



Comparing the effectiveness of positive psychotherapy and psychotherapy based on acceptance and commitment on life expectancy and body image of women with breast cancer

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Background and Aim: Cancer is considered as the major health problem of the century, and its increasing growth in the last two decades and its harmful effects on the physical, psychological, social and economic aspects of human life are causing more concern to experts than ever. The present study was conducted with the aim of comparing the effectiveness of positive psychotherapy and psychotherapy based on acceptance and commitment on life expectancy and body image of women with breast cancer. **Methods:** The research method was semi-experimental with a pre-test-post-test design with three groups (two experimental groups and one control group). The statistical population included all female patients aged 20 to 45 with breast cancer who received a definite diagnosis of breast cancer according to clinical and laboratory examinations by a specialist. Among these, 45 people were selected by non-random sampling and were replaced in two experimental groups (positive psychotherapy and treatment based on acceptance and commitment) and a control group in a simple random manner (15 people in each group). Then, the first experimental group was treated in 10 90-minute sessions (one session per week) with positive psychotherapy methods, and the second experimental group was treated with acceptance and commitment-based therapy, and the waiting list group was not subjected to any intervention until the end of the follow-up. The data were collected with the help of Snyder's life expectancy questionnaires and body image questionnaires and were analyzed through the analysis of variance test with repeated measurements and using SPSS-22 software. **Results:** The research results showed that there is a significant difference between the experimental and control groups in all variables ($p < 0.01$). Also, Bonferroni's post hoc test indicated that positive psychotherapy has a greater effect on life expectancy ($P < 0.001$) and body image ($P < 0.001$) than treatment based on acceptance and commitment. **Conclusion:** As a result, it can be said that the use of both methods along with other treatment methods is effective in improving the psychological status of vulnerable groups, including breast cancer patients.



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Introduction

Cancer is considered as the major health problem of the century, and its increasing growth in the last two decades and its harmful effects on the physical, psychological, social and economic aspects of human life are causing more concern to experts than ever. Cancer is a life-threatening disease that kills 7.6 million people every year. Among all cancers, breast cancer is considered as the second most common disease in women (Britt et al., 2020). Every year 7 thousand women in Iran get this disease. In other countries, the number of patients is also high, and for example, in South Korea, breast cancer is the second cause of death from cancer (Momeni Vahed and Salehinia, 2019).

In diseases such as cancer, the life expectancy of a person increases to cope with and fight the disease and to continue the treatment (Nader et al., 2019). On the other hand, breast cancer has the greatest impact on life expectancy compared to other chronic diseases. Therefore, most of the researches related to hope are also about cancer patients, because this disease is considered as a threat to hope. Therefore, it will be important for cancer patients to address a type of psychotherapy that focuses on hope (Gu et al., 2018). Mahmoudi and Karbalai Bagheri, (2020), also state that crises caused by cancer cause imbalance and disharmony in thought, body and mind. But the most common feeling in this period for the patient is hopelessness and despair. Cancer has a greater impact on hope than other chronic diseases. Maybe it's because a cancer diagnosis leads to feelings of anxiety, fear and mistrust of treatment. Also, serious treatment of this disease leads to physical discomfort, appearance changes and psychological problems. Life-threatening situations, losses or changes during life can affect the level of hope (Schoenborn et al., 2019). Cancer is one of the stressful situations that has a greater impact on life expectancy than other chronic diseases. Hope is an essential factor in the life of cancer patients. The feeling of hope can improve the physical and mental health of patients, it is a vital factor in dealing with stress and increasing the quality of life in their stressful times (Zianbakhri & Zazmi Kolor, 2021).

Among the problems faced by those suffering from breast cancer are changes in the body through surgery, hair loss, burns caused by

radiation therapy, and decreased sexual attraction, which lead to the creation of a negative body image for these people. (Davis et al., 2020). Since the breast evokes femininity, attractiveness and sexuality of women, having breast cancer leaves a lot of negative impact on the body image of affected women. A person's understanding of his physical appearance and his attitude and perception towards the beliefs that the person himself and others have about the body, constitutes the person's body image and includes multi-dimensional components consisting of cognitive, emotional and behavioral elements. (Moralis et al., 2021). In other words, body image is a kind of mental evaluation that a person has about his body and appearance, and having an acceptable body leads to an increase in self-confidence in women. Breast cancer diagnosis and treatment measures such as surgery, radiation therapy, chemotherapy, breast reconstruction and mastectomy are related to women's body image (Woo et al., 2019).

