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THE EFFECTS OF COPING STYLES ON MOOD AND QUALITY OF LIFE IN BREAST CANCER PATIENTS UNDERGOING CHEMOTHERAPY

Ali Jah Muhammad[1], Aqeel Ahmad Khan[2], Aamir Iqbal[3], Nimra [3], Ahmed Ikram[4], Allah Ditta[5], Mazhar Abbas[6*]

[1]Shalamar Medical and Dental College, Lahore - Pakistan
[2]Assistant Professor, Department of Applied Psychology, Islamia University Bahawalpur - Pakistan
[3]PhD Scholar, Department of Applied Psychology, Islamia University Bahawalpur – Pakistan
[3]Research Student, Department of Applied Psychology, Islamia University, Bahawalpur - Pakistan
[4]Lecturer, Department of Applied Psychology, Islamia University, Bahawalpur - Pakistan
[5]Principal/ Managing Director Sunnat Academy & Counseling Services of Pakistan, Mailsi Vehari - Pakistan
[6*]Department of Surgery, District Head Quarter Hospital, Bhakkar - Pakistan

[*]**Corresponding Author:** Mazhar Abbas
[*]Department of Surgery, District Head Quarter Hospital, Bhakkar - Pakistan, drmazhar234@gmail.com

Abstract

Background: Breast cancer patients feel extreme distress following their initial chemotherapy treatment. The study's goal was to examine the mood and quality of life of patients with breast cancer who have had chemotherapy for six months. Furthermore, the relationships between these patients' quality of life, mood, and coping style were studied.

Methods: The correlational research design was utilized, and 74 women were sampled at random to collect data. The mean age of the participants was (mean = 37.9). Data was collected by using functional assessment of cancer therapy, a profile of mood state and a coping style scale.

Results: Patients who had received intensive chemotherapy therapy reported decreases in their physical, emotional, and functional well-being. Similarly, patients who had received intensive treatment reported feeling fatigued and more exhausted but not anxious nor depressed. The majority of individuals who had comprehensive treatment found it beneficial. Reduced physical and emotional health, anxiety, depression, fatigue, and mood disturbances are all results of avoidant coping. Moreover, active coping was significantly associated with higher social well-being and quality of life, physician visits, and overall low mood disturbance among patients.

Conclusion: This study shows that chemotherapy significantly reduces the quality of life of cancer patients undergoing long-term treatment. However, the majority of patients still thought the treatment was worthwhile. Avoidant coping styles are a particular risk factor for poor quality of life and increased mood disturbance.

Keywords: oncology, health wellbeing, women, anxiety, depression

Introduction

Pakistan has the highest breast cancer rate in Asia, and demographic trends suggest it will continue to rise [(1)]. In the World Health Organization report, 26,000 women were diagnosed with breast cancer, of which 13,500 Pakistani women died from breast cancer in 2020 [(2)]. Due to socioeconomic and cultural variables such as age, employment position, lack of understanding, fear of surgery, and faith in traditional remedies and spiritual healing, women in Pakistan often visit medical facilities when their cancer has gone to a terminal stage [(3)]. Moreover, 89.9% of breast cancer patients in Pakistan are diagnosed late due to a lack of awareness and the overall median survival rate of breast cancer patients is 2.83% [(4)].

Cancer patients who undergo a radical treatment, such as chemotherapy, may experience trauma. Treatments in the second or third line for recurrent breast cancers may be too harsh for certain patients, depending on their prognosis and quality of life [(5)]. A breast cancer patient's quality of life is affected by physical and emotional symptoms, self-efficacy, and social support following initial therapy. Breast cancer patients frequently experience depression, anxiety, a negative body image, sleep difficulties, pain, and emotional exhaustion that decrease the patients' overall quality of life [(6)]. Even when their prognosis was favorable, cancer patients who utilized avoidance as a coping mechanism experienced greater emotional pain [(7)]. Patients with ruminating were more upset. It seems that receiving emotional support reduced distress. Other researchers have found an association between active coping and decreased distress in cancer patients [(8)]. The way a person responds to a significant stressor affects their quality of life. How a cancer patient responds to the changes brought on by their disease depends on their coping mechanisms. According to Chawboski et al., the following five coping mechanisms in cancer patients are identified: social support, optimistic thinking, distance, cognitive escape avoidance, and behavioral escape avoidance [(9)]. Avoidance-based coping is connected with higher suffering, worse outcomes, and lower quality of life, whereas assistance-seeking and a focus on the positive reduce suffering, distress, and associated health problems [(10)].

