Psychological distress and Coping Strategies among Women with Breast Cancer on Chemotherapy at Assiut university Hospital

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Abstract : The study aimed to determine depression, anxiety symptoms and coping strategies among women with breast cancer during chemotherapy, and to investigate the relationship between them. A descriptive correlational design was utilized. The study was carried out in the oncology unit at Assiut University Hospital and South Egypt Cancer Institute. The sample comprised of all women with breast cancer on chemotherapy attending the oncology unit and South Egypt Cancer Institute during three months period from January to March 2015. **Tools of study** comprised of personal data questionnaire, the Hospital Anxiety Depression Scale (HADS) and Brief COPE scale. **Results**: 62.2%, 32.4% of the studied group were abnormal (case) anxiety, and depression respectively. The highest mean scores of coping strategies were related to religion use of emotional support, active coping, use of instrumental support, planning, and positive reframing. **Conclusion:** The highest mean score of the studied group used emotional focused strategies, as a method of coping with anxiety and depression symptoms. **Recommendations:** Designing and implementing psycho-educational programs about stressors related to patients with breast cancer.

Key words: psychological distress, Coping Strategies, Breast Cancer, Chemotherapy.

Introduction

Cancer diagnosis is usually apparent as a crisis for both patients and their families (Taleghani et al. 2006). The most common cancer affecting women is breast cancer. Women who have had cancer often experience significant psychological and physical stress, including the stress of the diagnosis, debilitating treatments and chronic pain. Distress can compromise compliance with treatment and negatively affect prognosis and survival rates, so the significance of patients' psychological status forms an essential element of oncological treatment (Carayol M. et al. 2013, Lo Castro AM, Schlebusch L. 2006 and Ballenger JC et al. 2001).

For those diagnosed in the late stages, they too have to come to terms with their diagnosis, the fact that they will have to receive palliative as opposed to curative care and the fears and vagueness about end of life (Kearney, N. & Richardson, A. 2006, Lackey, et al. 2001). Breast cancer rates are increasing in developing countries, including Egypt, and are largely recognized to aging of the population (Jemal, et al. 2010, Freedman et al. 2006). Although breast cancer incidence rates in Egypt are substantially lower than the rates in the United States and other developed countries (Shulman, 2010). Breast cancer is the most common cancer among women in Egypt (Omar, et al. 2003).

Women who have had a breast cancer often experience significant psychological and physical stress, as well as physical problems. They have to change their lifestyle following a long period of treatment, and this may well influence their quality of life. Their daily life is full of stress and worry regarding their family/sexual roles disrupting physical status, emotional and spiritual well-being and personal relationships for the patient and family. In addition to the feeling of worries about their future life in terms of their general functionality status. (Mohaghaghi, 2003).

The majority cancer patients receiving chemotherapy experience psychological distress as a result of negative effects of chemotherapy agents, the uncertainty of post-treatment, and the occurrence of psychosocial problems (Del Mastro et al. 2002 and Nor Zuraida 2010). The same author added that, anxiety is widespread at the beginning of treatment, worrying of the potential side effects of the agents and fear of recurrence after completion of treatment. The incidence of depression varies between 8% and 36% depending on the site of cancer, diagnostic criteria.

Several studies have revealed that depression, anxiety, stress and poor quality of life are often psychological consequences of living with cancer, and cancer patients face the double challenge of learning to manage the physical as well as psychological effects of cancer. furthermore, previous studies suggest that depression and poor quality of life have been associated with 5 year survival rates as well as increased mortality as a result of cancer (Montazeri, 2008).

Coping with cancer requires dealing with a number of specific problems such as pain and fatigue, anger, changes in appearance, and relationships with partners and family. Successful, coping strategies may need to be different according to specific stressor. Previous studies of coping have not looked at particular stressors other than chemotherapy, yet these specifics may help target interventions. For instance, coping with fatigue and pain may need special strategies than coping with changes in appearance (Janeen, et al. 2007).

proper coping and adjustment is essential in facing chronic diseases, especially during the treatment period such as chemotherapy, employed four main styles in coping with the treatment crisis - think positively/fighter, acceptance, fearfulness and hopelessness, and had “confrontive” element in coping style, were found to experience less psychological and physical

symptoms, as compared to the patients who had “avoidant” element in the coping strategy used, (John D and MacArthur, 1998, Shapiro, et al. 1997 Payne, 1990).

