

Coping Strategies in Egyptian Ladies with Breast Cancer

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ABSTRACT

INTRODUCTION: A diagnosis of breast cancer regardless of the stage can be stressful, impact multiple spheres of life, and disrupt physical status, emotional and spiritual well-being, and personal relationships for the patient and family. In order to adapt, the patient ought to employ certain coping mechanisms. Individuals with terminal illness who utilize coping strategies have better quality of life compared to those who do not.

PATIENTS AND METHODS: This study aimed to determine the strategies used by females with breast cancer to cope with such stress by using Brief COPE scale and the hospital anxiety and depression scale. The study included 56 female patients diagnosed with operable breast cancer at Mansoura Oncology Center before surgery.

RESULTS: Large proportion of patients used acceptance, religion, and emotional support in coping with the stress of having breast cancer. Patients with depressive symptoms scored significantly higher venting while those with anxiety scored higher positive reframing, planning, and venting.

CONCLUSION: Efforts should be made to encourage women with breast cancer to use coping strategies that have been found to be helpful (eg, acceptance, emotional support, distraction, and active coping strategies).

KEYWORDS: coping, depression, anxiety, breast cancer, Egypt

CITATION: Elsheshtawy et al. Coping Strategies in Egyptian Ladies with Breast Cancer. *Breast Cancer: Basic and Clinical Research* 2014;8:97–102
doi:10.4137/BCBCR.S14755.

RECEIVED: February 10, 2014. **RESUBMITTED:** March 30, 2014. **ACCEPTED FOR PUBLICATION:** March 31, 2014.

ACADEMIC EDITOR: Goberdhan P. Dimri, Editor in Chief

TYPE: Original Research

FUNDING: Authors disclose no funding source.

COMPETING INTERESTS: Authors disclose no potential conflicts of interest.

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Introduction

Breast cancer is the most common cancer among women in developed western countries and is becoming more significant in many developing countries. In Egypt, breast cancer is the most common cancer among women, representing 18.9% of total cancer cases with an age adjusted rate of 49.6 per 100 000 population.¹

A diagnosis of breast cancer is a great shock. Women report that they fear breast cancer more than heart disease, even though they have a better chance of surviving breast cancer, and later dying of stroke or heart failure. Breast cancer has been known since the early Egyptians, and fear of this disease as well as the treatments for it, seem to be inherent in women all across the world.² In order to adapt/cope, the patient ought to employ certain coping mechanisms. Individuals with terminal

illness who utilize coping strategies have better quality of life compared to those who do not.³

In Egypt, like many other developing countries, women diagnosed with cancer may experience unique stresses related to loss of fertility, changes in various social roles, body images, sexual concerns, and altered relationships with significant others.^{4,5}

Ever since popularization of the notion that women with a “fighting spirit” had better breast cancer survival than women who were compliant, there has been a good deal of research interest in the role that different ways of coping with illness may play in breast cancer prognosis. The “fighting spirit,” along with denial, were two psychological responses first identified by British researchers from clinical interviews conducted among 69 early stage breast cancer patients



who subsequently experienced better five-year survival than women whose responses were characterized as “stoic acceptance” or “helplessness/hopelessness”.⁶

Coping is the major determinant in the process from stressful events to adaptational outcomes such as psychological symptoms and somatic illness.⁷ Coping has two main functions: dealing with the problem that is causing the distress (problem-focused coping) and regulating stressful emotions (emotion-focused coping).^{8,9}

Early identification of patients who are coping poorly is important for compliance with treatment and control of distress. It is equally important to recognize and diagnose common psychiatric disorders, primarily anxiety and depression, which can occur and can affect the coping style. Referral for counseling to a mental health professional familiar with the care of patients with cancer may be indicated.¹⁰

According to Johnson's stress-coping model, coping strategies are efforts directed toward managing or dealing with a stressor.^{11,12} Depending upon how effectively individuals cope with their stressors, they may experience either desired emotional states of acceptance, peace, and equanimity, or undesired emotional consequences such as depression, anxiety, and anger.¹³ Many psycho-educational programs have been effective in improving cancer patients' coping strategies and outcomes of coping, such as moods.¹⁴ Coping does not imply success¹⁵ but efforts to resolve a stressful situation. Several factors influence the stress-coping response. Some factors are related to the stressor such as, intensity, scope, duration, number, and nature of concurrent stressors and predictability. Those related to the individual experiencing the stressor include level of personal control, feeling of competence, availability of social support, information and guidance, and access to resources (equipment and supplies). Others are age at the time of stress and cognitive appraisal.^{15,16}

Although anxiety and depressive disorders are common in breast cancer and worsen the disease course, coping style, and treatment outcomes, these psychiatric disorders are ignored and left untreated. Understanding these common psychiatric disorders and associated psychosocial factors can help to plan for treatment and may result in more treatment success.¹³

This study aimed to determine the different coping strategies employed by female patients diagnosed as having breast cancer and to estimate the presence of anxiety and depression among them.

