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Evaluation of the Effectiveness of Dialectical Behavior Therapy Training on Depression in Women with Breast Cancer

S. Reza Azhar*[1], Zahra Ahmadi Ardakani[2]

1. M.A of Clinical Psychology, Islamic Azad University, Yazd Research Sciences Branch, Iran.
2. Department of Counseling, Faculty of Humanistic and social science, Ardakan University, Ardakan, Iran

A B S T R A C T

Cancer can cause many psychological problems for patients and it is necessary to find effective ways to help them. Unfortunately, people consider cancer to be a kind of end of life, and patients, after being diagnosed with the disease, find themselves closer to death, and as a result, suffer from death-related disorders. The aim of this study was to evaluate the effectiveness of dialectical behavior therapy on mental health and depression in breast cancer. The present study was a quasi-experimental study consisting of experimental and control groups. The statistical population of the present study included all women with breast cancer who referred to the specialized breast clinic of women in Jihad University of Tehran. The sample consisted of 33 subjects who were reduced to 33 subjects in 2 groups of 15 after the fall. The selection was done by randomization of treatment, but the selection of subjects for inclusion in the study was done non-randomly. Subjects were assessed using the Lovebird Depression, Anxiety and Stress Scale. Due to the fact that the necessary assumptions for multivariate analysis of variance and multivariate analysis of variance were not met, univariate analysis of variance was used to analyze the data. The results showed that there was a significant difference between the depression scores of the experimental group of dialectical behavior therapy compared to the control group. In the field of treatment and work with cancer patients and people in crisis, dialectical behavior therapy is very useful due to its nature and effectiveness.

Keywords: Dialectical Behavior Therapy, Depression, Breast Cancer.

INTRODUCTION

Cancer is one of the most serious diseases in the world and the third leading cause of death in the world; as 18.4% of deaths in the world are due to cancer. Unfortunately, the growth of cancer in the world is accelerating and about 18.1 million people are diagnosed with cancer annually(Sospedra & Martin, 2005). Cancer is caused by the unlimited proliferation of cells in the body and there are up to 200 types of cancer(Zarrin, Hatami, & AliHemmati, 2014). Breast cancer is the most common cancer in women and liver cancer is the most common cancer in men and is the leading cause of cancer mortality(Sospedra & Martin, 2005). In Iran, unfortunately, breast cancer is more prevalent for women and liver cancer for men, and one in four Iranians develops one type of cancer before the age of 75 (Davis, 2000).

Chronic cancer causes the body to weaken and increase psychological problems by weakening the body and also due to its bad mentality among people(Nafisi, 1998).

* . Corresponding Author: Rezaazhar2013@yahoo.com

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Unfortunately, people consider cancer to be a kind of end of life, and patients, after being diagnosed with the disease, find themselves closer to death and therefore suffer from death-related disorders(Martin, McFarland, & McFarlin, 1992); In other words, patients suffer from anxiety and depression. Anxiety about death is a constant, irrational and morbid fear of death or dying. This concept also refers to the fear of death and high fear of the dead(Dennison, Moss-Morris, Silber, Galea, & Chalder, 2010). Death depression also refers to depressive attitudes about death and non-existence(Phillips, Li, & Zhang, 2002). Research has shown that cancer patients have a high mortality rate. The prevalence of anxiety in the cancer group was 17.9% and in the healthy group was 13.9% (Lichtenthal et al., 2009; Maass, Roorda, Berendsen, Verhaak, & de Bock, 2015). Depression and death anxiety in cancer patients cause many problems in them and can reduce their health and quality of life(Götze et al., 2018; Tsuang, Tohen, & Jones, 2011).