Little is known about the quality of life of breast cancer patients who had rigorous chemotherapy. The aim of the study was to examine the How significantly do health, treatment, and side effects impact life quality? How do attitudes and coping methods influence the quality of life and disturbance of mood? Understanding these challenges could help doctors decide which patients need more support during long-term chemotherapy and which should only receive second or third line chemotherapy at high risk to their quality of life.

The study has the following Hypothesis

H1: There is an association between coping styles, disturbance of mood, and breast cancer patients' quality of life.

H2: Coping styles predict low mood disturbance and quality of life in breast cancer patients.

Research Methodology

The study included 74 breast cancer patients who had undergone chemotherapy on a regular or intermittent basis for at least 6 months. The correlational research design was used. The purposive sampling technique was used to collect the data and the data was collected from the Shaukat Khanum memorial cancer hospital in Lahore, the Combined Military Hospital in Lahore (CMH), and the Combined Military Hospital Rawalpindi. The inclusion criteria of the study was women over the age of 23 who had taken chemotherapy for at least six months were eligible for this study.

Instruments

1. **Participant Socio-demographic sheet:** Women age, stage of the cancer, marital status and chemotherapy session schedule were asked from the participants.
2. **Functional Assessment of Cancer Therapy:** This scale analyzes cancer patients' quality of life [(11)]. The scale has the five subscales that assess physical, functional, emotional, and social well-being as well as doctor satisfaction. On a scale from 0 to 4, patients were asked to indicate the degree to which each statement accurately reflected their health over the preceding week.

3. **Profile of Mood State:** In the current study we used the short form of profile mood state scale [12]. It is a five point Likert scale (0-4) and the scale has the five subscales: confusion, fatigue, vigor, anger, anxiety and depression.
4. **Coping Strategy Scale:** The scale has 36-item [13]. Inputting comments regarding how they handled challenges to their physical health and related pressures throughout the past month. Responses range from 1 ("I have never done this") to 4 ("I have performed this task frequently").

Procedure

Patients with breast cancer who matched the inclusion criteria were enrolled for the duration of their current chemotherapy treatment. Patients completed survey questionnaires after expressing informed consent in the presence of a female study assistant. Four months following their initial operation, these individuals' survey responses were collected.

Statistical Analysis

The descriptive statistic and inferential statistic was applied by using the statistical package for social sciences (SPSS). Pearson Product moment correlation and Regression analysis was applied to test the hypothesis.

Result

Table 1 Socio-demographic characteristics of the Brest cancer patients (N= 74)

Socio-demographic	F (%)	M (SD)
Age		37.9(4.82)
Stage of Cancer		
Stage II	15(20.2)	
Stage III	24 (32.6)	
Stage IV	35 (47.2)	
Marital status		
Married	33 (44.5)	
Un-Married	14 (18.9)	
Divorced	17 (22.9)	
Widow	10 (13.7)	
Chemotherapy Session		
Every Week	27 (36.4)	
After Two week	14 (18.9)	
Three Week	21 (28.3)	
Four Week	12 (16.4)	

Table-1 results revealed that 74 women who are under treatment with chemotherapy volunteered to participate in the current study. The mean age of the patients was (m = 37.9). In a state in which 44.5% were married, 18.9% were unmarried, 22.9% were divorced, and 13.7% were widowed. Most of the participants were diagnosed with breast cancer at stage IV (47.2%). Information about the chemotherapy session was taken from the participants; 36% of the participants came to the hospital weekly for the chemotherapy session, 18.9% visited after two weeks for the chemotherapy, and 28.3% and 16.4% of the participants visited hospital after three or four weeks.

