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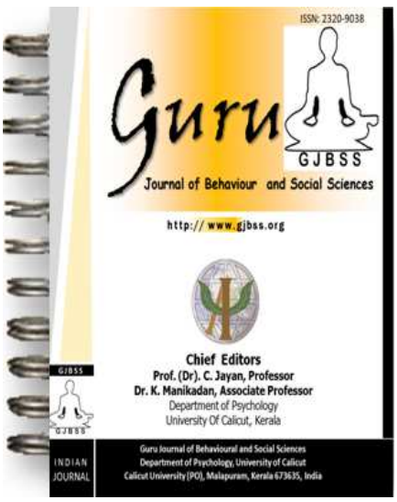

Article Title

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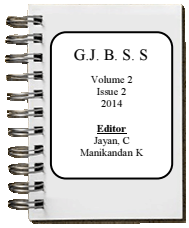

Role of Psychological Wellbeing on Anxiety and Depression among Breast Cancer Patients

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Abstract

Breast cancer is one of the leading causes of cancer death in women worldwide. Breast cancer is associated with disruption in psychological well being. Women diagnosed with breast cancer also experience an increased level of emotional distress which is expressed as either anxiety or depression or both. The present study aims at identifying the effect of psychological wellbeing on anxiety and depression among breast cancer patients. Instruments used were Hospital Anxiety and Depression Scale and Psychological General wellbeing Schedule. Results revealed that there is a significant difference in anxiety, among patients who vary in the treatment strategy they received. The result also showed a significant difference in anxiety and depression among groups having high, medium and low Psychological wellbeing. Study concludes that enhancing well being among breast cancer patients helps them in facing the impact of the disease related experience in a better way.

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Breast cancer is considered as one of the distressful experience a women faces when she is diagnosed for it. Diagnosis of a potentially life threatening illness not only produces great shock, but also necessitates coping in all relevant aspects of a women's life. The treatment strategies used for the disease necessitates considerable adjustment from the part of the patient. People diagnosed with cancer have to frequently confront with psychological problems resulting from the radical nature of the surgery required in treatment and thereafter. Previous studies have indicated that psychological distress is common in breast cancer patients and occurs throughout the course of the illness (Iwamitzu et al., 2005; Shelby & Golden-Kreuz, 2008). Emotional distress has been found out among half of the patient population (Kornblith & Ligibel, 2003) and the intensity is said to vary from medium to high levels following diagnosis (Tjemsland, Soreide, & Malt, 1996).

Emotional distress ranges from feeling of sadness and worry to clinically significant anxiety and depression (National Comprehensive Cancer Network Distress Management Panel, 2005). Global stress perceptions, cancer related intrusive thoughts and financial concerns along with the tendency towards negativity (neuroticism) are considered as risk indicators for depressive symptoms in patients who have undergone surgical treatment for breast cancer (Golden-Kreutz & Andersen, 2004). High level of emotional distress is seen in breast cancer patients who suppress their emotions and are having high levels of anxiety (Iwamitsu et al., 2005).

Women diagnosed with breast cancer face a lot of challenges. Stress related to breast cancer is associated with disruptions in quality of life (Compas & Luecken, 2002) which is produced by encountering potentially life threatening disease and the uncertainty surrounding the complex medical decisions. Most of the cancer patients have depressive symptoms and fifty percentage of them are diagnosed as having adjustment, mood and/or anxiety disorders (Derogatis et al., 1983). Mood disturbance considerably affect the quality of life in cancer patients (Dapueto, Serventne, Francolino, & Hahn, 2005). Changes in psychological distress

significantly impacts physical and functional quality of life in breast cancer patients (Wong & Fielding, 2007). Even if cancer-related variables, including duration of survival, and type of cancer treatment, were not significantly associated with survivors' well-being, health status, higher levels of psychosocial resources including optimism, mastery, spirituality and social support were considerably related with well-being (Perkinsa et al., 2007).

In this scenario a study was conducted to understand the anxiety, depression and psychological well being among breast cancer patients who were undergoing various treatment for cancer. The study also aimed to observe the effect of Psychological wellbeing on anxiety and depression among breast cancer patients.