It is very difficult for patients to know death is imminent and it causes them a lot of confusion; but the degree of tolerance and resistance to these difficulties varies for patients. If patients can increase their tolerance and strength, they will be less disturbed(Razban, Mehdipour-Rabori, Rayyani, & Mangolian Shahrbabaki, 2020). Hardship is a combination of beliefs about oneself and the world that consists of three components: commitment, control, and struggle, or challenge, and high rigidity is a sign of a healthy personality. Tough people have the power to control life events and instead of avoiding problems, they see them as opportunities for progress. In other words, hard-working people not only do not consider themselves victims of change, but also see themselves as the determinants of the results of change(Alavi, Modarres Gharavi, Amin Yazdi, & Salehi Fadardi, 2011).

There is a high level of anxiety and depression in these patients, which are considered to be the most common psychiatric diagnoses in patients with breast cancer compared to the general population. The recurrence of the disease increases with the onset of these disorders and prolongs the duration of treatment. Depressive and anxiety disorders are at the top of the list of mental illnesses and account for about 25% of referrals to health centers in the world(Groenvold et al., 1999). Available statistics show that these disorders were ranked fourth in 1990 (Burgess et al., 2005). But in the last decade, it has become the second most common psychological disorder, affecting nearly 121 million people worldwide. Also in 2010, depression was the second most expensive disease and anxiety was one of the most expensive treatments in 2013 among all mental illnesses(Groenvold et al., 1999; Reich, Lesur, & Perdrizet-Chevallier, 2008). The data suggest that mood disorders start from a situation in which very large changes occur in human life. One of the most important changes in life is having a chronic illness that brings with it high anxiety and excitement.

Depression is often accompanied by higher levels of anxiety and can be accompanied by panic attacks and simple or complex phobias that endanger a person's quality of life. Reports show that about one-third of the world's population suffers from a period of depression at some point in their lives, with statistics showing that about 23 percent of adults develop a mood disorder in their lifetime and eight percent suffer from it. They become a major depressive disorder that, if left untreated or ineffective, can lead to maladaptive behaviors that in turn cause more major problems(Alshawwa, Elkahlout, El-Mashharawi, & Abu-Naser, 2019; Prince, Harwood, Thomas, & Mann, 1998).

The prevalence of depression has led to the introduction and study of various treatments for it, including medication and psychotherapy. However, although research supports the effectiveness of existing therapies, this effectiveness is relative and there is still no cure that can be considered a definitive solution to the problem of depression because on the one hand, drug therapy has several side effects. (Including dry mouth and various physical disorders) and on the other hand, despite the fact that many psychotherapies have been effective in treating depression, we still face a high rate of recurrence of depressive symptoms(Karkou, Aithal, Zubala, & Meekums, 2019; Segal & Teasdale, 2018).

In fact, although the goal of depression treatment should be complete recovery, many patients fail to achieve or maintain asymptomatic status. These results indicate the inadequacy of current treatments and the need for more effective treatments for this disorder. In this regard, third wave therapies were used to evaluate its effectiveness. According to the results of previous studies, depressive and anxiety disorders in patients with chronic physical diseases such as cancer, IBS, MS and diabetes lead to suicide(Chan, Tsang, Lau, & Chung, 2017; Robbertz et al., 2020). Therefore, there was a need to examine among the new therapies the third wave of therapy that accepts the thoughts and impulses of people with emotional pain and steps in the direction and change of risky behaviors. In fact, the reason for choosing dialectical behavior therapy was that this therapeutic approach, introduced by Heard and Linehan (1994), was developed for resilient and risky behaviors and is technically based on accepting the patient as he is and at the same time helping him to change with Training of interpersonal skills, stress tolerance skills, emotion regulation skills and mindfulness skills.

American Psychiatric Association (2001), first published therapeutic guidelines for the treatment of patients with borderline personality disorder. The highlights of these guidelines are: identifying the multidimensional nature of borderline pathology, proposing a treatment approach that is both flexible and In accordance with the expectations and needs of the individual, the importance of the combined approach, especially the combination of drug therapy with psychotherapy and the conditions of admission and care of hospitalized patients(Alilo & Sharifi, 2012; Sanderson, Swenson, & Bohus, 2002).

