



Prevalence of depression in breast cancer patients and its association with coping skills at Shefa hospital, Ahvaz.

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Abstract: This study was conducted to evaluate depression in patients with breast cancer and its relationship with coping skills. This study was a descriptive epidemiological study in which 178 women with breast cancer that referred to Shafa hospital in Ahvaz were studied. Beck depression inventory was used to measure depression of the group under study Boyer coping skills inventory was used to measure the coping skills. After collecting data, they were analyzed in SPSS software program and the results were obtained. The results showed that the use of maladaptive style in the participants was statistically significant in the study and there was a positive and significant correlation between maladaptive style and depression score and the maladaptive style predicted 58% of the variance in the depression scores. Also, the relationship between the demographic, treatment duration, marital status, education and number of children and depression scores was statistically significant but there was no significant relationship between depression and income, type of treatment, employment status and age. Finally, it was concluded from the current study that patients with breast cancer who were tested in the study use the maladaptive and destructive style to deal with everyday problems and this is also associated with their depression; meanwhile factors such as marital status, number of children and education played a positive and significant role in reducing and controlling their depression.

Key words: Depression; coping skills; breast cancer

Introduction

According to the World Health Organization, breast cancer is the second most common cancer worldwide and the most common cancer among women. More than a million women are diagnosed with breast cancer annually (1). Breast cancer is the fifth leading cause of death in women aged 40-50 years. Its prevalence in Iran is estimated as 20 per 105 women and one out of 10 women will develop breast cancer in her life time (2). Epidemiology of breast cancer in Iran is similar to the Eastern Mediterranean Region countries and other developing countries and the incidence trend has changed in recent years. In Iran, according to the Center for Disease Control of the Ministry of Health, the incidence of breast cancer among all cancers in women is still in first place and with two adjusted age incidences of 27.15 and 6976 cases in 2007 has the highest incidence among different cancers (3).

Cancer patients often undergo various treatments in various hospital centers and it is attempted to cope with the recurrence, severity or spread of

cancer among them. With detailed study of the treatments provided to patients with cancer and breast cancer, it becomes clear that the majority of treatments are medical and physical while the rest of the human parts remain intact. For example, the mental parts can provide a strong platform for physical therapies and intensify their effectiveness (4). One of the chronic diseases that increase the risk of depression in a person is the risk of cancer. In several studies cancer is an important risk factor for depression (3).

Depression is one of the most common mental health problems in the world. In the general population, the annual prevalence of depression is about 9%. Among patients with cancer the prevalence of depression is usually higher and about 15-20% which is 3-5 times higher than the general population.

Depression in cancer patients dramatically affects the health performance and increases the mortality risk in these subjects. Also, depressed patients are less likely to have cancer treatments and do not

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care about the medical advices which increases the use of the emergency services and hospitalization by the cancer patients with depression compared to the ones that are not depressed (5). Cancer diagnosis is also among the notable stress factors that lead to psychological stress and poor quality of life in many patients (2).

Patients with physical pains such as cancer usually have maladaptive and negative assessments about the situation and their ability to control their pain. Therefore, they tend to assess their pain as a threat and thus resort to emotion-focused coping (6). Depression in addition to negative impact on the assessment causes the person to expect more threat in the coping condition. Thus, a significant relationship has been reported between emotion-focused coping methods and depression (7, 8). Coping strategies are a set of cognitive and behavioral efforts applied to interpret and modify a stressful situation and reduce the suffering caused by it. Generally coping is defined as an individual cognition or behavioral efforts to manage (reduce or tolerate) the stressful conditions. Coping strategies are divided into two basic categories.

- 1) Problem focus coping
- 2) Emotion focus coping

Regarding the scope of mental health and coping skills it can be mentioned that mental health is considered as a bilateral interaction on the one hand with the election results and the use of effective coping skills proportional to the change and stress and on the other hand it provides a healthy mental space in the light of which the correct understanding and evaluation of stressful condition is made possible to select an effective coping strategy. Health psychology places great importance to the role of coping on physical and mental state of health and considers it as an intermediary between stress and depression (9). It is clear that the effective use of coping skills may reduce depression in patients with advanced diseases (10). Psychological stress, coping and vulnerability interact with each other. When the level of vulnerability is high, the patient presents maladaptive behavior against mental stress. As the person's ability for better coping is better, they are less likely to be involved in situations that they are vulnerable in the (11). Early diagnosis of the patients who are in poor coping state is important for the treatment and control of depression caused by major diseases (12).

Materials and Methods

Method, population and samples

In a cross-sectional study, descriptive epidemiologic analysis in Shafa Hospital in Ahvaz a number of female patients with breast cancer

with a minimum age of 18 years that disease has been confirmed by the pathologists and related professionals were entered to the study after objective justification and presenting the written consent. Patients who have a history of mental illnesses including depression, mental retardation, cognitive impairment, dementia and psychosis prior to developing cancer and patients who do not have the ability to understand the questions in the questionnaire were excluded from the study. The population included in this study was female patients with breast cancer whose disease was confirmed by pathology and relevant specialists. A total of 178 samples were selected as samples.

Research Tools

Beck Depression Inventory: Beck Depression Inventory was first introduced by Beck et al in 1961. Since the initial BDI only covered only 6 measures out of 9 measures, it was reviewed for higher coordination with DSM-IV in 1996 (13). The initial version of the inventory has 21 items. In the following years, the 13-item version of it was prepared to facilitate its easier implementation. In this version, similar to the 21 item one each item has 4 options that the participants have to choose one of them. Also, based on the scores obtained each person can be placed in one of the depression classes. Rajabi analyzed the psychometric properties of the questionnaire. Orovaei in his study obtained the correlation coefficient of BDI as 0.67 which was significant at $p < 0.01$. Also, factor analysis showed that the inventory has two subscales known as negative emotions toward one self and lack of pleasure. The reliability of the questionnaire using Cronbach's alpha and split half methods was 0.89 and 0.82. The validity and reliability of 13-item BDI is also examined in foreign studies (14).

