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Evaluation of Psychiatric Morbidity, Locus of Control and Coping Pattern in a Sample of Female Patients with Cancer Breast

Nivert Zaki, Ahmed El Missiry, Gihan El Nahas and Doha El Serafy

Assistant Professor of Psychiatry, Faculty of Medicine, Ain Shams University

ABSTRACT

Introduction: Women diagnosed with cancer breast may experience unique stresses related to loss of fertility, changes in body image and altered relationships with significant others. These stressors demand coping and may induce various psychiatric illnesses, especially anxiety and/or depression.

Aim of the study: To study psychiatric morbidity, pattern of coping, difference in personality traits, importance of the social support and also to correlate between locus of control and health seeking advice behavior.

Subjects and methods: This is a cross sectional study including 100 female patients with cancer breast recruited from the Breast Cancer Clinic, Ain Shams University hospitals. Subjects were assessed by SCID and different scales for their locus of control, social Class, social readjustment and social support.

Results: The majority of cases suffered from mood disorders (32%) followed by anxiety disorders (25%). Cancer breast patients mainly displayed an internal locus of control as compared to controls (58% Vs 38%, P=0.005), with a more frequent use of active cognitive methods. Those within the recurrent group used more avoidance coping method while those in recurrence received comparatively more practical social support than that given to in early disease (P=0.005).

Conclusion: There is a high prevalence of psychiatric disorders and internal attribution of locus of control within patients with breast cancer. It is therefore, essential for physicians to explore and cater for psychosocial needs of the breast cancer patients and support them to cope better.

Key words: Psychiatric morbidity, locus of control, coping, cancer breast female patients

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INTRODUCTION

Breast cancer is the most common cancer in women being the second leading cause of women death from cancer, accounting for approximately 15% of female cancer deaths[1]. With its high prevalence and fatality, breast cancer is seen as deadly and disfiguring disease. Women diagnosed with cancer may experience unique stresses related to the disruption to their body image, especially due to the aesthetic and symbolic value invested in the breast, loss of fertility, sexual concerns, altered relationships with significant others, and changes in various aspects of their social lives and roles[2]. Hence, beast cancer has always been a source of severe distress to patients and their families as well.

The nature, degree, and impact of psychosocial problems and the level of coping differ along the trajectory of breast cancer. Findings from the body of literature in this area indicate that cancer patients with a recurrent disease report poorer physical functioning, poorer perception of their health, less hope and more problems in their relationships with physicians and other health professionals than patients with newly diagnosed disease[3]. External social support is important throughout the course of illness. Studies postulated it is associated with better adjustment among patients and their family members in the newly diagnosed and longer survival among women with advanced disease[4]. Moreover, external social support along with internal psychological coping resources moderate the effect of life stressors as well as the stressful experience associated with the disease and its treatment. These resources seem to help the subjects to adopt a better way of coping, which may improve their chances for recovery from breast cancer[5] and improve their quality of life.

Some studies demonstrated that coping strategies directed towards active engagement with the stressor are associated with more positive adjustment and those geared towards avoidance are related to greater distress in cancer patient sample[6].

The present study is designed to examine the coping pattern in the breast cancer patients during the early diagnosis phase and in the postoperative period through the course of treatment of breast cancer, to study the psychiatric morbidity in cancer breast patients in early diagnosis phase and its recurrence, the locus of control and its reflection on patient adjustment and seeking medical help and to highlight the importance of the social support for these patients.

This study is cross-sectional conducted at the weekly Breast Cancer clinic in conjunction with the nuclear medicine center at Ain Shams University Hospitals, Cairo. The study was approved by the Research and Ethics Committee at Ain Shams University Institute of Psychiatry (ASUIP).

METHODOLOGY

The study was done in two stages. A case-control design to compare the psychosocial profile of 100 female breast cancer patients as compared to 100 controls with respect to the locus of control and personality depressive tendencies, as internal determinants and life stresses, social readjustment, and social status as external determinants that may influence coping. A further descriptive analysis for the 100 female breast cancer patients stratified into two groups, those within the post operative phase, and those in recurrence.