Considering that depressive disorders play a role in the severity and type of treatment of breast cancer and the lack of motivation of some patients and the results of previous research that, despite the high prevalence of mental disorders less than 0.01 people with these disorders referred to psychiatric health centers and others Suffering from mental disorders and problems left untreated or showing their symptoms as physical illnesses, therefore, the aim of this study was to investigate the effectiveness of dialectical behavior therapy on depression in women with breast cancer.

METHODOLOGY

The method of this research was quasi-experimental. The experimental group was trained in dialectical behavior therapy. The statistical population of the study was all patients with multiple sclerosis referred to the subspecialty clinic of breast diseases of women in Tehran University Jihad, but no exact statistics were obtained from them. Therefore, in this study, 36 people who were ready to participate in the study were randomly selected. These patients were

randomly divided into two groups of 18 patients. Finally, due to the drop in sample, each group was reduced to 15 people. Patients with dummy disorders, acute pain, and patients under the supervision of a psychiatrist due to mood disorders and anxiety were initially targeted. Also, variables such as education (minimum diploma education), age (age range between 30-43 years) and gender (women) were controlled.

Depression, Anxiety and Stress Scale (DASS, Lavibund): Is a set of 3 self-report scales to assess negative emotion states in depression, anxiety and stress(Lovibond & Lovibond, 1995). Antony, Bieling, Cox, Enns, and Swinson (1998), analyzed this scale as a factor that the results of their research indicated the existence of three factors of depression, anxiety and tension. The alpha coefficients for depression, anxiety and stress were 97%, 92% and 95%, respectively. Also, the results of calculating the correlation between factors in the study of Antony et al. (1998), showed a correlation coefficient of 48% between the two factors of depression and stress, a correlation coefficient of 53% between anxiety and stress, a correlation coefficient of 28% between anxiety and depression. The validity and reliability of this questionnaire in Iran have been examined by Samani and Joukar (2007). They reported 74.81, 0.0 and 0.78%, respectively. Each of the test subscales consists of 7 questions, the final score of each of which is obtained through the sum of the scores of the related questions.

Dialectical Behavior Therapy Training: Dialectical behavior therapy is presented as a supportive treatment that requires a strong and common relationship between the client and the therapist. In standard dialectical behavior therapy, clients receive three main forms of therapy: individual therapy, skills group, and telephone communication. In individual therapy, clients receive individual sessions once a week, which is usually one to one and a half hours.

Weekly psychotherapy sessions begin with exploring a problematic event or behavior, that is, with a chain of events from the previous week, and review the suggested solutions that have been used and the factors that encourage the client to use solutions that are more compatible with the problem they are facing, it ends. During and between sessions, the therapist actively trains and reinforces adaptive behaviors. The emphasis is on educating patients about how to control emotional trauma, not reduce it or get them out of crisis. Telephone contact with an individual therapist between sessions is part of dialectical behavioral therapy(Van den Bosch, Verheul, Schippers, & van den Brink, 2002).

After selection, the subjects answered the mental health test as a pre-test. The control group did not receive any training and the experimental groups underwent dialectical behavioral therapy by a trained psychologist. Dialectical behavior therapy was planned based on the work of McKay, Wood, and Brantley (2019), for a period of 8 weeks. In this way, patients were taught dialectical behavioral therapy skills three times a week in groups. In this way, each skill was taught in 2 sessions of 1 to 1.5 hours. Teaching dialectical behavior therapy with acceptance-based skills (skills for enduring distress and emotional pain and suffering caused by illness, mindfulness skills and paying attention to the momentary functioning of your body and efficiency in life and living with current facilities) that is the heart of dialectical behavior therapy(Alilo & Sharifi, 2012). we started and then underwent change-based skills training (emotion regulation and emotion expression skills and familiarity with our emotions and naming emotions and feelings to find the cause of emotional distress and disorder and

