

# Investigating the Effectiveness of Compassion-Based Therapy in Improving the Performance of Women with Breast Cancer

## Abstract

One of the chronic diseases whose diagnosis and treatment involve many psychological problems is breast cancer. Considering the nature of this disease, it seems necessary to use psychological treatment. The purpose of the current study was to investigate the effectiveness of compassion-based treatment in improving the performance of women with breast cancer. This study is a semi-experimental type and was done with a post-test and pre-test design and with two experimental and control groups. The statistical population of this study included female patients with breast cancer who had visited the hospital, and among them, thirty qualified volunteers were randomly included in the study. Data analysis was done using SPSS version 23 software and the covariance analysis method. According to the results of the current study, the impact of compassion-based treatment on happiness and family functioning in women with breast cancer was significant ( $p < 0.001$ ). The findings of the present study demonstrated that compassion-based treatment can have a positive impact on happiness and family functioning in women with breast cancer. Based on the results, it is recommended to use compassion-based treatment along with other treatment methods for health-related interventions, especially to reduce psychological problems in women with breast cancer.

**Keywords:** Cancer, Breast cancer, Women, Compassion-based therapy, Performance

## Introduction

There are different types of cancer and each type can affect any part of the body.<sup>[1, 2]</sup> Breast cancer is the main cancer in women and has a profound impact on different functions of women in life.<sup>[3]</sup> This cancer causes deep emotional and emotional problems in them. Breast cancer is a chronic disease, the diagnosis and treatment of which brings many psychological problems and increases the need to use psychological treatment.<sup>[4, 5]</sup>

On the other hand, the feeling of well-being or happiness is an important psychological characteristic that a healthy person should have. Albertson and his colleagues showed the happiness of people with breast cancer, the decrease of this factor is associated with the increase of anxiety and pain in patients.<sup>[6]</sup> Happiness is a positive feeling and general satisfaction with life includes satisfaction with oneself and others in the fields of family and work;<sup>[7]</sup> therefore, considering that happiness has an important role in mental health, researchers pay special attention to this variable.<sup>[8]</sup>

In their research, Kim and Gavin determined that family functioning has important effects on the health of family members and strengthens the cycle of mental health in the family. Also, they showed that, under conditions of stress and disease, the normal functioning of the family suffers problems.<sup>[9]</sup> A family with healthy functioning has cohesion and a family with unhealthy functioning is formed with a feeling of insecurity and unpleasantness within the family.<sup>[10]</sup> McMaster's model takes into account the important dimensions of family functioning that often have clinical manifestations.<sup>[11]</sup> Archambault *et al.* found that problem-solving, communication, role-playing, emotional integration, emotional responsiveness, and behavior control are important dimensions of family functioning that are considered in McMaster's model.<sup>[12]</sup>

According to the said contents and the psychological complications of breast cancer for women, it seems that the best defense against the psychological problems caused by it is psychological interventions.<sup>[13]</sup> So far, educational interventions such as reducing stress

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based on mindfulness and anti-stress<sup>[14]</sup> and programs focused on cultivating self-compassion<sup>[15]</sup> have been designed to deal with difficult emotional situations, among which the self-compassion development in Stressful times can potentially decrease the risk of secondary stress injury and burnout and at the same time increase individual well-being and satisfaction from compassion.<sup>[16]</sup> Self-compassion includes three basic elements: 1) creating a sense of kindness and self-understanding instead of self-criticism and stubborn judgment (self-compassion); 2) considering personal experience as part of the wider human experience instead of separate and isolated (common humanity); 3. Holding painful thoughts and feelings in balanced awareness rather than exaggeratedly identifying with them (mindfulness).<sup>[17-21]</sup> Gilbert applied compassion-focused therapy to the therapeutic setting. The principles of treatment focused on compassion are that thoughts and everything related to external factors should be internalized and thus the human mind can relax;<sup>[15]</sup> therefore, in the aforementioned treatment, people learn to touch their negative feelings and not avoid them.<sup>[20]</sup>

The high prevalence of psychiatric disorders in women with breast cancer requires more attention from health officials. Considering the psychological side effects of breast cancer and these side effects do not affect the disease process, it seems that in addition to the medical treatment of cancer, psychological treatments can be used to treat the psychological problems caused by cancer in these patients. Therefore, the present study aimed to determine the compassion-based therapy effectiveness on happiness and family functioning in women with breast cancer.