The study included Females aged 35-65 years diagnosed as having operable breast cancer (stage, I, II), who attended the breast cancer weekly clinic over 18 months. We excluded patients with metastases; known complications from chemotherapy and/or radiotherapy, organ failure (hepatic, renal, cardiac), and those undergoing intensive chemotherapy and radiotherapy, since side effects of such treatment can transiently affect adjustment and coping. A total of 120 patients were identified; however, only 100 patients completed and consented to the study. They were further stratified into two groups; first group (n=75) consists of patients in the post-operative period waiting for further management, second group (n=25) consists of patients who had already received a primary treatment for cancer breast, whether surgical alone or combined with radiotherapy or chemotherapy, and re-presented in recurrence of the disease.

The control group consisted of Egyptian females aged 35-65 years recruited from visitors to Ain Shams University Hospitals. A total of 150 were screened by an initial interview, followed by the application of the General Health Questionnaire (GHQ) and the General Medical Health Rating scale (GMHR). We included those with scoring less than 13 on the GHQ, or excellent score on the GMHR (i.e.: no medical condition). While those with a history of a psychiatric or medical condition or having any physical disabilities were excluded from the study. We were able to recruit 100 subjects who consented to the study.

All participants were evaluated by an experienced and trained research investigator and were subjected to the following; ***a)*** a researcher devised demographic data collection questionnaire; ***b)*** Fahmy and El-Sherbini's Egyptian Social Classification Scale which stratifies subjects into four social classes[7]. ***c)*** Rotter Internal-External Control Scale. This is a self administered scale to assess the locus of control and to evaluate the orientation of the person regarding external and internal reinforcements influencing his behavior[8]. ***d)*** Egyptian version of Holmes and Rahe Social Readjustment Rating Questionnaire, a self administered questionnaire used to quantify the impact of 43 life events[9]. ***e)*** D-scale of Guilford inventory of personality factors to assess the depressive personality traits[10].

The patients` group was further evaluated in a second setting by ***a)*** free style Clinical Psychiatric Interview followed by ***b)*** Structured Clinical Interview for DSM-IV (SCID-I) research version to diagnose any DSM-IV axis I disorders[11]. ***c)*** The translated Arabic Version of the Dealing with illness coping self administered inventory which is a self-administered questionnaire with 48 statements on a Likert scale aiming to measure three main coping methods that are further analyzed into 8 specific coping strategies[12,13].***d)*** The MOS Social Support Survey, a 20-item self-report scale designed to measure 4 dimensions of perceived functional social support and interaction (emotional/informational, tangible/practical, affectionate, and total support)[14].

Control group were screened by ***a)*** General Health Questionnaire (GHQ)[15] with a cut of score of 13. ***b)*** General Medical Health Rating scale (GMHR) which assesses current medical health among them by assessing: number of unstable medical conditions, stable medical conditions, number of medications, and clinical appearance[16]. Data analysis was done using Statistical Package for Social Sciences. Student's T test (t) was used for comparison between means of the different groups. Pearson Chi-Square Test (χ2) was used for comparison between qualitative variables. Spearman Correlation Test (r) was used for the relationship of quantitative variables. P value was used to indicate the level of significance where P≤0.05 is considered significant (SIG), P≤0.01 is highly significant (HS), P≤0.001 is (VHS) very highly significant.

RESULTS

The socio-demographic comparison between cases and controls revealed no statistical differences with matching across several socio-demographic (Table 1).

Moreover, breast cancer patients appear to be subjected to statistically significant stressful life events than the control group (Table 2).

With respect to mental illness, Figure (1) shows the distribution of Axis-I disorders diagnosis among patients with Cancer Breast. Adjustment Disorder ranked first, followed by Major Depressive Disorder, Post Traumatic Stress Disorder, and Dysthymic Disorder. The presence of psychiatric morbidity was evident in the recurrence phase of the illness, where essentially the entire recurrent group (n=25, 100%, p=0.022) had a diagnosable Axis-I disorder.

The way of coping of the patients` group were evaluated and compared with anxiety spectrum disorder and mood spectrum disorders. Table (3) shows that patients with depressive disorders use the avoidance coping method more frequently while patients suffering from anxiety disorders follows more the solitary passive behavior.

The different coping strategies were also investigated across the locus of control. We found that patients with external locus of control performed more the active positive involvement (mean=2.5) in comparison to those with internal locus of control (mean=1.8) with a high significant statistical difference between the two groups (P=0.0001). The same was found for the avoidance/solitary behavior (p=0.01). On the contrary the social support presented to patient in our study was further divided into emotional, practical and affectionate. Correlation data revealed no significant correlation between the social support and the type of coping pattern. However, data presented in table (4) showed that emotional support is statistical more expressed in those with no mental disorder (48.3±3.1) and least expressed to patients suffering from mood disorders (p=0.05).