Patients and Methods

This was a cross-sectional study conducted at Surgical Oncology Unit in Oncology Center—Mansoura University from August 2011 to August 2013. Ethical approval was granted by the Mansoura Medical Research Ethics Committee. Fifty-six patients diagnosed with breast cancer were recruited for the study before entering surgery. After explaining the purpose and nature of the research, written informed consent was taken from the patient to join the study. Patients who have any disorder that

clearly interfere with cognition, such as central nervous system lesions and hepatic or renal dysfunction were excluded.

All patients in this study were assessed on their socio-demographic profiles and clinical history, the following scaled were applied:

- a. Brief COPE scale¹⁴ is a validated short form of the COPE inventory¹⁵ for measurement of coping in health related research. The Brief COPE consists of 14 scales of two items each. Both cognitive and behavioral strategies of coping are included and is rated by the four-point Likert scale, ranging from “I haven't been doing this at all” (score one) to “I have been doing this a lot” (score four). In this study, there were no cut-off point scores for coping strategies.

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 (ie active coping, planning, and using instrumental support) and emotion-focused strategies (ie positive reframing, acceptance, religion, using emotional support, and denial). The scale was translated into Arabic, back-translated into English, and then retranslated into Arabic. The reliability during a short retest interval (several days) was reported to be 0.85.

- b. Hospital anxiety and depression scale (HADS)¹⁶ was used to report anxiety and depressive symptoms. The instrument was designed for medically ill patients and does not include physical symptoms. It has been validated in patients with cancer.¹⁷

The HADS contains seven items that assess anxiety and seven items that assess depression. HADS-A or HADS-D score of >8 was defined as a case, score from 8 to 10 is mild, from 11 to 14 is of moderate intensity, and above 14 denotes severe. Arabic translated form was used.¹⁸

Results

Table 1 shows socio-demographic variables for cancer breast patients highlighting that the mean age was 52 ± 13.3 years and about half of them were illiterate, most of them were housewives and married with significant statistical difference. Most of them were of majority of them were of grade II and III and their lymph node status was between N1 and N2, only seven of them had metastasis.

Table 2 describes the different pattern of the coping strategies used by patients indicating that the most commonly used were religion (mean 4.55 ± 1.6), acceptance (mean 4.14 ± 1.3), and emotional support (mean 4.04 ± 1.4) followed by self distraction (mean 3.62 ± 1.3). The lowest scores were on substance use (2.14 ± 0.4), behavioral disengagement (mean 2.4 ± 0.8), and self-blame (mean 2.5 ± 1).

**Table 1.** Socio-demographic data and clinical variables.

	MEAN ± SD	SIGNIFICANCE
Age	52 ± 13.3	t = 29.402 p = .000**
Education		
Illiterate	28	χ ² = 25.321 p = .000**
Primary	12	
Preparatory	7	
Secondary	10	
College	2	
Occupation		
Housewives	48	χ ² = 70.107 p = .000**
Student	1	
Professional	7	
Marital status		
Never married	3	χ ² = 46.00 p = .000**
Married	35	
Widow	13	
Divorced	5	
Grade		
I	5	χ ² = 29.18 p = .000**
II	37	
III	14	
T		
T1	6	χ ² = 6.43 p = .001**
T2	25	
T3	17	
T4	8	
Metastasis		
+ve	7	χ ² = 31.5 p = .000**
-ve	49	
LN status		
N0	7	χ ² = 9.86 p = .020*
N1	22	
N2	17	
N3	10	

Abbreviations: T, tumor size; LN, lymph node status.

Table 3 describes the results of HADS, it shows that about 70% of patients were suffering from depression of mild to moderate severity, none had severe depression. Regarding anxiety, more than half of the cases were anxious (73%) with mild to moderate severity, about 2% of them had severe anxiety.

Table 4 demonstrates that depression was significantly only positively correlated with venting ($r = 0.307^*$) while anxiety was significantly positively correlated with positive reframing ($r = 0.298^*$), planning ($r = 0.277^*$), and venting ($r = 0.301^*$).

Table 5 describes the correlation between the results of Brief COPE scale with different clinical and pathological

Table 2. Brief COPE scale among breast cancer patients.