New psychological interventions for cancer patients cover a wide range. Meanwhile, the effectiveness of two approaches, or to be more precise, two paradigms, i.e. the third wave of acceptance and commitment approach and positive psychology, have interesting patterns in the therapeutic and philosophical framework. These two paradigms are also important from a strategic point of view for humanities from an ecological point of view and science production. So that on the one hand, treatment based on commitment and acceptance is placed with a realistic, non-mechanical and context-oriented courtship (Bach & Moran, 2017); And on the other hand, there is a revolutionary approach of positivist psychology and positive psychotherapy, which has a mainly positivistic demand. On the one hand, there is an effort to alleviate human suffering, and on the other hand, there is an effort to discover the capacities related to growth and development.

Treatment based on acceptance and commitment (ACT) is also another psychological treatment that can be effective in addition to drug therapy. This type of psychotherapy is part of the third generation behavioral treatments in the field of treating mood and anxiety disorders (Bai et al., 2020; Azimi, 2000). The basic concept in the act is that psychological suffering is often caused by people escaping from unpleasant psychological

experiences, or in other words, experiential avoidance, becoming captive to their own bad thoughts, and as a result, the inability to live based on personal fundamental values. This approach is a type of behavioral intervention that uses the skills of mindfulness, acceptance and cognitive faulting to improve the level of psychological flexibility and avoid experiential avoidance, which has a strong relationship with depression and anxiety. It teaches patients to pay attention to the occurrence of mental injuries in the context and within the problem and to change the relationship between the thoughts and feelings of the problem so that they no longer perceive them as morbid symptoms, but perceive them as harmless if they are uncomfortable and unpleasant. (Hayes et al., 2006; Worsby et al., 2018; Azimi, 2000; Furman and Herbert, 2009). Najdi (2019) states that among psychotherapy approaches, ACT approach (therapy based on acceptance and commitment) is one of the most dynamic treatments of the third wave of behavioral therapies. It is an applied contextual intervention, based on the relational framework theory, which considers human suffering to be caused by psychological inflexibility and is strengthened by cognitive fusion and experiential avoidance. In fact, the purpose of the act is to create psychological flexibility through the processes of acceptance, failure, self as a context, connection with the present, values and creating a pattern of committed action related to these values. Psychological flexibility also means developing the ability to choose an action just to avoid disturbing thoughts, feelings, memories of desires. During recent decades, there has been an increasing relationship in the field of dealing with the psychological consequences of cancer. One of the effective psychological interventions in this field is therapy based on acceptance and commitment. Also, studies have shown that psychological adaptation of cancer patients is related to characteristics such as quality of life and psychological helplessness. In addition, some studies have shown that psychological adaptation to cancer may also affect the physical consequences of the disease. Various studies have investigated the positive and negative aspects of this disease and their results show that many patients who survived after cancer experienced positive changes during the course

of the disease (Barghi Irani et al., 2016). In an approach like the ACT approach, this opportunity is given to the patient (Hayes, 2004). This approach with its processes can affect a person's philosophy of life and change the overall process of a person's thinking regardless of the content of his thinking. Basically, the difference between this approach and approaches such as cognitive-behavioral therapy and other approaches of the second wave is the focus on the process of thinking instead of the content of thinking.

Considering the increasing prevalence of cancer, if it is possible to use the most effective psychotherapy approach for these patients so that they not only overcome the challenge of cancer but also achieve a higher psychological function, it can be an important step to increase the quality of life. These are patients. Also, understanding concepts such as life expectancy and body image of women with breast cancer provides information to health care providers that can help them in care and help patients to better adapt to their stressful situation. Patients who experience post-traumatic growth show positive and significant changes in their cognition and emotions, which have a positive effect on their behavior and performance. These positive changes can facilitate the process of recognizing the stressful event for patients and create a positive perspective in the patient, the people around them, and their way of life. So far, there has not been a comprehensive study that has used ACT therapy and positive psychotherapy to improve life expectancy, psychological well-being, inner happiness, quality of life, and body image of women with breast cancer in cancer patients. Although many studies have investigated the effectiveness of positive psychotherapy and treatment based on acceptance and commitment on breast cancer patients, but by reviewing the available sources, the researcher did not find a study that compared these interventions and this set of variables; Therefore, the aim of the present study was to compare the effectiveness of positive psychotherapy and psychotherapy based on acceptance and commitment on life expectancy and body image of women with breast cancer.