Another investigator pointed out that behavioral escape avoidance and cognitive escape-avoidance as the most significant coping mechanisms which contribute to the psychological distress of the cancer patients receiving chemotherapy (Zabalegui, 1999). Therefore, the coping style with a fighting spirit has been observed to associate with a greater adherence to the chemotherapy regimen (Ayres, et al. 1994).

Significance of the study:-

Breast cancer rates are increasing in developing countries, including Egypt. Although breast cancer incidence rates in Egypt are substantially lower than the rates in the United States and other developed countries, breast cancer is the most common cancer among women in Egypt. Patients undergoing treatment for cancer face major physical and emotional challenges such as, stress, anxiety and depression that adversely affect the quality of life and daily functioning of those patients. So that it seems important to investigate how women with breast cancer cope with their illness and related stressors. Data generated from this study may help in designing and implementing program for those patients to assist them in coping with disease and its consequence.

Aim of the study:-

This study aimed to determine depression, anxiety symptoms and coping strategies among women with breast cancer during chemotherapy. Investigate the relationship between anxiety, depression and coping strategies used by those patients.

Subjects and methods:-

Research Design: A descriptive correlational design was utilized in this study.

Setting:-

The study was conducted in the oncology unit at Assiut University Hospital and South Egypt Cancer Institute.

Subjects:-

All women with breast cancer on chemotherapy attending the oncology unit and South Egypt Cancer Institute during three months period from January to March 2015.

Tools of the study:-

1- **Personal data questionnaire** which comprised of name, age, sex, level of education and marital status.

2- **The Hospital Anxiety Depression Scale (HADS)** developed by, Zigmond and Snaith (1983); score was used to report anxiety and psychological depressive symptoms. The instrument was designed for medically ill patients and does not include physical symptoms. It has been validated in patients with cancer. The HADS contains seven items that assess anxiety and seven items that assess depression rated on a four-point Likart scale (0 to 3), with 3 indicating higher symptom frequencies. Score for each subscale anxiety and depression and range from 0-21 with scores categorized as follows: normal (0-7), mild (8-10), moderate (11-14), severe (15-21). Scores for the entire scale (emotional distress) range from 0-42, with higher scores indicating more distress. Cronbach's alpha reliability coefficient of the (HADS) was found to be 0.72.

3- **Brief COPE scale**, it was developed by, Carver, (1997). It consists of 28-item self report measure of both adaptive and maladaptive coping skills. As an abbreviated version of the COPE Inventory, it can be

used to assess trait coping (the manner in which people cope with stress in everyday life) and state coping (the way people cope with a specific stressful situation). In total, 14 dimensions are covered by this scale. These are self distraction, active coping, denial, substance use, use of emotional support, use of instrumental support, behavioral disengagement, venting, positive reframing, planning, humor, acceptance, religion and self-blame. Every dimension has two items. The coping dimensions also can be divided into two major categories: Problem-focused Strategies (i.e. active coping, planning and using instrumental support) and Emotion focused Strategies (i.e. positive reframing, acceptance, religion, using emotional support and denial). Individuals respond to each item on a four-point Likart scale, indicating the frequency with which each strategy is used (1) = I have not been doing this at all; 4 = I have been doing this a lot). With alpha coefficients of 0.79. The previous two questionnaires were translated into Arabic language. This translation was revised by five experts; three assistant professors in psychiatry and two assistant professors in neurology. A back translation into English language and compared with the original sentences to ensure content validity.

Methods of data collection:-

1- An official approval was obtained from the Dean of the faculty of Nursing Assiut University directed to the Head of oncology unit at Assiut University Hospital and Dean of South Egypt Cancer Institute in order to get permission to conduct the study. The purpose of the study was explained to the patients before starting data collection. Each session ranged from 30 to 45 minutes.

Ethical consideration:-

Ethical approval for the protocol of research was obtained from post graduate and research committee in the faculty of nursing- Assiut University. The researchers obtained informed consent for participation from all patients who reassured about the confidentiality of the obtained information to avoid misunderstanding.

Pilot study:-

A pilot study was conducted at the beginning of the study. It included 10% of the total sample to investigate the feasibility of data collection tools and their clarity.

They were included in the study because no modification was done.

Statistical analysis:-

Statistical analysis was done by using SPSS version 20 Software Package. Data collected were coded and analyzed. The results were tabulated and statistically compared using categorical variables and were described by number and percent (N, %), where continuous variables described by mean and standard deviation (Mean, SD). t-test and ANOVA to compare between continuous variables. A two-tailed $p < 0.05$ was considered statistically significant.