Table (1): The socio-demographic data of case/control groups:

Variable	**Cases N = 100**		**Control N = 100**		**Test used**	**df**	**P. value**
Age	Mean	S.D	Mean	S.D	t. test		0.4 (NS)
	48	± 9.6	45.8	± 8.6			
Marital status:	%		%				
Married	67%		72%				
Single	1%		6%		χ2		0.36 (NS)
Divorced	4%		0%				
Widow	28		22%			3	
Education:	%		%				
Illiterate	34%		29%				
Reads & writes	13%		10%				
Primary	7%		2%		χ2		0.81 (NS)
Preparatory	10%		15%				
Secondary	12%		16%			6	
University	12%		18%				
Post graduated	12%		10%				
Occupation:	%		%				
Clerks	6%		10%				
Employees	26%		20%		χ2	4	0.85 (NS)
Professionals	4%		10%				
House wives	64%		60%				
Residence:							
Urban	60%		55%		χ2	5	0.7 (NS)
Rural	40%		45%				
Social level:							
High	13%		20%				
Middle	8%		10%		χ2	4	0.9 (NS)
Low	18%		15%				
Very low	57%		55%				

Table (2): I stressful life events in the case/control group

Variable	**Cases** **No = 100**	**Control** **N = 100**	**P. value**	**Sig.**
Social readjustment	%	%		
Mild	31	77	0.000	V. HS
Moderate	67	17		
Severe	2	6		