Method

Participants

The participants for this study consisted of women diagnosed with breast cancer. A total of 160 participants were taken for the study from the inpatient of surgery and oncology department of Amala Institute of Medical Sciences, Kerala, India. Patients who were admitted for the treatment were selected for the study on the basis of stratified random sampling method. Thus group of patients who have recently undergone surgery without any adjuvant therapy, patients undergoing chemotherapy and patients undergoing radiation therapy formed the three strata for study.

Instruments

1. **Hospital Anxiety and Depression Scale:** The hospital anxiety and depression scale was originally designed to assess psychological distress of patients in medical and surgical settings. The two scales assessing anxiety and depression which were designed to measure affective states independent of physical symptoms in general medical patients. The HADS contains 14 items and consists of two subscales: anxiety and depression. Each item is rated on a four point scale of 0-3, giving maximum scores of 21 for anxiety and depression respectively. Scores of 11 or more on either subscale are considered to be a significant 'case 'of psychological morbidity (clinical cases), while scores of 8-10 represent 'mood disorder' (borderline). A score of 7 or below is considered as normal. The Malayalam version of HADS was developed by Thomas et al. (2005).
2. **Psychological General Well-being Schedule:** The Psychological General Well-being Schedule assesses how the individual feels about his "inner personal state" rather than about external conditions such as income, work environment or home environment. This is a six-point scale ranging from 0 to 5. No item score needs to be reversed because the direction of the score is the same for all, whatever the direction taken by the wording of the options (i.e., the higher score is always positive). The Schedule was translated into Malayalam and is used for the present study (Menon & Jayan, 2012).

Procedure

All the respondents who consented to participate in this study were briefed about the purpose of the study. Each respondent were then provided with 1) Hospital Anxiety and Depression Scale and 2) Psychological General Well-being Schedule and persuaded to fill by their own. Help was rendered by the interviewer for those patients who had physical difficulty in filling the questionnaires Materials

The patients who had undergone different treatment strategy such as surgery, chemotherapy and radiation during the time of study were compared in order to understand the difference in anxiety, depression and psychological wellbeing. The patients were grouped into three based on the mean scores of Psychological wellbeing; Likewise patients were grouped as those having low, medium and high psychological wellbeing. Analysis of variance

and Duncuns Multiple Range Test (DMRT) was carried out following Cohen (1988) for elucidating the level of anxiety and depression among the three groups and to evaluate the impact of psychological well being in alleviating anxiety and depression among breast cancer patients. It also helped to compare the difference in anxiety, depression and psychological wellbeing in breast cancer patients undergoing different treatment strategies.

Results and Discussion

Breast cancer patients selected for the study were divided into three on the basis of treatment they received for cancer. First group is the surgery group in which patients who had recently undergone surgery were taken and the second group consisted of patients who were undergoing chemotherapy after mastectomy and the third group included patients undergoing radiation therapy after the completion of surgery and chemotherapy. In these groups anxiety and depression were studied to understand whether there exists any significant difference among patients under this variable. F value showed that there was significant difference ($p<0.05$) in anxiety ($F = 3.05$) among three groups (Table1). The mean value for anxiety for surgery, chemotherapy and radiation were found to be 8.84, 8.38, and 6.84 respectively

Results of Duncun's Multiple Range test indicates that hospital anxiety in patients undergoing radiation significantly differ from that of surgery and chemotherapy (Table 2). Results hence depict that anxiety significantly less in radiotherapy group compared to other two groups. This may be due to the improvement in their general physical condition and the feeling relieved about completion of most difficult part of their treatment and that they are nearing the end of the therapy. Observations of the present study fall in line with earlier reports (Hughson, Cooper, Mc-Ardle, & Smith, 1986) that the psychological impact of adjuvant chemotherapy was high compared to radiation. Limm, Devi and Ang (2011) also states that anxiety seem to be present in all treatment type of breast cancer and anxiety seem to be high in patients who were just to have first chemotherapy infusion. Similar findings were seen in the present study where people who have undergone surgery and awaiting for chemotherapy showed more anxiety.