	MEAN ± SD	T
Acceptance	4.14 ± 1.3	24.67
Self distraction	3.62 ± 1.3	20.207
Emotional support	4.04 ± 1.4	21.559
Instrumental support	3.05 ± 1.1	20.135
Positive reframing	2.98 ± 1.9	21.925
Behavioral disengagement	2.4 ± .8	23.999
Planning	2.96 ± 1.1	19.960
Substance use	2.14 ± .4	45.415
Venting	2.69 ± 1.2	17.184
Humor	2.91 ± 1.3	16.613
Religion	4.55 ± 1.6	20.784
Self blame	2.5 ± 1	18.042
Active coping	3.3 ± 1.8	13.986
Denial	2.59 ± 1.2	16.111

variables as grading, tumor size, LN status, presence of positive estrogen, progesterone receptors or HER2, or for metastasis or recurrence, where only metastasis was found to be positively correlated with venting ($r = 0.284^*$) and highly positively correlated with denial ($r = 0.357^{**}$).

Discussion

A diagnosis of breast cancer can be considered as a more severe stressor than most of the stressful events faced by people.¹⁹ Our study analyzed the coping strategies used by a group of female patients who received a diagnosis of breast cancer before doing surgery. Many of our participants were old, married, illiterates and house wives, this could give an idea that most of attendants patients to the Oncology Center are of low social class.

In this study, the higher percentage of breast cancer patients was using religion coping strategy. Religion is seen as one of the emotion-focused coping strategies involving purely cognitive activities that do not directly alter the actual relationship with the environment but do alter the way this relationship is cognized.^{20,21} Subjects believed that God had chosen this path for them and now they had no choice except to walk that path, women discussed how their faith in God helped alleviate fears about future uncertainties, disease, and

Table 3. Hospital anxiety and depression scale results.

	DEPRESSION		ANXIETY	
	NO	%	NO	%
No <8	16	28.6%	26	46.4%
Mild 8–10	23	41%	15	26.8%
Moderate 11–14	17	30.4%	14	25%
Severe 15–21	0	0%	1	1.8%



Table 4. Correlation between brief COPE and depression and anxiety.

BRIEF COPE	DEPRESSION	ANXIETY
Acceptance	-.255	-.193
Self distraction	-.007	-.207
Emotional support	.028	.196
Instrumental support	-.097	.119
Positive reframing	.087	.298*
Behavioral disengagement	.029	.222
Planning	.228	.277*
Substance use	.006	-.071
Venting	.307*	.301*
Humor	.207	.070
Religion	.106	.198
Self blame	.055	.203
Active coping	.057	.107
Denial	-.066	.104

Note: *Significant at $P \leq 0.05$.

death, by “leaving it in God’s hands.” The finding was consistent with prior studies of cancer patients.^{22,23}

A study done by Taleghani et al showed that the majority of strategies used by Iranian women to cope with breast cancer were being positive on religious faith.²⁴ Doumit et al stated in their study that Lebanese women regardless of their religious background, considered cancer to be something from God.²⁵ This made the women accept their disease because when something is from God, you cannot change, only accept it. The high level of the use of religion coping strategy can explain the lower severity of depression in this group of patients as

it was from mild to moderate severity against what could be expected as a reaction to have cancer.

Regarding acceptance, it was the second most common coping strategies among those patients. Acceptance means compliance with the reality of a stressful situation, learning to live with it, accepting its implications and its irreversible course. This suggests that Egyptian women with breast cancer tend not to blame themselves for the disease nor think that it is their sole responsibility to address the problem. The planning that is necessary to get through the cancer experience, and adaptation to life after cancer may have enhanced this form of coping. Similarly, the powerlessness and lack of control that the cancer experience often engenders may also have promoted a stronger sense of acceptance as a coping strategy. Again this replicates the study of Carver et al, who found acceptance to be one of the most often used coping strategies along with positive reframing and the use of religion.¹⁴

Our group of patients also used emotional support and self distraction, women with higher levels of emotional support were slightly less likely to want to avoid knowing about a cancer diagnosis and were much less likely to agree that cancer treatments were worse than the disease itself. Self distraction reflects the tendency to engage in other activities that distract the individual from thinking about or taking action to handle the stressor. Common distracting activities include daydreaming, watching television, or sleeping.

From the results it was evident that more than half of the cases had mild to moderate depression that was correlated with venting coping strategy. As venting is one of the emotional coping strategy with a tendency to focus on whatever distress one is experiencing and to vent those feelings, focusing on these emotions (particularly for long periods) can impede

Table 5. Correlation between brief COPE and different clinical and pathological variables.