interpersonal efficiency and communication with others After the illness, they were placed without judgment and self-thought and sometimes expressing the self-thought of the individual) and 2 group sessions were formed for each skill. In the first 2 sessions, basic skills of tolerance and distraction included (basic acceptance, reversal attention, development of reversal attention program). , Self-relaxation and relaxation planning) and advanced perturbation tolerance skills including (safe place imaging, discovering values, identifying superior power, living in the present, using self-encouraging coping ideas, affirming self-talk and coping strategies) And in the second 2 sessions Basic and advanced mindfulness skills include (training attention and practice skills of attention, wise mind and intuition, decision making based on wise mind, basic acceptance and initiating mind, judging and labeling and conscious communication with others, identifying resistances and obstacles, meditation, etc.) in meetings 5 and 6, basic and advanced emotional regulation skills including (recognizing emotions, how emotions work, overcoming barriers to healthy emotions, reducing vulnerability to disturbing emotions, self-observation, reducing cognitive vulnerability, increasing emotion Positive emotions, coping with emotions, acting against strong emotional desires and problem solving) and in the last 2 sessions, basic and advanced skills of effective communication (passive behaviors, fit between my desires and the desires of others, the ratio of wants and needs, skills Interpersonal key, barriers to using interpersonal skills, identifying demands, adjusting the intensity of demands, request design, bold drafts, listening, saying no and dealing with resistance and conflict, how to negotiate and analyze interpersonal problems were taught.

In order to implement ethical interventions in the present study, the ethical codes proposed by the Iranian-American Psychological Association (2003) and the Organization of Psychology and Counseling of the Islamic Republic of Iran (2006) were considered. Accordingly, the following components were observed for all patients participating in the study (at each stage of the study): the principle of respect for human dignity and freedom, the principle of conscientiousness and responsibility, the principle of usefulness and non-harm, the principle of non-discrimination The principle of paying attention to the welfare of others, the principle of paying attention to the value system of society, respecting the principle of confidentiality, providing sufficient information on how to research all participating subjects, obtaining written consent to participate in treatment, mindfulness group therapy Follow-up therapy, if necessary, even after the end of the study and finally after the end of treatment and evaluation of the experimental group, group therapy sessions were provided for the control group.

RESULTS

Findings of this study were performed on 30 people in two experimental groups (dialectical behavior therapy) and the control group, each group consisted of 15 subjects. The age range of the participants in the experiment was between 40 and 65 years. The mean age of the experimental group was 56.3 years and 55 years in the control group. The minimum education of the subjects was a diploma. The severity of the disease in the patients was not what the experimenters wanted and this variable was not controlled. In this study, inferential statistical methods including chi-square test and analysis of covariance were used to compare the means of demographic data of the groups and the results showed that the groups in terms of

treatment group, education status, occupation and age of onset. Disease and years of illness are not significantly different from each other and are the same. The age range of the participants in the experiment was between 40 and 65 years old. The mean age of dialectical behavioral therapy experimental group was 34.6±1.5 and control group was 33.7± 2.4 years. According to the test, there was no significant difference between the experimental and control groups in terms of mean age (Table 1).

Table 1. Demographic comparison of case and control groups

	Dialectic behavior therapy, frequency(%)	Control group, frequency(%)
Marital status	3(20)	4(26.6)
Single	9(60)	8(53.3)
Married	2(13.3)	3(20)
Belonging	1(6.6)	0(0)
Education		
Diploma	7(46.6)	7(46.4)
Bachelor	5(33.3)	5(33.3)
Higher than a bachelor's degree	3(20)	3(20)
Occupational status		
Employee	3(20)	3(20)
housewife	8(53)	7(46.6)
Home Jobs	4(26.4)	5(33.3)
Age of onset of the disease		
Under 40 years	4(26.4)	7(46.6)
40 to 50 years	8(53.3)	5(33.3)
Over 50 years	3(20)	3(20)

Table 2 shows the mean score and standard deviation of the depression score of the mental health questionnaire before and after treatment in both experimental and control groups and the results showed the effectiveness of dialectical behavior therapy on the subscale of depression in mental health. Table 3 shows the difference in scores of the mental health questionnaire before and after treatment for both experimental and control groups. The reason for calculating the score difference in this table was the lack of necessary assumptions for multivariate analysis of covariance. The mean score and standard deviation were the difference in the score of the mental health questionnaire in the experimental group, which showed that it showed a difference of -14.16 and in the control group was 2.24, which indicated a large difference between the mean scores of the two groups. The mean score presented in Table 4 is the result of the difference between the scores of the mental health questionnaire before and after treatment in both groups. The t-test shows a significant difference between the experimental and control groups ($p = 0.001$). This difference indicates that the intervention was effective and caused a significant difference in the experimental group compared to the control group.

