzie, 2000). It had come to light that the participants, in order to cope with the disease, used "fighting", "struggling" and "tolerating" strategies (Fouladi, Pourfarzi, Mohammadi, Masumi, Agamohammadi, & Mazaheri, 2013). Similarly, another research examined coping processes in women with breast cancer, and the following categories were determined: threat for life, religious aspects, support systems, interest in recovery, hindering factors against recapturing health, tolerance growth, getting along with the illness using facilitating and inhibiting factors that influence tolerance (Taleghani,Yekta, Nasrabadi & Käppeli, 2008).

All the above-mentioned studies and other similar evidence have put their focus on the process of coping with disease and mostly have sparsely studied the process of coping with treatments like Mastectomy. Coping with Mastectomy and consent for it has been of main concern in breast cancer and might involve a lot of challenges (Taleghani, Yekta, Nasrabadi & Käppeli, 2008). Most of the studies on traumatic events and coping with them lay emphasis only on the painful emotional, psychological and physical symptoms these events produce (Bromet& Dew, 1995). Nevertheless, in the aftermath of a traumatic event, people show great resilience and eventually experience personal growth (Schaefer &Moos, 1998). Findings suggest that benefit finding, positive reappraisal coping, and posttraumatic growth are related constructs that surface in the aftermath of distress events (Sears, Stanton & Danoff-Burg, 2003).

Coping strategies play a crucial role in posttraumatic growth. Adaptive coping styles are positively correlated to posttraumatic growth (park &lechner, 2006). Mastectomy can be looked upon at as a psychosocial transition with the ability for positive and negative outcomes. Recent literature has recognized posttraumatic growth in many dissimilar areas of trauma and stress, including dieses (park & helgeson, 2006). Posttraumatic growth is an exact opposite of posttraumatic stress disorder where individuals discover no benefit from their trauma only pain and anxiety (hadit, 2006). The term posttraumatic growth suggests positive psychological change experienced as an outcome of the struggle with challenging life circumstances (calhoun &tedeschi, 1999, 2001).

Posttraumatic growth has been variously indicated as "positive psychological change" (yalom & leiberman, 1991), "perceived benefits" or "constructing benefits" (calhoun & tedeschi, 1991; tennen, affleck, urrows, higgins & mendola, 1992; mcmillen, zuvarian & rediout, 1995; park, cohen & murch, 1996) and "thriving" (o'leary & ickovics, 1995). Posttraumatic growth has been studied on a diverse set of traumatic incidents from divorce and death to natural disasters and terrorist attacks (haidt, 2006). The works on posttraumatic growth shows that, the benefits reported fall into three categories. These are (1) feeling resilient and finding hidden capabilities and strengths; this alters the person's concept of himself and gives them assurance to face new challenges; (2) good relationships are reinforced and (3) priorities and attitudes concerning the present day and other people are transformed (haidt, 2006; joseph & linley, 2005). Some of the findings in the posttraumatic growth literature found a positive between posttraumatic growth and psychological growth (park & helgeson, 2006).

A cross-sectional research that made a comparison between breast cancer survivors' self-reports of depression, well-being, and posttraumatic growth with those of age and education matched healthy comparison women and determined correlates of posttraumatic growth among breast cancer survivors. The breast cancer group showed greater posttraumatic growth, relating to others, appreciation of life. (cordova, cunningham, lauren, carlson, charles, andrykowski & michael, 2001).

Rationale - studies have been conducted on negative and sexual aspect of mastectomy and positive aspects like coping strategies and posttraumatic growth have been studied sparsely.

1.1. Objectives

i. To determine if there is significant difference in Middle-aged Women and Older Women who have undergone Mastectomy with respect to the coping strategies.
ii. To determine if there is a significant difference between Middle-aged Women and Older Women who have undergone Mastectomy with respect to Posttraumatic Growth (viz. new possibilities, personal strength, spiritual change, appreciation of life, relating to others).
iii. To determine the correlation between Coping Strategies and Posttraumatic Growth in Middle-aged Women and Older Women who have undergone Mastectomy.

2. Methodology

2.1. Research design

Quantitative approach with a between group design was used in the present study.

2.2. Participants

This study collected data from 50 participants divided into 2 groups [25 middle aged women (age between 45-55 years) and 25 older women (age between 56-65 years)]. Participants were selected from the cosmopolitan city of Hyderabad. Women between the ages group of 45 to 65 years were included and 4th stage Cancer patients were excluded.