## Materials and Methods

The current study was a semi-experimental type and was done with a post-test and pre-test design and with two experimental and control groups. The statistical population of the study consisted of all female patients with breast cancer who visited the hospital. Because the number of subjects in groups in semi-experimental research is considered to be at least 15 people, among the statistical population, 30 qualified volunteers were randomly included in the study. They were randomly placed in two control and experimental groups (15 people in each group). The execution method was as follows: after choosing the patient of the sample group and before applying the treatment program, the family functioning questionnaire and the marital happiness questionnaire were distributed to both groups. In the following, the experimental group received the compassion-based treatment program in the form of eight ninety-minute sessions, each session once a week; but no treatment program was done for the control group. Eventually, the post-test was repeated in both groups. In addition, after the research ended, to sustain ethical standards, the treatment programs carried out in the study were done for the control group.

The criteria for entering the study were: being a woman; having breast cancer, committed to attending meetings; having at least an education diploma level, not participating in other

psychological treatment interventions meantime; and the criteria for leaving the study included the absence of more than three sessions and not following the group therapy rules.

The marital happiness scale (MHS) consists of ten items and is used to measure marital happiness.<sup>[22]</sup> This questionnaire tool was first designed to test the observational effects of confrontation, which is a behavioral approach in marriage counseling. This scale measures the overall level of marital happiness in a different environment than the relationship between husband and wife using general single-item indicators. Each question can be used as an independent indicator of marital happiness in certain areas of marital interaction. To obtain an overall index of marital happiness, the total scores of the questions are summed. In front of each proposition, there is a range from 1 to 10, where the respondent ranks his level of happiness in that range according to the proposition.<sup>[22]</sup> The range of the questionnaire is from 10 to 100. Questionnaire scoring is according to a ten-point Likert scale. A score between 10 and 20 indicates weak marital happiness, a score between 20 and 55 indicates moderate marital happiness, and a score greater than 55 indicates strong marital happiness. The original version reliability of the questionnaire was 0.77 by Cronbach's alpha method and 0.8 by the retest method.<sup>[22]</sup>

The Family Functioning Questionnaire (FAD) has 60 questions and was developed to measure family functioning based on the McMaster model. Estein *et al.* prepared this tool in 1983 to describe the organizational and structural characteristics of the family, which evaluates the family's ability to compromise with family tasks with a self-report scale. The family functioning scale has six dimensions: problem-solving, communication, roles, emotional companionship, emotional fusion, and behavioral control. To evaluate each of the subscales of the family functioning questionnaire, special questions are included in the questionnaire. The validity coefficient of convergence and divergence of the subscales of the family assessment tool with the communication patterns questionnaire in the original version is 0.37 and 0.31 respectively for the subscales of problem-solving, communication, or interaction 0.41 and 0.35, roles 0.31 and 0.34, emotional responsiveness 0.37 and 0.46, emotional intercourse 0.42 and 0.38, behavioral control 0.32 and 0.41 - and overall family functioning 0.46 and -0.43 were reported. Also, the reliability of the family functioning tool was calculated by calculating the Cronbach's alpha coefficient of its subscales, 0.72 to 0.92.<sup>[11]</sup>

The content of the treatment session adapted from Gilbert's treatment package was designed for eight sessions.<sup>[15]</sup> Content validity was confirmed by several professors. In this study, ethical standards containing obtaining informed consent and guaranteeing confidentiality and privacy were observed. In addition, when participating in the study, the participants were free to draw back from the study at any time and provide personal information. They were certain that the information would stand confidential and this was strictly adhered to.