Table 2 Pearson moment product correlation among subscales of Coping style and quality of life (QOL) (N= 74)

Coping		Quality of Life				
		PWB	**SWB**	**EWB**	**FWB**	**RWD**
1.	**AC**	.08	.58**	.26	.08	.60**
2.	**SSS**	-.03	.45	-.52	.23	.59**
3.	**AV**	-.66*	-.04	-.89**	-.54*	-.21
4.	**IN**	-.44	-.07	-.66**	-.35	-.44

Note: PWB= physical wellbeing, SWB= social wellbeing, EWB= emotional wellbeing, FWB= functional wellbeing, RWD= relationship with doctor, AC= active coping, SSS= seeking social support, AV= Avoidance, IN= Intrusion. p = 0.05*, p= 0.01.**

The correlation between coping style and quality of life is presented in Table 2. Personal wellbeing, social wellbeing (r =.58**, p = 0.01), emotional wellbeing, functional wellbeing, and doctor-patient relationship (r =.60**, p =.01) are all significantly positively correlated with active coping style. Seeking social support had a negative correlation with personal and emotional health, but a significant positive correlation with social, functional, and doctor-patient relationship (r =.59**, p =.01). In addition, avoidance coping style and intrusion coping style have a strong negative correlation across all subdomains of quality of life (personal, social, emotional, functional, and doctor-patient relationship).

Table 3 Pearson moment product correlation among subscales of Coping strategy and profile of mood (N= 74)

Coping		Profile of Mood					
		Confusion	**Fatigue**	**Vigor**	**Anger**	**Anxiety**	**Depression**
1.	**AC**	-.57**	-.07	.25	.39	-.51**	-.64**
2.	**SSS**	-.08	-.27	.27	-.33	-.28	-.16
3.	**AV**	.61*	.57**	-.62**	.33	.83*	.75*
4.	**IN**	.70**	.17	-.34	.47	.73*	.73*

Note: AC= active coping, SSS= seeking social support, AV= Avoidance, IN= Intrusion. p = 0.05*, p= 0.01.**

We examine the impact of coping styles on the moods of breast cancer patients who are taking chemotherapy. The result is shown in (table-3). Patients who used an active coping style have less confusion, less fatigue, mild anxiety, and mild depression, while those who did not employ an active coping style have more vigor and anger. Seeking social support as a coping style is also associated with less confusion, fatigue, anger, anxiety, and depression. Patients who used avoidance and intrusion coping styles had a significant positive correlation with confusion, fatigue, anger, anxiety, and depression.

Table 4 Regression analysis coping strategy predicts quality of life and lower mood disturbance among Breast Cancer patients (N=74)

Variables	B-value	t-value	p-value	R	R^2
Coping* QOL	.30*	3.15	.03	.55	.17
Coping* Mood	-.38**	-2.45	.015	.34	.42

Note: QOL= quality of life, p = 0.05*, p= 0.01.**

Table-4 displays the results of the regression analysis. Patients with a greater level of coping style had a better quality of life (p= 0.03; less than 0.05) and less mood disturbance (p=0.015), regardless of co-morbid disease or the severity of chemotherapy.

Discussion

Quality of life is determined by one's physical, mental, and social wellbeing. A more thorough understanding of the risks and advantages of chemotherapy is provided by quality of life and the factors that influence it. There has been conflicting evidence linking therapy success and an improvement in quality of life [(14)].