2.3. Instruments

Brief COPE Inventory

"Cognitive and behavioral efforts to master, reduce, or tolerate the internal and/or external demands that are created by the stressful transaction". The Brief COPE (Carver, 1997)is the abridged version of the COPE inventory and presents fourteen scales all assessing different coping dimensions: 1) active coping, 2) planning, 3) instrumental support, 4) emotional support, 5) venting, 6) behavioral disengagement, 7) self-distraction, 8) self-blame, 9) positive reframing, 10) humor, 11) denial, 12) acceptance, 13) religion, and 14) substance use. Each scale contains two items. It is a 28-item Likert scale with 1-4 rating. Its reliability is $\propto = .79$.

Posttraumatic Growth Inventory (PTGI)

Posttraumatic Growth Inventory (Tedeschi and Calhoun, 1996) is an instrument for assessing positive outcomes reported by persons who have experienced traumatic events (Tedeschi and Calhoun, 1996).

It is a 21-item scale, which includes five factors. A 6-point Likert format was used. Adding up the scores will give an overall score and then five subscale scores indicating the five factors which represent your level of PTGI. The five factors include Relating to Others (greater intimacy and compassion for others), New Possibilities (new roles and new people), Personal Strength (feeling personally stronger), Spiritual Change (being more connected spiritually), and a deeper Appreciation of Life (Tedeschi & Calhoun, 2004). The internal consistency of PTGI is $\alpha = 0.90$. The factors that emerged also showed substantial internal consistency: New Possibilities ($\alpha = .84$) relating to others ($\alpha = .85$) Personal Strength ($\alpha = .72$) Spiritual Change ($\alpha = .85$) Appreciation of life ($\alpha = .67$) (Tedeschi and Calhoun, 1996)

2.4. Procedure

Permission from various cancer hospitals in Hyderabad was obtained for the collection of data. At the beginning of the data collection, the participants were informed that their participation was voluntary and anonymous, and they were told that they could stop at any time. Each participant was seated comfortably and informed consent was taken. They were then asked to fill their demographic details and answer the questions. After the data was collected, the participants were thanked for their participation and were debriefed. Mean, Standard Deviation, Correlation and t-test were the statistics used to draw inferences from this data.

3. Results

In table 1, the mean and SD of behavioral disengagement of middle aged (M=1.56, SD-1.21) and old aged women (M=1.08 SD=1.27). The results also state that there was significant difference between middle aged and old aged women with reference to their behavioral disengagement $t(48)= 1.66$, $p<0.05$.

Mean and standard deviation of denial were found to be (M=1.73, SD=1.20) in middle-aged women and (M=1.18, SD=1.15) in older women. An independent t-test was performed and a significant difference was found $t(48) = 1.66$, $p<0.05$. Middle-aged Women adopt Denial as their Coping Strategy more than Older Women.

Mean and standard deviation of self-distraction were found to be (M=3.06, SD=0.89) in Middle-aged Women and (M=2.62, SD=0.84) in Older Women. An independent t-test was performed and a significant difference was found $t(48)= 2$, $p<0.05$. Middle-aged Women adopt self-distraction as their Coping Strategy more than Older Women.

The mean and standard deviation of substance use were found to be (M=0.80, SD=1.30) in middle-aged women and (M=0.14, SD=0.48) in older women. An independent t-test was performed and the results showed a significant difference $t(48) = 2.53$, $p<0.01$. Middle-aged Women adopt substance use as their Coping Strategy more than Older Women.

In table 2 mean and standard deviation of spiritual change (dimension of post traumatic growth) were found to be (M=3.42, SD=1.42) in Middle-aged Women and (M=4.09, SD=0.96) in Older Women. An independent t-test was performed and a significant difference was found $t(48)=2.03$, $p<0.05$. Older Women showed higher levels of spiritual change in Posttraumatic Growth

In table 3 Pearson's Product Moment Correlation Coefficient was performed between Coping Strategies and Posttraumatic Growth. Results reported significant positive correlation between new possibilities and instrumental coping, $r(48)= 0.29$ $p<0.05$; new possibilities and planning, $r(48)= 0.50$, $p<0.01$; spiritual change and planning, $r(48)= 0.27$, $p<0.05$; spiritual change and religion, $r(48)= 0.53$, $p<0.01$; appreciation of life and active coping, $r(48)= 0.43$, $p<0.01$; appreciation of life and acceptance, $r(48)= 0.28$, $p<0.05$; appreciation of life and emotional support, $r(48)= 0.28$, $p<0.05$; relating to others and instrumental support, $r(48)= 0.52$, $p<0.01$; relating to others and planning, $r(48)= 0.39$, $p<0.01$; relating to others and emotional support, $r(48)= 0.51$, $p<0.01$; relating to others and positive reframing, $r(48)= 0.37$, $p<0.01$. Results also reported negative correlation between personal strength and behavioral disengagement, $r(48)= -0.35$, $p<0.05$; personal strength and venting, $r(48)= -0.29$, $p<0.05$; spiritual change and substance use, $r(48)= -0.36$, $p<0.01$.