Data analysis was done in two parts: inferential statistics and descriptive statistics. At the descriptive statistics level, mean, percentage, frequency, and standard deviation were utilized, and at the inferential statistics level, multivariate covariance analysis was utilized. Data analysis was done in SPSS software version 23. The test's significance level was considered 0.05.

## Results and Discussion

Based on the descriptive characteristics of the age of the participants in the research, a total of thirty subjects (fifteen in the experimental group and fifteen in the control group) participated. The average age and SD in the experimental group was  $39.5 \pm 3.4$  years and in the control group  $40.8 \pm 3.7$  years.

**Table 1** shows the average scores of the control and experimental groups before and after the carrying out of the compassion-based treatment program. As can be seen in **Table 1**, the scores of the subjects of the experimental group have improved in both variables of happiness and family functioning compared to the control group; but in the evidence group, no significant change is observed.

**Table 1. Descriptive characteristics of research variables.**

Variable	Experimental group				Control group			
	Pre-test		Post-test		Pre-test		Post-test	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Happiness	14.6	3.6	17.9	3.4	15.6	3.6	16.4	3.8
Problem-Solving	14.1	3.4	17.8	3.2	12.3	3.2	13.3	3.2
Relationship	21.8	4.3	25.6	4.2	22.4	4.6	20.8	4.3
Roles	23.3	3.3	32.8	3.8	23.5	3.3	24.8	3.2
Emotional responsiveness	15.5	3.6	20.2	3.9	16	3.2	18.4	4.3
Emotional intercourse	14.8	4.2	19.9	4.1	16.2	3.04	16.8	2.3
Behavioral control	24.6	4.1	31.8	4.5	24.4	4.5	25.3	4.2

First, the data distribution normality was checked and confirmed by the Kolmogorov-Smirnov test. The findings of the Mbox test demonstrated the homogeneity assumption of the variance-covariance matrices. The homogeneity assumption of variances in study variables was confirmed by Levin's test; thus, all assumptions of univariate covariance analysis were fulfilled and this test was utilized for data analysis. The results of covariance analysis for each of the subscales of family functioning and happiness variables demonstrated that there is a significant difference in all components between the two control and experimental groups in the post-test after removing the pre-test effect (**Table 2**) ( $p < 0.001$ ).

**Table 2. Covariance analysis test in the subscales of family functioning and happiness.**

Type of effect	Subscales	F	P-value	Eta squared
Pre-test effect	Happiness	124.4	< 0.001	0.65

	Problem-Solving	25.9	< 0.001	0.32
	Relationship	51.7	< 0.001	0.51
	Roles	25.4	< 0.001	0.21
	Emotional responsiveness	36.8	< 0.001	0.46
	Emotional intercourse	19.8	< 0.001	0.32
	Behavioral control	24.4	< 0.001	0.34
	Happiness	101.8	< 0.001	0.84
	Problem-Solving	15.5	< 0.001	0.45
	Relationship	39.5	< 0.001	0.63
Group effect	Roles	11.7	< 0.001	0.31
	Emotional responsiveness	27.38	< 0.001	0.56
	Emotional intercourse	10.4	< 0.001	0.43
	Behavioral control	16.5	< 0.001	0.41

The present study aimed to determine the compassion-based therapy effectiveness on happiness and family functioning in women with breast cancer. The findings of the covariance analysis demonstrated that the treatment based on compassion improved the happiness scores in the subjects of the experimental group. In explaining these findings, it can be said that in teaching self-compassion, self-kindness, self-understanding instead of self-judgment, and a support kind for one's shortcomings and incompetence. Acknowledging that all humans are flawed, make mistakes, and engage in unhealthy behaviors is a central feature of human commonality. Consciousness, in contrast to extreme identification in his compassion, leads to a clear and balanced awareness of the present experiences and makes the painful aspects of an experience not ignored and does not occupy the mind repeatedly.<sup>[23]</sup>