	METASTASIS	RECURRENCE	TUMOR GRADE	PR	ER	HER2	L.N STATUS	T
Acceptance	.043	-.015	.121	-.141	-.177	-.023	-.206	.019
Self distraction	.025	-.063	-.015	.162	.158	-.221	.120	.188
Emotional support	-.263	-.003	.016	-.024	.032	.078	.180	.209
Instrumental support	-.066	-.006	-.042	.061	.052	-.001	.209	.083
Positive reframing	.167	.136	-.058	.138	.249	.171	.083	.214
Behavioral disengagement	.215	-.102	.048	-.099	-.033	-.008	.214	.176
Planning	.012	.127	-.107	.022	.076	.024	.176	-.001
Substance use	.092	-.065	.247	-.192	-.049	-.073	-.001	-.060
Venting	.284*	.035	.047	-.054	.025	.261	-.060	.181
Humor	-.016	.113	.044	.173	.186	-.191	.181	-.025
Religion	.204	.120	.078	.268	.319	-.185	-.025	.178
Self blame	-.033	-.067	.072	-.099	-.099	.194	.178	.000
Active coping	-.158	.054	-.068	-.094	-.094	.236	.000	.210
Denial	.357**	-.067	.045	.087	.121	.157	.210	-.102

Notes: *Significant at $P \leq 0.05$; **Highly significant if $P \leq 0.01$.

Abbreviations: T, tumor size; ER, estrogen receptors; PR, progesterone receptors; HER2, human epidermal growth factor receptor 2.



adjustment.²⁶ The phenomenological salience of distress may exacerbate the distress causing depression.

Individuals who utilize playful problem solving as a coping strategy focus their efforts on planning and positive reframing taking direct action to solve a problem that is related to better adjustment to cancer. Participants in this study who were anxious frequently used playful problem solving to cope with breast cancer. Venting in its mild form could be an effective way to promote psychosocial well-being. The advantage of venting was not only a means to release unpleasant feelings, but also a means to get an effective response from others. This finding suggests that health professionals should patiently listen to patients with cancer and provide opportunities for expression of negative feelings and complaints.²⁷

Denial, which is a form of avoiding all thoughts about the possible devastating effects of cancer, was used as a coping strategy by a group of patients. It could be seen beneficial as it 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. On correlation between coping strategies with different clinical variables, denial was highly significantly correlated with metastasis. This positive correlation could suggest that this coping strategy may play a role in delaying medical help, hence, deteriorating the condition of the patient leading to metastasis. Also, venting was significantly correlated with metastasis mostly in those who are depressed. This can be explained that nowadays it is well known that depression causes some physiological changes through the persistent activation of the hypothalamic–pituitary–adrenal axis leading to cancer progression. This persistent activation probably impairs the immune response and contributes to the development and progression of some types of cancer. This gives evidence that various cellular and molecular immunological factors are compromised in depression and discuss the clinical implications of these factors in the initiation and progression of cancer. Also, some studies found that, there is decreased cytotoxic T-cell and natural-killer-cell activities that affect processes such as immune surveillance of tumors, and events that modulate development and accumulation of somatic mutations and genomic instability leading to metastasis.²⁸

Limitations

- Small sample size was recruited for the study, thus generalization of the results is difficult.

Conclusions

- A diagnosis of breast cancer causes stress to the patient. Coping strategies employed could either be problem-focused or emotion-focused. Predominant coping strategies used were: (a) religion; (b) acceptance; (c) emotional support; and (d) self distraction. The strategy employed influences adaptation to the diagnosis.
- We should encourage women having breast cancer to use coping strategies that was found to be helpful

(eg, acceptance, emotional support, distraction, and active coping strategies). Together with early identification of coping strategies that could delay seeking medical and surgical help as denial and venting.

- Early diagnosis and management of any psychiatric disturbance specially depression would promote better coping in those group of patients and help in improving immunological processes involved against progression of cancer.
- More in-depth studies are needed to study the relation between presence of depression and anxiety in breast cancer patients and changes at receptors, different pathological variables together with progression of cancer.
- Application of molecular tools to study coping with the stress of having breast cancer for obtaining a quantitative measure of the effect of different coping strategies on immunological processes and mammary cells.

Author Contributions

Conceived and designed the experiments: EAE, WFA, HSA, OF. Analyzed the data: EAE, WFA, HSA. Wrote the first draft of the manuscript: EAE. Contributed to the writing of the manuscript: OF, MIEE. Agree with manuscript results and conclusions: EAE, WFA, HSA, OF, MIEE. Jointly developed the structure and arguments for the paper: EAE, WFA, HSA. Made critical revisions and approved final version: EAE, WFA, HSA, OF, MIEE. All authors reviewed and approved of the final manuscript.

DISCLOSURES AND ETHICS

This paper was subject to independent, expert peer review by a minimum of two blind peer reviewers. All editorial decisions were made by the independent academic editor. All authors have provided signed confirmation of their compliance with ethical and legal obligations including (but not limited to) use of any copyrighted material, compliance with ICMJE authorship and competing interests disclosure guidelines and, where applicable, compliance with legal and ethical guidelines on human and animal research participants.

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