Scales	Middle Aged Women		Older Women		t(48)
Coping Strategies	Mean	Standard Deviation	Mean	SD	
Adaptive Coping Active Coping	2.66	0.60	2.61	0.56	1.07
Instrumental Coping	2.56	0.82	2.40	0.85	0.72
Planning	2.54	0.70	2.36	1.11	0.75
Acceptance	2.76	0.72	2.94	0.65	1.05
Emotional Support	2.88	0.71	2.78	0.97	0.45
Humor	0.50	0.97	0.32	0.78	0.14
Positive Reframing	2.10	0.80	2	0.92	0.45
Religion Maladaptive Coping	2.68	1.26	3.08	1.02	1.29
Behavioral Disengagement	1.56	1.21	1.08	1.27	**1.41***
Denial	1.73	1.20	1.18	1.15	**1.66***
Self-distraction	3.06	0.89	2.62	0.84	2
Self-blame	0.92	1.19	0.72	1.16	0.6
Substance use	0.80	1.30	0.14	0.48	**2.53****
Venting	2.30	1.08	2.39	0.81	0.34

Table 1: Showing Mean, Standard deviation and t-ratio of Coping Strategies (adaptive and maladaptive) in middle aged women and older women
*Note: ** p<0.01, * p<0.05, unstarred-not significant*

Scales	Middle Aged Women		Older women		T-Ratio
	Mean	Standard deviation	Mean	Standard deviation	
New Possibilities	3.25	0.80	3.36	0.67	0.55
Personal Strength	3.37	0.84	3.16	0.88	0.95
Spiritual Change	3.42	1.42	4.09	0.96	**2.03***
Appreciation of Life	2.93	0.92	3.22	0.94	1.20
Relating to others	3.05	1.03	3.44	0.86	1.50
Total posttraumatic growth	3.18	0.70	3.38	0.57	1.17

Table 2: Showing Mean, Standard Deviation and T-ratio of Posttraumatic Growth in Middle-aged Women and Older Women.
*Note: ** p<0.01, * p<0.05, unstarred-not significant*

	active coping	instrumental coping	planning	acceptance	emotional support	humor	positive reframing	religion	behavioral disengagement	denial	self distraction	self blame	substance abuse	venting
new possibilities	0.04	**0.29***	**0.50****	0.20	0.12	-0.11	0.27	0.02	0.20	0.14	-0.02	-0.22	0.11	-0.17
personal strength	0.12	-0.15	0,05	0.13	0.13	-0.25	0.05	0.03	**-0.35***	-0.09	0.07	-0.12	0.17	**-0.29***
spiritual change	0.14	0.08	**0.27***	0.16	0.16	-0.001	0.12	**0.53****	-0.18	-0.07	0.08	0.27	**-0.36****	-0.18
appreciation of life	**0.43****	0.16	0.19	**0.28***	**0.28***	-0.04	0.16	0.02	0.04	0.07	0.17	0.16	0.05	-0.01
relating to others	0.1	**0.52****	**0.39****	0.24	**0.51****	-0.15	**0.37****	0.22	0.19	-0.03	0.01	-0.18	-0.10	-0.19

Table 3: Showing the correlation between Coping Strategies and Posttraumatic Growth
*Note: ** p<0.01, * p<0.05, unstarred-not significant*

4. Discussion

The purpose of this study was to find out significant difference in Coping Strategies and levels of Posttraumatic Growth between Middle-aged Women and Older Women who have undergone Mastectomy. The purpose of this study is also to find out whether coping strategies are correlated to posttraumatic growth. Active coping, acceptance, emotional support, religion and self-distraction

were the most highly used Coping Strategies. Self-blame, humor and substance use were the least common Coping Strategies adopted. Instrumental coping, planning, positive reframing, denial, venting & behavioral disengagement were used less frequently.

Analysis of the data showed that there were no significant differences in Middle-aged Women and Older Women with respect to adaptive coping. The results are supported by the study done on Change in Coping and Defense Mechanisms across Adulthood: Longitudinal Findings in a European-American Sample suggest that most individuals showed development in the direction of more adaptive strategies in middle age and early old age (Diehl, Chui &Hay, 2014).