Table 2. Mean and standard deviation of experimental and control groups in the studied variable by pre-test and post-test

group	examination Group		control group	
Depression	Pre-test, Mean± std. deviation	Pre-test, Mean± Std. deviation	Pre-test, Mean± Std. deviation	Pre-test, Mean± Std. deviation
	21.65 ±2.03	18.35 ±1.03	20.64 ±1.85	21.07 ±1.74

Table 3. Mean score and standard deviation of the difference in score of the Mental Health Questionnaire (Depression Variable)

Variable	Experimental group, mean ± Std. deviation	Experimental group, mean ± Std. deviation
Depression	4.48±-9.52	2.73±1.42

Table 4. Independent t-test based on differential scores to compare depression in experimental and control groups

	Mean±Std. deviation	Confidence interval 95%		T	P
		upper limit	Low limit		
Examination Group	4.48± -9.52	9.24	-2.12	19.14	0.000
Control group	2.73±1.42	2.16	1.01		

Due to the high prevalence of depression and the need for more effective methods to treat this disorder, the present study was conducted to investigate the effectiveness of dialectical behavior therapy training on depression in women with breast cancer.

CONCLUSION

The results of this study indicate the effectiveness of dialectical behavior therapy in reducing depressive symptoms and show that patients' pre-test and post-test scores clearly showed a decrease in the depression subscale after performing dialectical behavior therapy compared to the control group, which confirms its effectiveness. Behavioral therapy was dialectical and its results confirmed the hypothesis that dialectical behavior therapy increases mental health and reduces depression. The results of the present study showed that dialectical behavior therapy is effective on depression.

It also supports the findings of Chew (2006), Lynch, Chapman, Rosenthal, Kuo, and Linehan (2006), Harley, Sprich, Safren, Jacobo, and Fava (2008), on the effectiveness of dialectical behavior therapy in the treatment of depression. In addition, they maintain this effectiveness in follow-up evaluations. Anthony also provided a meta-analytic study of all the studies that reported the effectiveness of dialectical behavior therapy on depressive symptoms up to 2006, which showed that dialectical behavior therapy not only had a large effect on the improvement of depression and a moderate effect on related indicators. Shows after treatment compared to before but maintains these effects during follow-up evaluation periods.

In the present study, the dialectical behavioral therapy depression variable showed a significant decrease compared to the control group ($p < 0.001$) and a study that negates the effect of this treatment on mood disorders was not shown. Healthy thinking and emotions, as well as Linhan's motherly vision, are present throughout the treatment.

Along with cognitive behavioral therapy, this treatment has been effective in treating patients with depressive disorders and has been more resistant and longer effective than other treatments and is much more effective in reducing the recurrence period of patients with physical disorders than other treatments; Because this treatment accepts people and reduces the emotional suffering caused by their tolerance of the disease, and along with acceptance, acts to change them.

Lack of access to patients with different disease intensities, time constraints, time

continuity follow-up and long-term transfer of skills to improve performance are some of the limitations of this study. In addition, the findings of the study can be generalized to those mothers who receive a percentage of treatment. Finally, the sample group consisted only of women. Therefore, the findings of this study can only be generalized to women with breast cancer. In order to more accurately evaluate the effectiveness of this approach, it is suggested that in future research, designs with random control and replacement be used and patient subgroups be considered. Compare the effectiveness of this approach with other approaches. Consider a longer follow-up period, and study the effectiveness of this approach in various diseases.

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