Coping skills inventory: To measure adaptive skill the coping strategies inventory designed by Boyer et al (1999) was used. The questionnaire includes 22 items the 11 items analyze the adaptive and 11 items analyze the maladaptive style. Even questions measure the adaptive styles and the odd questions measure the maladaptive style. Thus, if the participant has more responded to the even questions, she is adaptive and if she has more responded to the odd questions, she is maladaptive. The score of higher than 6 in maladaptive items indicates maladaptive and inefficient practices (15).

Method of analysis

In order to analyze the data in this questionnaire, the descriptive statistic methods such as the mean, standard deviation, frequency and frequency percentage were used. In the inferential tests the t-test was used for the independent samples, regression and correlation were used.

Results

In the results the demographic characteristics of subjects were discussed. The demographic characteristics of subjects are shown in Table 1.

Table 3-1: education level, marital status, employment and income of the samples

Variable	Education	Frequency	Percent
Education	Under Diploma	49	27.5
	Academic	129	72.5
Income	Low-average	65	36.5
	High-average	113	63.5
Marital status	Single	85	47.8
	Married	93	52.2
Employment	Employed	80	44.9
	Unemployed	98	55.1

Also, the average age of the group under study was 30.21, the mean treatment period was 2.69 years and the average number of children was 0.92. The cancer treatments of the patients included mastectomy, chemotherapy, radiology, hormone and combined therapies that in this study most of the patients had used radiology. To study the coping styles in the group under study in the one-sample t test was used the results of which are presented in Table 2.

Table 3-5: one-sample t-test to compare coping styles in the sampled under study

Variable	Mean	SD	Cut off point	t	p
Adaptive	3.34	1.72	6	20.51	0.001
Maladaptive	8.07	1.54	6	17.94	0.001

The above table shows the coping style of the group under study in maladaptive style is higher than the cut of score 6 and this value is statistically significant ($p=0.001$) and thus it can be said that the prevailing style of the subjects is the maladaptive style. In another analysis, the relationship between the coping and skills and depression was studied. The r value calculated for the relationship between depression and the adaptive style was 0.013 and that of the depression and the maladaptive style was 0.260; where the r value obtained for the relationship between depression and the maladaptive style was statistically significant.

Table 3-7: stepwise multivariate regression analysis to predict depression through coping styles

Predictive variables	B	SE	Beta	T	P
Maladaptive	1.09	0.308	0.260	3.56	0.001
ADJ.R ² = 0.057		R ² = R = 0.068 0.26			

According to the results of the above table of the multivariate style to predict depression 0.057% of depression variance is predicted Among demographic characteristics depression had a significant relationship with duration of the disease, number of children, marital status and

education but there was no significant relationship between depression income, age, type of treatment, and the employment status.

Conclusion

This study was conducted to evaluate depression in patients with breast cancer and its relationship with coping skills. To conduct this study the women with breast cancer were examined and depression and coping skills tests along with additional information such as the duration of treatment, type of treatment and ... were examined. The first result of the study was that the mean of the group studied in this research in the maladaptive style was higher than the standard level and this means that the group under study uses the maladaptive coping skills in the face of stressful events. The results of other studies confirmed the results of the present study (16-18). To explain these results it can be noted that possibly the destructive and negative events resulting from the disease and lack of concentration and mental balance of the breast cancer patients have led to their failure to adopt a useful and proper approach towards environmental events. The second result of this study indicated that depression has a significant and positive relationship with maladaptive coping style but it has no statistically significant correlation with the adaptive coping style. This means that as the severity of the depression increases, their maladaptive coping style score is increased but since the correlation test was used to investigate the relationship between the two variables, it is not possible to interpret the cause and effect relationship and it can be noted that the reason of depression is the use of maladaptive coping style and to explore this relationship it is necessary to use another methodology and other statistical tests. The results were consistent with various studies (19-21). In explaining this result, it can be said that the incidence of a negative event causes negative emotions such as anxiety and stress in the individual. According to the first result of this study the subjects in this study have had the maladaptive style versus their life events and thus the use of such maladaptive style against these events could highlight the negative effects of these events and lead to the conversion of natural emotions such as sadness into pathological emotions such as depression and acute anxiety. The third result of this study indicated that the disease duration among the subjects was associated with their level of depression. According to the results of this study it became clear that the level of the correlation between the duration of illness and depression is positive and significant which means that as the duration of disease increases, their depression was intensified. The results of other studies approved the results of the present study (22, 23). Breast cancer in addition to physical

problems and exhausting treatment causes heavy psychological pressure as the result of losing the organ. Long-term treatment of this disease exposes these patients to risk and increases the risk of developing severer emotional problems such as depression. The fourth result of the present study was the there is a significant relationship between education and depression in patients with breast cancer. The calculated t value between the two levels of under diploma and academic educations indicates that the depression of the subjects in this study is related to their education both with and without academic educations so that as the level of education increases from elementary school to academic educations, the level of depression is reduced and this reduction is statistically significant (24, 25).

The results also showed that there is no significant relationship between depression and age, income, type of treatment, and employment status which is consistent with the results of the previous studies (26-28).

Based on the results of the present study it is recommended to the researchers who want to conduct research in this area in future:

1. Basic and cultural factors of the subjects should be considered and they should be included as variables in the study.
2. Other factors and individual characteristics such as religious beliefs should be considered along with other demographic characteristics.
3. Treatments should be developed and the maladaptive coping strategies of patients should be modified and their effectiveness should be analysed.

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