Our research indicates that individuals with breast cancer who endured at least six months of intensive chemotherapy had a lower quality of life. Patients who had received intensive treatment reported less physical, emotional, and functional health, but greater social health and physician satisfaction. Patients who had received intensive treatment reported feeling less energized and more exhausted, but neither nervous nor depressed. Despite these hurdles, the majority of patients who endured prolonged treatment felt that it was beneficial. Reduced physical and emotional health, worry,

despondency, fatigue, and mood disturbances are all results of avoidant coping. Actively coping patients reported improved social well-being, more favorable doctor-patient interactions, and less disorientation and emotional instability. Patients who used a higher degree of coping style had better quality of life and less mood disturbance among the breast cancer patients. Hope, grief, and concern, as well as concerns about one's own mortality and health even if there is no indication of anxiety or depression, these concerns may reduce one's quality of life. Despite their mental distress, individuals receiving treatment encountered no social or doctor-patient interruptions. Family and friends reported high levels of intimacy, communication, and emotional support. When getting cancer therapy, social relationships appear to be unaffected by physical limitations or emotional agony. Because the patient's social health and doctor-patient relationships depend more on what other people do than on what the patient can do physically, the patient should be limited as little as possible.

Patients who have received extensive treatment report feeling uncomfortable, exhausted, unpleasant effects, and sick. Patients who underwent extensive treatment were less able than controls to work, handle domestic duties, and engage in hobbies [(15)]. These general declines in quality of life among intensively treated patients are comparable to those seen in patients during the first year after diagnosis [(16)]. After a year, the quality of life was poorer for women with poor prognoses than for those without a persistent illness. Quality-of-life decreases were anticipated given the dismal prognoses of all the women in our sample who received intensive care. A researcher found no change in quality of life between the sixth and fifteenth cycles of chemotherapy, our results are in contrast to the researcher [(17)]. There is a clear relationship between avoidant coping, a lower quality of life, and increased pain, according to studies of patients with chronic illnesses [(15)]. Six months after surgery, avoidant coping is associated with increased anxiety in cancer patients, as well as increased distress and diminished immune function in HIV patients [(18)]. Avoiding cancer is related to a decreased cancer survival rate. It is common to avoid a stressful or overwhelming life stressor, such as disease and its treatment. Short-term avoidance allows a person to improve their active coping reactions to a stressor without becoming overburdened. Long-term avoidance is bad because it keeps people from realizing how hard their lives are and coming up with ways to deal with them. A patient enduring long-term chemotherapy that refuses to consider their health or treatment will be unable to accept their illness or set new priorities [(19)]. Avoidance results in ongoing emotional suffering. By avoiding cancer-related thoughts, health treatments can be hampered.

Active coping style has correlation to increased social well-being, doctor-patient contacts, and general distress. Perceptions of stress are influenced by both individual's coping abilities and perceived external threat. Some patients believed that long-term chemotherapy created chronic stress, and their coping techniques may have helped to alleviate this stress [(20)]. Active coping techniques reduce overall distress by instilling a sense of control in patients during therapy. Those who employ active coping strategies may be able to interact more effectively with their loved ones, friends, and healthcare professionals, building stronger relationships. According to a study, cancer patients who seek emotional social support are better able to cope and feel less pain [(21)]. Patients might not have needed more social support because they had been receiving treatment for a while. After diagnosis, social support might serve as a more important coping strategy.

The research has few limitations; the study did not examine the causal effect between independent and dependent variables. The current has a small sample size that has precluded us from examine predicted but non-significant relationships. A larger sample size may have revealed substantial variations in the levels of depression and anxiety between intensive care patients and controls.

Clinical Implication

This research has clinical uses. Caregivers should consider the small differences between a patient with a "good attitude" and one who is disregarding her disease. Frequent side consequences of avoidance include disengagement, unwillingness to treat the sickness, and denial of the problem. Before a patient can comprehend essential therapeutic information or participate in treatment decision-making, it may be beneficial and important to elicit specific concerns or anxieties. It may be possible to recognize discomfort by differentiating "positive attitude" from avoidance.

Conclusion

The findings show that chemotherapy-treated breast cancer patients had functional, emotional, and physical disadvantages. Despite the low quality of life, the majority of patients thought treatment was beneficial because it gave them hope for the future. Patients who used active coping reported less overall discomfort and higher social well-being than those who used avoidant coping. These findings indicate that medical personnel should be aware of the frequency with which patients postpone addressing their condition, as doing so may increase pain and diminish quality of life.

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