Table 1
Analysis of Variance of Anxiety, Depression and psychological wellbeing for groups based on treatment

Variables	Between Groups		Within Groups		F value
	Sum of Square	Mean Square	Sum of Square	Mean Square	
Anxiety	84.84	42.42	2182.14	13.90	3.052*
Depression	85.05	42.52	2464.33	15.70	2.709
Psychological General Wellbeing	1243.372	621.686	39103.372	249.066	2.496

*p< .05

Table 2

Duncun's multiple range for Anxiety, Depression and psychological wellbeing by treatment groups

Variables / Groups	Surgery (n = 63)		Chemotherapy (n = 66)		Radiation (n = 31)	
	Mean	SD	Mean	SD	Mean	SD
Anxiety	8.84[b]	3.34	8.38[b]	3.85	6.84[a]	4.20
Depression	8.11	4.14	8.45	3.86	6.48	3.80
Psychological General Wellbeing	51.67	17.66	48.65	14.54	56.29	14.15

Note: Means with similar letter as superscript are homogeneous

Even though there is no significant difference in depression and psychological well being among women with breast cancer based on the treatment they received, the mean value shows that depression is less (Mean= 6.48) and wellbeing (Mean= 56.29) is more in radiation group compared to surgery and chemotherapy group. It can be seen that there is a gradual improvement in psychological wellbeing and a decrease in depression when patients move from chemotherapy to radiation therapy. These observations are consistent with the finding that adverse symptoms of chemotherapy have been related to increased depression and decreased health-related Quality of Life (Longman, Braden, & Mishel, 1999). Time since cancer diagnosis and chemotherapy completion was also found to be positively related to greater depressive symptomatology (Broeckel, Jacobsen, Balducci, Horton, & Lyman, 2000).

Patients are further grouped on the basis of low, medium and high psychological well being and they were analyzed in order to find out the difference in anxiety and depression among these groups.

Table 3

Summary of ANOVA of Anxiety and Depression by psychological wellbeing

Variables	Between Groups		Within Groups		F value
	Sum of Square	Mean Square	Sum of Square	Mean Square	
Anxiety	450.41	225.20	1816.56	11.57	19.46**
Depression	657.79	328.89	1891.58	12.04	27.29**

**p< .01

From table 3, it is evident that there is a significant difference (p< .01) in anxiety and depression among low anxiety and depression (Mean =11.69 & 12.13), medium (Mean= 8.14 & 7.76) and high anxiety and depression (Mean= 5.54 & 4.70) psychological well being group respectively. That is an enhancement of Psychological well being can lead to a decrease in anxiety and depression among breast cancer patients. A consistent finding was seen by Liu, Shono, and Kitamura (2009). They found that psychological wellbeing is related negatively to anxiety and depression and these variables are also predicted by the components of psychological wellbeing.

Wong and Fielding (2007) reported that changes in depression resulted in subsequent changes in overall, functional and physical quality of life. People high in subjective well-being tend to be more self-enhancing and more enabling than those low in subjective well-being. This indicate that positive emotions can bring about positive cognitions which, sequentially contribute to further positive emotions (Ryan & Deci, 2001) and this in turn pave way to a reduction in anxiety and depression. This is further emphasized by Pollak's (1979) finding that the anxiety is lower for people who have a positive sense of well-being and sense of meaning in life. Badger, Segrin , Dorros , Meek, and Lopez (2007) in their study noted that an enhancement in psychological quality of life using psychosocial intervention also produced reduction in anxiety and depression. Present study also pointed out the fact that an increment in psychological wellbeing can reduce the level of morbid depression and anxiety.

Conclusion

Diagnosis of breast cancer is a great challenge for a woman in her life. Patient's lack of personal control over the treatment they receive and the uncertainty of its outcome produce great psychological distress which when dealt improperly may lead to morbid anxiety and depression. A considerable change in the emotional status of the patient can be seen during the therapeutic process for cancer. Anxiety and Depression are seen more after surgery and later while undergoing chemotherapy. Enhancing the psychological wellbeing can reduce the anxiety and depression in breast cancer patients. So psychological interventions focusing especially on the improvement of psychological wellbeing; preferably during the initial stages of cancer treatment such as surgery and chemotherapy can prevent patient from moving into serious mental health problems.

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