Results:-

Table (1) shows, socio-demographic characteristics of breast cancer patients on chemotherapy .The mean age was (52.9 ± 12) years, ranged from 18 to 80 years old, 66.7% of them were married, 25% were divorced, 52% from urban and the rest of them from rural area. According to education, 61.8% of the study group were illiterate and have primary education and 78.4% of them were housewives.

Relation between brief COPE and depression are presented in Table 2. It reveals that, patients on borderline depression had higher score 55.±119, Followed by abnormal (severe) depression 53.4±116. Also there were no statistical significant association between brief COPE, and depression.

Relation between brief COPE and anxiety are presented in Table 3. It illustrates that, patients on abnormal or severe anxiety had higher score (54±116). Also there were no statistical significant association between brief COPE and anxiety.

Figure (1) shows that, 62.2%, 32.4% of studied group were abnormal (case) of anxiety, and depression respectively. This result suggests that, women with breast cancer are vulnerable for anxiety and depression.

Table (4) reveals distribution of the mean scores and standard deviations of Brief COPE scale. It was found that, the highest mean scores were related to religion, use emotional support , active coping , use instrumental support, planning, and positive reframing. The lowest scores were related to, substance use, behavioral disengagement , and self-blame.

Correlation between brief COPE, depression and anxiety are presented in Table 5. It indicates that, patients with anxiety symptoms had significant higher scores on, denial, positive reframing, acceptance, use of instrumental support, self - distraction and self blame as their coping

strategies with (P=0.000), (p=0.002), (p=004), (p=0.012), (p= 0.19), respectively. While patients who were depressed had significantly higher scores on coping strategies such as planning, denial, positive reframing, acceptance, use of instrumental support, active coping, self-distraction with (p= 0.000) (p=0.001) (p=0.002) (0.002) (p=0.12) (p=0.38) respectively. This result suggests that, those patients used emotion focused strategies to cope with their disease .

Table 1: Demographic data (N.102)

	No.	%
Age (in years)		
Range	18 – 80	
Mean±SD	52.9 ± 12	
Age groups		
18 – 40	17	16.7
40 – 60	57	55.9
60 – 80	28	27.5
Marital status		
Married	68	66.7
Single	5	4.9
Divorced	4	3.9
Widow	25	24.5
Address		
Rural	49	48.0
Urban	53	52.0
Education		
Illiterate & primary	63	61.8
Secondary	26	25.5
University	13	12.7
Occupation		
House wife	80	78.4
Employee	22	21.6

Table 2: Relation between COPE and depression (N.102)

Total depression level	Mean ± SD	P. value
Normal	50±12.1	0.143
Borderline	55.7±11.9	
Abnormal(severe)	53.4±11.6	
Total	52.9±12	

Ns: No statistically significant difference (p level >0.05)

Table 3: Relation between COPE and anxiety (N.102)

Total Anxiety level	Mean ± SD	P. value
Normal	51.4±11.2	0.421
Borderline	50.4±14	
Abnormal(severe)	54±11.6	
Total	52.9±12	

Ns: No statistically significant difference (p level >0.05)

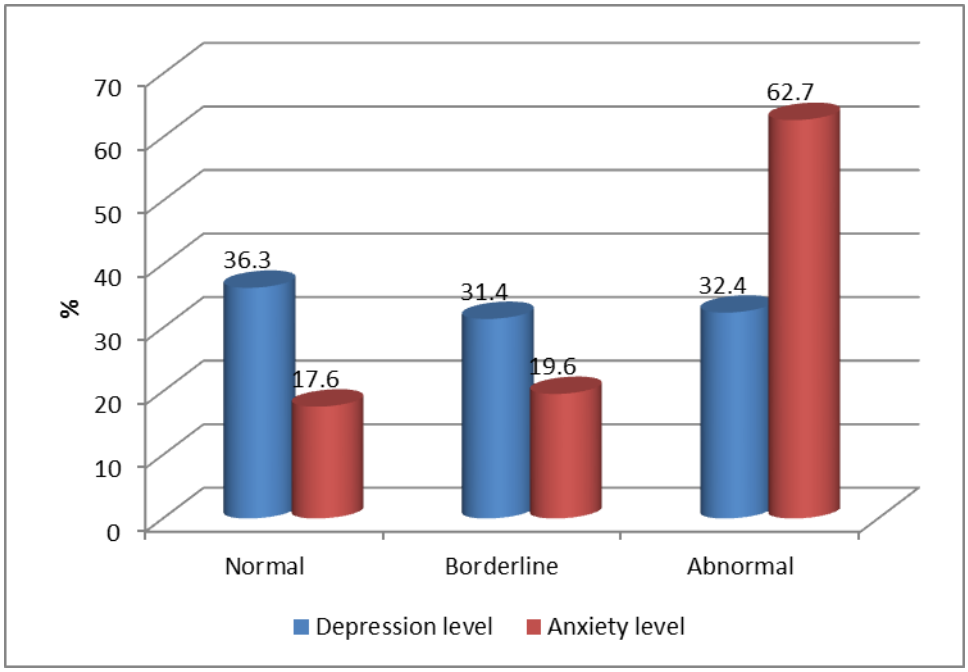

Figure (1)

