



Psychological Burden of Breast Cancer Predicted Quality of Life: A Case Study of Multan Institute of Nuclear Medicine and Radiology

Dr. Haleema Perveen¹, Saima Ayyaz², Saima Abbas³, Muhammad Kamran Sagur⁴, Rafay Ali⁵, Motasem Hassan Mirza⁶

Abstract

Breast cancer is a highly prevalent cancer in females worldwide, with new cases around one million every year. The study was aimed to investigate psychological burden and quality of among women with breast cancer. The nature of study was quantitative that was completed through correlational research design. Questionnaires were administered with breast cancer patients by conducting a survey as method of data collection. Sample of 139 breast cancer patients were recruited from Multan Institute of Nuclear Medicine and Radiology through purposive sampling technique. Findings of study reveal that depression, anxiety and stress are the most frequent psychological disorders in BC patients. In addition, psychological burden due to BC among women is a significant negative predictor of quality of life. Moreover, results suggest that young breast cancer patients reported propounding level of psychological problems. Several psychotherapeutic and supportive approaches have proven effective in managing psychological disorders in BC patients.

Keyword: Breast cancer, psychological burden, quality of life

1. Introduction

Breast cancer is the most common cancer among females worldwide. Breast cancer patients suffer from several negative consequences after breast cancer complications or treatment and these include pain, fatigue, sexual problems, and appearance and body image concerns, with psychological dysfunction. This could affect the patient quality of life and psychological well-being (Mokhatri-Hesari & Montazeri, 2020). Breast cancer treatment could include different therapies like partial or total mastectomy, radiotherapy, and chemotherapy with or without systemic hormonal therapy, depending on stage and estrogen receptor status at diagnosis. This is associated with short- and long-term complications such as pain, lymphedema, reduced vaginal lubrication, and hot flashes due to long-term hormonal therapy (Armitage, 2002).

A cross sectional study from one cancer center in Jeddah showed a good quality of life scores and identified areas that need further support, such fatigue, insomnia, hair loss (Imran et al., 2019). Another study was in Riyadh, Saudi Arabia, on breast cancer survivors showed a low overall global quality of life (Almutairi et al., 2016). Intermediate survivors who completed their main treatment regimen could suffer from different quality of life and psychological impairments, and this could go unnoticed if the focus is on the clinical points (Mokhatri-Hesari & Montazeri, 2020).

1.1. Psychological Burden among Breast Cancer

Psychological disorders such as anxiety, anger, and depression are more severe in these patients than physical complications. There have been cases where patients have deserted chemotherapy due to their psychological disorders. The quality of life and daily functioning of cancer patients are strongly affected by mental disorders (Pedram et al., 2010). Previous research has revealed that educated patients, married patients with high emotional relationships, and patients with medium socioeconomic levels are more prone to psychological disorders (El-Hadidy et al., 2012). There is a clear relationship between increased cancer pain in patients and some forms of stress such as depression, anxiety, and mood disorders (Fischer et al., 2010). As shown in studies, adjustment disorder is the most frequent psychiatric disorder in cancer patients, followed by depressive disorder (Musarezaie et al., 2015). Although cancer-related disorders can lead to incompatibility and imbalance in the body and mind of patients, the most prevalent states are hopelessness and despair (Pedram et al., 2010). Cancer patients are at a higher risk (about 4 times higher) to experience severe and persistent depressive disorders than the healthy population (Nezami et al., 2020). It is reported that about half of the patients have been detected with symptoms of depression, anxiety, mood swings, and adaptive disorders (Sajadian et al., 2016).

1.2. Quality of Life among Breast Cancer

Breast cancer patients' quality of life (QoL) is severely reduced with the cancer symptoms and side effects of the therapies. Indeed, physical and psychosocial functioning, family life, couple relations, and working ability affect the QoL in this population (Krigel et al., 2014). Physical QoL and activity was severely diminished by symptoms such as severe pain, nausea, gastrointestinal discomfort, flu-like symptoms, cardiovascular dysfunction, edema, stomatitis, neuropathies, muscles and joints stiffness, dyspnea, dizziness, sleep problems, hair loss and menopausal symptoms (Lee Mortensen et al., 2018).