Compassion-focused therapy is not just about dealing with threat-based processing or building various defenses, such as learning assertiveness instead of surrendering; rather, it seeks to stimulate positive affective processing. Some clients are afraid to enjoy doing good things and suppress their positive feelings. Exposure to positive emotions such as happiness encourages and helps clients to enjoy their experience.<sup>[15]</sup> Having self-compassion in married life requires that one does not harshly criticize oneself due to failures or not reaching standards, and this concept does not mean not paying attention by not correcting these failures. When you believe that self-criticism can make a person change and improve, if he is judged harshly for his mistakes, he adjusts his support functions in order not to threaten the dignity of the person, to hide the shortcomings from the person's self-awareness.

Intervention based on self-compassion resulted in increased forgiveness and flexibility and increased marital happiness of married people.<sup>[24]</sup> Also, teaching self-compassion promotes kindness, self-understanding, and avoiding criticism and unfavorable judgments about oneself. Teaching self-compassion, because it causes acceptance of kindness and non-judgment of one's spouse, causes couples to be more intimate and show positive self-regulation when experiencing failure and incapacity (such as a spouse suffering from breast cancer). Increasing women's self-esteem in marital relationships

improves their sincere attitudes to be improved in the direction of a more purposeful life. Teaching women self-compassion strengthens their intimate attitudes, creates a sense of connectedness between women, and creates attraction, appropriate behavior, and trust between married people. The greater the self-compassion, the more intimacy in relationships between women will increase and it will be a basis for satisfaction and positive emotions in the satisfaction of women's married life.<sup>[25]</sup>

On the other hand, the findings of the covariance analysis demonstrated that compassion-based therapy has improved the scores of family functioning in the experimental group. In explaining these results, it can be said that researchers realized for a long time that soft problems and self-criticism are often rooted in family dysfunction, neglect, or lack of affection.<sup>[15]</sup> González Hernández and colleagues investigated the impact of compassion-based therapy on breast cancer patients in a research.<sup>[26]</sup> These researchers concluded that the processes of empathy and self-forgiveness and creating a bridge of communication with others play a significant role in accepting the disease and increasing self-compassion and control over the stress of cancer treatment.

One of the emphasized areas in the therapy is based on compassion, empathy, and the expansion of interest in others, which was emphasized in the therapy sessions. Expanding forgiveness and empathy with others ultimately leads to an increase in the social support network in people. This issue has been emphasized in other studies as well. The effect of this treatment on the patient's family relationships can be from the way of influencing the expansion and enrichment of the patient's social relationships. On the other hand, the reinterpretation of events according to the revised conditions increases happiness and vitality, which in turn increases family functioning in women with breast cancer during education. Also, the use of mindfulness interventions and relaxation exercises were other areas emphasized in this treatment. The effect of these techniques on research variables has been determined in past research. It seems that the techniques and principles of treatment based on compassion by increasing empathy and feeling of self-forgiveness affect the process of accepting the disease; also, recent research showed that women with breast cancer who have more self-forgiveness experience better family relationships.<sup>[27]</sup>

In another explanation, it can be said that in the treatment according to compassion, when a person pays attention to his pain and suffering and responds with kindness and remembers that suffering is part of the common human condition, he can deal with life's problems more easily. One develops a balanced and connected loving state of heart and mind that assists in decreasing psychopathology while increasing happiness and meaning in life. Self-compassion is a portable source of support and friendship, available when one needs it most. Unlike self-esteem, which is friendship with oneself with respect for justice and fairness, self-compassion is a resource available in times of happiness and sadness. By combining conscious acceptance of one's present moment

experience with a compassionate desire to be happy and free from suffering, one maximizes one's ability to heal and reach one's full potential.<sup>[16]</sup>

## Conclusion

The findings of the current study showed that compassion-based treatment can have a positive effect on happiness and family functioning in women with breast cancer. Based on the findings, it is recommended to use compassion-based treatment along with other treatment methods for health-related interventions, especially to reduce psychological problems in women with breast cancer.

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## Conflict of interest

None.

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## Ethics statement

None.

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