Table 4: Mean scores and standard deviations of coping strategies among breast cancer patients on chemotherapy(N.102)

Items	Range	Mean±SD
Self-distraction	2 – 8	5.8 ± 1.7
Active coping	2 – 8	6.7 ± 1.7
Denial	2 – 8	5.5 ± 1.9
Substance use	2 – 8	2.7 ± 1.3
Use of emotional support	2 – 8	6.8 ± 1.4
Use of instrumental support	2 – 8	6.5 ± 1.7
Behavioral disengagement	2 – 8	4.2 ± 1.8
Venting	2 – 8	5.7 ± 1.6
Positive reframing	2 – 8	6 ± 1.7
Planning	3 – 8	6.3 ± 1.6
Humor	2 – 8	5 ± 1.6
Acceptance	2 – 8	5.7 ± 1.8
Religion	3 – 8	6.8 ± 1.3
Self-blame	2 – 8	4.5 ± 2.2
Total depression	3 – 19	9.5 ± 3.3
Total Anxiety	5 – 20	11.8 ± 3.5
Brief COPE score	60 – 93	78.1 ± 7.6

Table 5: Correlation between coping strategies, depression and anxiety among breast cancer patients on chemotherapy(N.102)

Items	Total depression		Total Anxiety	
	r	**P. value**	**r**	**P. value**
Self-distraction	-0.21	0.038*	-0.25	0.012*
Active coping	-0.25	0.012*	-0.09	0.371
Denial	0.35	0.000**	0.47	0.000**
Substance use	0.07	0.494	0.19	0.060
Use of emotional support	-0.13	0.209	-0.17	0.093
Use of instrumental support	-0.31	0.002**	-0.28	0.004**
Behavioral disengagement	0.09	0.388	0.05	0.607
Venting	0.17	0.080	0.25	0.012*
Positive reframing	-0.32	0.001**	-0.37	0.000**
Planning	-0.37	0.000**	-0.16	0.109
Humor	-0.05	0.631	-0.02	0.870
Acceptance	-0.30	0.002**	-0.30	0.002**
Religion	-0.15	0.122	-0.13	0.208
Self-blame	0.19	0.058	0.23	0.019*
Brief COPE score	-0.24	0.014*	-0.10	0.319

* Statistically significant correlation (p level <0.05)
** Statistically significant correlation (p level <0.01)

Discussion:-

Breast cancer patients on chemotherapy experienced high level of depressive and anxiety symptoms. These could be normal responses to the threat of the illness, uncertainty, side effects of chemotherapy agents, loss of control or an underlying psychiatric disorder such as depression and anxiety disorders.

The present study showed that more than half of the studied sample were from urban area and aged from 40 to 60 years old; more than two thirds of them were married. These findings were partially supported by, Kelly et al (2008) who reported that, breast cancer incidence rates in, Gharbiah, Egypt, during their study period was 31.8 % among women aged 40–49 years, and 29.8 % among women aged 50–59 years. Around 6.6 % of all breast cancer cases were diagnosed in women less than 40 years of age.

In this respect, Cancer in Norway (2009), found that, the most common cancer diagnosis in women aged from 25 to 69 years old and constitutes 34% of all cancers in women aged 25 to 49 years old. It affected 2,745 women in 2009, representing 22% of all female cancers, and mainly affects women over 50 years old, Norwegian Breast Cancer Group (2011). Also, National Board of Health and Welfare (2002), reported that the risk of getting breast cancer increases significantly with age, and approximately 4700 women over 55 years developed the disease during 2002.

In addition, Parkin, et al. (2002) and Soliman, et al. (2004), reported that, developing countries show a higher incidence of breast cancer in urban than in rural areas, a pattern that has not been fully explained. Other studies have shown that, women living in higher socio-economic status (SES) or urban communities have an increased risk of developing

breast cancer that cannot be explained by their exposure to individual risk factors (Robert, et al. 2004).