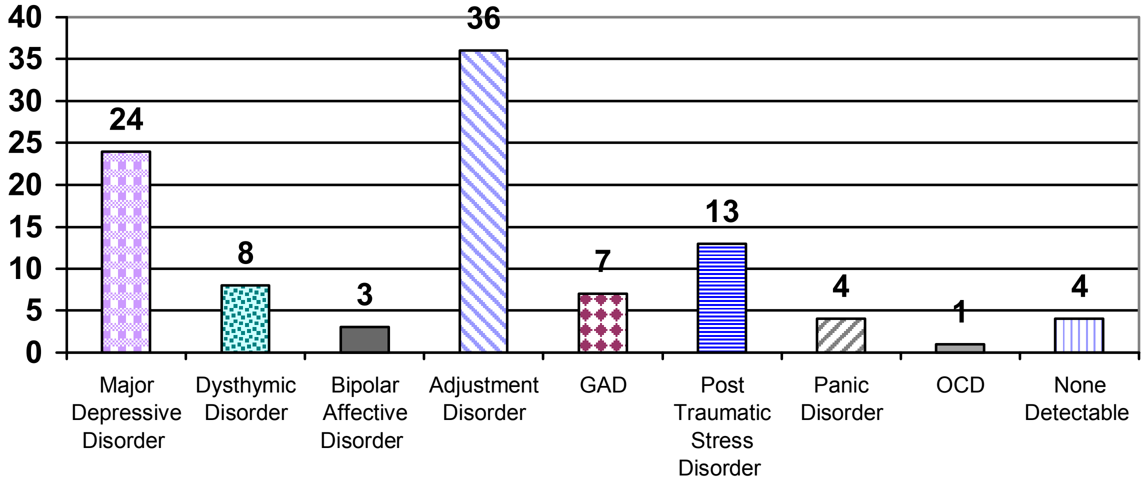

Figure (1): *Axis I diagnosis in case group*

Table (3) Coping pattern and psychiatric morbidity

Variables		**Psychiatric morbidity**			**Test used**	**P value**	**Sig.**
		No mental Dis.	**Mood Dis.**	**Anxiety Dis.**			
***Active cognitive**	**Mean**	3.6	3.5	3.5	T test	0.89	NS
	SD	0.3	0.8	0.8			
***Active behavioral**	**Mean**	2.7	2.8	2.8	T test	0.83	NS
	SD	0.5	0.6	0.7			
***Avoidance**	**Mean**	1.6	2.1	2.0	T test	0.04	SIGN
	SD	0.6	0.6	0.4			
[a]Active positive involvement	**Mean**	1.7	2.1	2.1	T test	0.62	NS
	SD	0.2	0.9	0.9			
[a]Active information seeking	**Mean**	4.1	3.1	3.3	T test	0.08	NS
	SD	0.5	0.9	0.8			
[a]Active reliance on others	**Mean**	4.2	4.3	4.2	T test	0.89	NS
	SD	1.3	1	1.0			
[a]Cognitive positive understanding	**Mean**	4.5	4	3.8	T test	0.21	NS
	SD	0.4	0.8	1.0			
[a]Distraction	**Mean**	2.1	2.3	2.4	T test	0.81	NS
	SD	0.9	0.7	0.8			
[a]Cognitive passive rumination	**Mean**	2.5	2.7	2.9	T test	0.24	NS
	SD	0.8	0.9	0.9			
[a]Passive resignation	**Mean**	2.8	3.4	3.2	T test	0.38	NS
	SD	1	1.1	1.1			
[a]Solitary-passive behavior	**Mean**	1.3	2.3	2.5	T test	0.04	SIGN
	SD	0.3	1.1	1.2			

Table (4): social support and psychiatric morbidity

Variables		Psychiatric morbidity No mental disorder	Mood disorder	Anxiety disorder	Test used	P value	Sig.
Emotional/ informational	**Mean**	48.3	38.2	40	T test	0.05	SIGN
	SD	3.1	10.2	9.2			
Practical	**Mean**	18.3	17.7	17.3	T test	0.81	NS
	SD	1.7	3.5	4.3			
Affectionate	**Mean**	14.5	12.2	14.1	T test	0.12	NS
	SD	1.9	4.5	4.7			
Total	**Mean**	81.0	66.7	69.8	T test	0.08	NS
	SD	4.5	16.4	15.9			

DISCUSSION

Psychiatric morbidity is commonly seen in patients with breast cancer with mood and Anxiety Disorders being the most prevalent. Our finding of high levels of anxiety and depression in Egyptian breast cancer patients reflects the previous finding that anxiety was prevalent in comparable rates of 15%-25% of cancer breast female patients, while rates of major depressive disorders were higher (42.5%), and the reported comorbidity rate of anxiety and depression ranged from 10%-30%[17]. The small sample size (40 cases), and the non use of structured interviews, might have contributed to these high rates. In other studies, 45% of women had an episode of depression, anxiety, or both in the three months after diagnosis of recurrence compared with 36% in the three months after initial diagnosis[18]. This discrepancy may be explained by the cross-cultural differences (e.g. social stigma, inadequate control of debilitating symptoms such as pain, inadequate social interest about those recurring and dying from the disease).

The most commonly used coping method in our study was the active cognitive method. These data joined the finding of Foad et al[12.]. Recent studies suggest an association between maladaptive coping styles with higher levels of depression, anxiety, and fatigue symptoms, while patients with better coping skills such as positive self-statements have lower levels of depressive and anxiety symptoms.

Each type of functional support can be obtained from many potential support providers, i.e. sources of support[19]. The importance of social support for cancer breast survival was illustrated in many studies which proved that socially isolated women had an elevated risk of mortality after the diagnosis of breast cancer, likely because of a lack of care access, specifically beneficial care-giving from friends, relatives, and adult children[20].

CONCLUSION

There was high prevalence of psychiatric disorders in our recruited sample, mainly mood and anxiety disorder. Mood disorders were more frequent in the recurrent group of patients. However, anxiety disorders were more prominent in the early post-operative phase. This highlights the importance of specific psychiatric and psychosocial intervention for each group. We illustrated the different pattern of coping used by the study group. Most of the patients used to follow the active reliance on other yet we found no different between the recurrent and the early post-operative as regards this coping strategy.

Clinical implications:

We need to investigate more the outcome of the social support and the coping pattern on the survival or the prognosis of cancer breast and to add on some tools to evaluate the personality profile in a more specific context which could play a role in the coping pattern of cancer breast female patients. Also, general practitioners and oncologist must be guided to the best way to detect psychiatric illness and differentiate it from the normal reaction to cancer diagnosis through the clinical guidelines suggested as through review of women with breast cancer involves an assessment of mood and coping, and enquiries about how the family is coping. Finally multidisciplinary care can improve outcomes for women with breast cancer, and should be considered throughout management and treatment.

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Corresponding Author:

Nivert Zaki
Assistant Professor of Psychiatry,
Faculty of Medicine,
Ain Shams University