1.3. Anxiety, Depression and Quality of Life in Breast Cancer Patients

Breast cancer and its subsequent treatment are a great source of anxiety and depression in patients (Jones et al., 2015). One can expect a patient to experience a decline in his/her perceived quality of life during cancer therapy. Surgery, radiation, chemotherapy and other kinds of interventions carry an array of side effects. Some of these adverse events are well tolerated by patients but many can be debilitating. Many studies have highlighted the importance of providing early management for depression and anxiety in breast cancer patients. This can help improve survival rates and quality of life, as well as reduce

¹ Government Graduate College for Women, Mumtazabad, Multan, Pakistan, haleemapk5@gmail.com

² Department of Professional Psychology, Bahria University Lahore Campus, Pakistan, saimaayyaz04@gmail.com

³ Department of Psychology, University of Cyberjaya, Malaysia, saimatherapist5@gmail.com

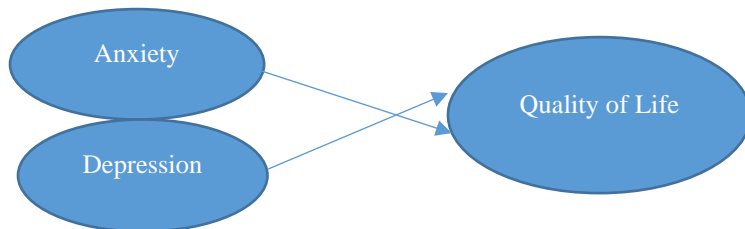
⁴ Institute of Southern Punjab, Multan, Pakistan, kamransagur@outlook.com

⁵ Department of Professional Psychology, Bahria University Lahore Campus, Pakistan, rafayali0316@gmail.com

⁶ Department of Professional Psychology, Bahria University Lahore Campus, Pakistan, motasimmirza7@gmail.com

healthcare costs (Matsuda et al., 2014). Thus, in order to decrease patient suffering and improve their quality of life, it is important to estimate the psychological burden caused by breast cancer and its treatment and try to find useful measures to reduce it. The current study was aimed at investigating the effect of psychological burden on quality of life.

1.4. Conceptual Framework



1.5. Objective of the Study

- To explore the relationship between psychological burden and quality of life
- To investigate the effect of anxiety and depression on quality of life among the patients of BC.

2. Research Methodology

2.1. Participants

The nature of study was quantitative that was completed through correlational research design. Questionnaires were administered with breast cancer patients by conducting a survey as method of data collection. Sample of 139 breast cancer patients were selected through purposive sampling technique who were admitted in Multan Institute of Nuclear Medicine and Radiology for chemotherapy and radiation.

2.2. Instruments

Two questionnaires were employed in our study: the Hospital Anxiety and Depression Scale (HADS) for assessment of anxiety and depression, and the Functional Assessment of Cancer Therapy- Breast (FACT-B Version 4) for evaluation of quality of life.

2.3. Hospital Anxiety and Depression Scale (HADS)

This self-administered questionnaire is a screening instrument for anxiety and depression that has been validated in different settings for the general population and for patients with a wide range of medical conditions including breast cancer patients (Abu-Helalah et al., 2014). The scale consists of 14 items and two subscales (anxiety and depression) with seven items in each subscale. Each item is scored from 0 to 3. Total scores for each subscale are calculated by simple summation of individual item responses in the subscales. A higher score indicates more distress. A systematic review of a large number of studies identified a cut-off point of 8/21 for anxiety or depression. For anxiety (HADS-A) this gave a specificity of 0.78 and a sensitivity of 0.9. For depression (HADS-D) this gave a specificity of 0.79 and a sensitivity of 0.83 (Bjelland et al., 2002). Depression and anxiety scores are also classified separately into groups: normal (0-7), mild (8-10), moderate (11-14), and severe (15-21) (Abu-Helalah et al., 2014). Use of the Arabic version of this questionnaire has been previously validated (El-Rufaie & Absood, 1987).