Analysis of the data of the study showed that there are significant differences in denial as a Coping Strategy between Middle-aged Women and Older Women. Wherein middle aged women highly used denial than older women. A study that supports this finding shows that denial does not immediately appear to be a mature strategy that is used by younger or middle aged individuals (Deihl, Coyle & Labouvie-Vief, 1996). Current life circumstances associated with aging may require adults to adapt to changes and losses that are beyond their personal control. Hence lower the chances of old age people using denial as a coping strategy (Aldwin, 1994, Brandstadter 1993, Brandstadter & Greve, 1994). Analysis of the data also showed a significant difference in self-distraction as a coping strategy adopted by Middle-aged Women and Older Women who have undergone Mastectomy. This is also supported by the research done on Coping and Distress among Women under treatment for early stage Breast Cancer (Culver, Arena, Antoni& Carver, 2002). Analysis of the data showed a significant difference between Middle-aged Women and Older Women who have undergone Mastectomy in the other dimensions of maladaptive coping Viz. Behavioral disengagement and substance use. Research suggested that, Middle-aged Women and Older Women who go through pain employ maladaptive coping irrespective of their age (Noro, Oka, Shibata & Nakamura, 2008).

Analysis of the data showed that there is a significant difference in the level of spiritual change in Middle-aged Women and Older Women with respect to Posttraumatic Growth. Older Women showed higher levels of growth in this aspect. The literature on Posttraumatic Growth explicitly addresses this possibility: “It is in the realm of existential and, for some persons, spiritual and religious matters, that the most significant Posttraumatic Growth may be experienced” (Calhoun & Tedeschi, 2006).

Results depicted that there are no significant differences between the level of Posttraumatic Growth in Middle-aged Women and Older Women who have undergone Mastectomy. This could imply age not being a factor affecting the level of Posttraumatic Growth. This implies that age does not play an important role in influencing Posttraumatic Growth. Similar were the findings of the study done on Posttraumatic Growth among elderly women with Breast cancer compared to Breast cancer free women showed that Posttraumatic growth occurs irrespective of the age of the women (Brix, Bidstrup, Christensen, Rottmann, Olsen, Tjønneland & Dalton, 2013).

Analysis of the data showed that coping strategies are partially correlated to posttraumatic growth. Results reported significant positive correlation between new possibilities and instrumental coping; new possibilities and planning; spiritual change and planning; spiritual change and religion; appreciation of life and active coping; appreciation of life and acceptance; appreciation of life and emotional support; relating to others and instrumental support; relating to others and planning,; relating to others and emotional support; relating to others and positive reframing. Results also reported negative correlation between personal strength and behavioral disengagement; personal strength and venting; spiritual change and substance use. There is some suggestion that coping with trauma promotes posttraumatic growth (Schaefer & Moos, 1998; Tedeschi & Calhoun, 2004). Coping Strategies promote Posttraumatic Growth as they arise from active efforts to deal with the problem or the consequent emotions. It was found that adaptive coping strategies were related to posttraumatic growth in Helgeson et al. (2006) meta-analysis. This meta-analytical review is supported by a research conducted by Prati & Pietrantoni (2009). The results depicted that optimism; social support, spirituality, acceptance coping, reappraisal coping, religious coping, and seeking support coping are associated with posttraumatic growth.

Women battling a life threatening disease such as cancer by giving away a part of their anatomical identity through the process of mastectomy require intervention. Undergoing and aftermath of Mastectomy could be a traumatic experience. However, research suggests that trauma can lead to positive psychological changes in an individual (Tedeschi & Calhoun, 2001). Dealing with a life-threatening event includes adopting certain Coping Strategies. This study can help such women and also women who are willing to undergo the surgery understand that the aftermath of a traumatic event can be positive. This study can also benefit institutions that help such women overcome the trauma of undergoing Mastectomy. This study also provides a better understanding of the coping strategies that that may be adopted for a positive outcome. Cancer patients are subject to many psychosocial problems, which are only partly related to their health state and medical treatments. They face social pressure, based on prejudices and stereotypes of this illness. The study explores the psychological connotation associated with the cancer diagnosis and related treatments. The effects of specific coping styles, psychosocial interventions and a social support on initiation, progression and recurrence of cancer are advised. A therapeutic window for the psychosocial intervention is still wide and shows an important effect on the quality of lives of many cancer patients (Šprah & Šoštarič, 2004). Research shows that women who have undergone mastectomy (especially younger women) are at a high risk for low quality of life. Such women require intervention that specifically target their needs related to the aftermath of trauma (Avis, Crawford & Manuel, 2005). This study shows that women opting adaptive coping strategies have reported higher levels of posttraumatic growth than women who have adopted maladaptive coping. Reporting this level of Posttraumatic Growth to healthcare providers may lessen their fear about cancer disclosure and change the practice of cancer disclosure in the world (Rahmani, Mohammadian, Ferguson, Golizadeh, Zirak & Chavoshi, 2012).

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