The present study, revealed that, more than one third of the study sample had severe depression and had higher score, followed by borderline. While more than two third of them had severe anxiety and had higher score. These findings are partially supported by, Saniah and Zainal (2010), who reported that, Prevalence of depression was 19.1% and prevalence for anxiety was 24.1%. The total prevalence of psychological distress (i.e. depression and/anxiety) as determined by HADS among patients was 29%. In addition, Ando et al. 2009, Montgomery & McCrone (2010), reported that anxiety and/or depression assessed prior to diagnosis were significant predictors of psychological distress after breast cancer diagnosis.

Joulaee et al, (2012) indicated that women's life as a spouse is very important in the family, and all intimate relations with men are in this format. For this reason, when a woman feels that she is not sexually attractive to her spouse, this might be the end of her sexual life. The spouse's reaction to the physical deficits caused by breast cancer may negatively affect women's self-esteem and confidence. These psycho-emotional problems can subsequently increase the physical problems.

In our opinion this finding may be attributed to, breasts are viewed mostly as the women's unique sexual appearance in Muslim cultures; and greater concerns about body image and sexuality; some subsequent problems in relation to their spouse. Or may be attributed to women concerns about children; concerns about having children when faced with a life-threatening illness; premature menopause leading to infertility.

The current study showed that, women with breast cancer have used a wide variety of coping strategies as; religion, use emotional support, active coping, use instrumental support, planning, and positive

reframing. The lowest scores were on: substance use, behavioral disengagement, and self-blame. Similar findings reported by, Saniah and, Zainal (2010), who reported that, the highest scores were on religion, acceptance, use emotional support and use instrumental support. The lowest score were on substance use, behavioral disengagement and self-blame.

In addition Culver et al. (2002), in investigating coping and distress among women undergoing treatment of early stage breast cancer, reported four main coping responses: use of humor, religious coping, self-distraction and venting. The investigators compared the coping responses among women from three ethnic groups; non-Hispanic Whites, Hispanic and African Americans. Non-Hispanic Whites reported more use of humour, Hispanic women used more, venting and self-distraction while religious coping was the common strategy among African Americans.

In this respect, a study by, Taleghani, et al. (2006), showed that the majority of strategies used by Iranian women to cope with breast cancer were being positive on religious faith. Similarly, Overcash, (2004), found that believing in God was of paramount importance for these women, which could help them in not giving up. Other researchers also suggest that the religious beliefs can be a supportive resource for people with cancer or other incurable diseases (Taleghani et al. 2008), but in Muslims, this is more pronounced.

The current study demonstrated that, patients with anxiety symptoms had significantly higher score on, denial, positive reframing, and acceptance, use of instrumental support, self- distraction and self-blame as their coping strategies. While Patients who were depressed had significantly higher score on coping strategies such as planning, denial, positive reframing, acceptance, use of instrumental support, active coping, self-distraction, respectively. This finding is partially supported

by; Saniah and, Zainal (2010) who reported that; patients with anxiety symptoms used denial, behavioral disengagement and venting. This may be explained by, Anxiety was considerably related with realistic, family, emotional problems and spiritual or religious concerns whereas depression was related with practical problems such as transportation, financial and work problems.

Similarly, Lazarus & Folkman (1985) stated that; denial in the form of avoiding all thoughts about the possible devastating effects of cancer may particularly benefit some patients at the time of diagnosis. This may be attributed to, depressed patients tend to internalize their problems and blame them. This can be part of the symptoms of depression. Behavioral disengagement is a dimension that reduces one's effort to deal with the stressor, even giving up the effort to accomplish objectives with which the stressor is interfering.

This may be attributed to, broad difference in women's responses to cancer, with many women adjusting somewhat well and others having more problems. The inconsistency in adjustment to breast cancer diagnosis and treatment has led researchers to examine how factors such as demographics, disease and treatment characteristics, social support, and personality (e.g., coping style) are associated with adjustment. Of these factors, coping strategies in particular have been shown to be highly associated with adjustment and quality of life (QOL) after breast cancer diagnosis.

This may be explained by; denial may not eliminate negative mood states but may help a woman with breast cancer distance herself from negative thoughts and feelings, thereby fostering feelings of hope for a positive health outcome.

Conclusion:- The highest mean score of the studied group used emotional focused strategies, as a method of coping with anxiety and depression symptoms. Women with breast cancer are vulnerable for anxiety and depression.

Recommendations: - Designing and implementing psycho-educational programs about stressor related to the patients with breast cancer.

- Liaison psychiatric nurse should be available to deal with problems of patients with breast cancer.

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