2.4. Functional Assessment of Cancer Therapy Breast (FACT-B)

This is a 44-item self-reported instrument designed to measure the multidimensional quality of life (QoL) in patients with breast cancer. The FACT-B consists of the FACT-General (FACT-G) plus the Breast Cancer Subscale (BCS), which complements the general scale with items specific to QoL in breast cancer. FACT-B consists of a number of items divided into several subscales: physical, emotional, social, functional well-being, breast cancer and additional concerns. Each item is rated on a five-point rating scale ranging from 0 (not at all) to 4 (very much). The total score and the subscale scores for the dimension of well-being are calculated with higher scores indicating higher QoL. The FACT-B is appropriate for use in oncology clinical trials, as well as in clinical practice. It demonstrates ease of administration, brevity, reliability, validity, and sensitivity to change (Brady, 2013). The Arabic version of the FACT-B questionnaire has been validated as well (Kobeissi et al., 2014).

2.5. Statistical Analysis

All collected data were coded, entered and analyzed using the statistical package IBM SPSS software version 24.0. Pearson correlation and multiple regression were used to test hypotheses as statistical technique.

3. Results

Table 1: Shows the relationship between Psychological Burden and Quality of Life among patients of Breast Cancer

	Cronbach's Alpha	Anxiety	Depression	Quality of Life
Anxiety	.732	1	.693	-.651
Depression	.697		1	-.739
Quality of Life	.756			1

Table shows the significant negative correlation between psychological burden and quality of life BC.

Table 2: Regression Analysis showing the effect of Psychological Burden on Quality of Life

Predictor	B	Std. Error	Beta	t-test	p-value
Constant	53.345	9.345		13.231	.000
Anxiety	.494	.421	-.651	-13.064	.000
Depression	.635	.573	-.739	-21.746	.000

Adjusted R² .723, p<0.05.

The above table describes the effect of anxiety and depression as psychological burden on quality of life among patients of BC.

4. Discussion

Breast cancer is the most common cancer among females worldwide. Psychological disorders such as anxiety, anger, and depression are more severe in these patients than physical complications. There have been cases where patients have deserted chemotherapy due to their psychological disorders. The quality of life and daily functioning of cancer patients are strongly affected by mental disorders. Findings of the reveal that there is significant negative relationship between psychological burden and quality of life among breast cancer patients. Moreover, anxiety and depression are the significant negative predictors of quality of life. Both, anxiety and depression are common and significant morbidities in the studied breast cancer population. The total HADS score as well as the percentages of patients suffering from anxiety and depression are comparable to regional and international figures. Numerous studies have demonstrated that approximately one quarter to one third of breast cancer patients suffer from distress, anxiety, and depression following diagnosis and treatment of breast cancer (Burgess et al., 2005). A study conducted on female breast cancer patients in Jordan, noted a mean total HADS score of 18.0 ± 9.0 with 53% of participants scoring abnormal on the anxiety subscale and 45% on the depression scale. Around 14% of patients suffered severe anxiety and 8% had severe depression (Abu-Helalah et al., 2014). Our results suggest significant levels of psychological distress that might be attributed to poor psychological screening and counseling during clinic visits. Level of education was also found to be a statistically significant predictor of total HADS score with worse scores in those who have only completed a primary level of education or below. This is consistent with some studies that highlighted a positive association between low educational level and socioeconomic status with worsening depressive symptoms and anxiety (Al-Zaben et al., 2015). As far as financial status is concerned, women with low family monthly income had on average lower total QoL scores compared to higher income women (Al-Naggar et al., 2011). Lower income may lead to a limited accessibility to primary preventive measures for detection of breast cancer at an early disease stage (Merkin et al., 2002), as well as affect the adequacy of treatment and tangible support available to the patient, leading to worse QoL (Jassim & Whitford, 2013). In fact, patients who were more anxious and more depressed (with higher HADS scores) reported more symptoms and were less functional (Alawadi & Ohaeri, 2009). Another study from Iran showed statistically significant correlation between HADS score with global health scores and emotional functioning (Montazeri et al., 2003). Similarly, our results showed impaired quality of life (lower FACT-B scores) in patients with worse psychological well-being (higher HADS scores).

5. Conclusion

Breast cancer is the most common cancer among females worldwide. Psychological disorders such as anxiety, anger, and depression are more severe in these patients than physical complications. There have been cases where patients have deserted chemotherapy due to their psychological disorders. The quality of life and daily functioning of cancer patients are strongly affected by mental disorders. Findings of the reveal that there is significant negative relationship between psychological burden and quality of life among breast cancer patients. Moreover, anxiety and depression are the significant negative predictors of quality of life.

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