Method

The present research method was a semi-experimental type with a pre-test-post-test design and follow-up with the control group. The statistical

population included all female patients aged 20 to 45 with breast cancer who received a definite diagnosis of breast cancer according to clinical and laboratory examinations by a specialist. Among them, 45 people were selected by non-random sampling and randomly replaced in the experimental group and the control group (15 people in each group). Then, the experimental group was treated in 10 sessions of 90 minutes (one session per week) with psychotherapy methods based on acceptance and commitment and positive psychotherapy, and the waiting list group was not subjected to any intervention until the end of the follow-up. Entry criteria include: women with breast cancer. Be between 20 and 45 years old. Before participating in the research, all participants were asked to take the Oxford Happiness Test. The cutoff score for participating in the research was 23. Have at least a post-graduate education. They have not taken any psychoactive drugs in the last three months. Do not suffer from a serious psychiatric illness such as psychosis and the like. have completed the informed consent agreement regarding participation in the research project. Do not be treated with other psychological interventions during the implementation of the research. Exclusion criteria include: missing two sessions in treatment sessions. It should be determined that he has taken psychoactive drugs or drugs during the last three months. Have mania or a psychotic disorder.

Materials

1. Life expectancy: Schneider's life expectancy questionnaire was created to measure hope. It has 12 statements in a 5-point Likert scale. Among these terms: 4 terms are used to measure operative thinking, 4 terms are used to measure strategic thinking, and 4 are deviant terms. This scale has two subscales: factor and strategy. Questions 3, 7, and 11 are reverse scored. Subscale scores are summed to obtain total scores. Scores greater than 30 indicate high life expectancy and scores less than 30 indicate low life expectancy. Many researches support the reliability and validity of this scale. The internal consistency of the whole test is between 0.74 and 0.84. The test-retest reliability is 0.80 and in periods of more than 8 to 10 weeks it is higher than this amount (Izdabadi et al., 2020). In this research, Cronbach's alpha reliability coefficient was 0.73.

2. Body Image Questionnaire: This questionnaire contains 68 questions designed to evaluate a person's attitude about different dimensions of body structure. This

questionnaire includes three scales: 1- Questionnaire related to the body itself (all questions except the number of questions presented in the two subscales below). 2- Scale of satisfaction with different parts of the body (questions 60 to 68). 3- Scale related to Attitude about weight (questions 20, 56, 57, 58, 59, 66). In BSRQ, three physical dimensions are dominant: physical appearance, physical fitness and health, each of these parts includes two areas of evaluation and awareness: Assessment of appearance and awareness of appearance, assessment of physical fitness and awareness of physical fitness, health assessment and awareness of health. Each of these areas has 5 points. In this way, a score of 1 is considered for completely disagree and a score of 5 for completely agree. A higher score indicates more satisfaction. A higher score indicates more satisfaction. In BASS, the satisfaction of different parts of the body includes the face, upper body, middle body and lower body, muscle consistency, weight and height, and overall appearance, with a score of 1 for completely dissatisfied and 5 for completely satisfied. The scale related to the person's attitude about weight includes two sub-sets: 1) mental preoccupation with excess weight, the higher the score, the greater the person's concern. 2) Assessing your weight, where a score of 1 indicates underweight and 5 indicates overweight. This questionnaire is based on the Likert scale, which is scored from 1 to 5. The reliability of this tool in Iran was also obtained by Zarshanas and his colleagues in the following order: The subscale of awareness of appearance was 0.87, evaluation of appearance was 0.85, concern about weight gain was 0.82, satisfaction with different body parts was 0.79, and weight evaluation from the person's own perspective was 0.75. In another study, the validity of the main parts of the questionnaire was investigated by Cash (1997) and it was confirmed and its reliability was reported as 0.81. In this study, Cronbach's alpha reliability coefficient was 0.94.

3. Positive therapy: The protocol of Seligman et al. (2006) was used to implement positive therapy sessions in this research.

Table 1. Summary of the structure and content of sessions based on the therapeutic protocol of Seligman et al. (2006)

Session	Content	Goal
1-2	Introduction of therapist and assistant therapist, introduction of group members to each other, recommendations and recipes, brief explanation about the treatment plan, treatment rationale for breast cancer patients	Orienting clients in the framework of positive psychotherapy, the assumptions of this perspective and the role of the psychotherapist.
3	Recording the ability of each person by himself, analyzing the tendency to control thoughts and emotions, discussing more about controlling thoughts and emotions that shows distancing exercises, reviewing homework.	Identifying personal abilities, getting familiar with the classification of abilities and moral virtues and using personal abilities in a new way
4	Mentioning blessings or remembering three good (positive) things in daily life	Planting positive emotions and mentioning blessings and good things in life
5-6	Repeating the task done in the session	Reviewing whether writing three good things or three blessings and emphasizing positive reminders and memory over the past week has had a positive effect.
7	Use the Thanksgiving worksheet	It was focused on gratitude. Also, the role of bad and good memories was re-examined.
8	Mid-treatment review	Clients reviewed their progress in writing notebooks and letters of forgiveness and gratitude and using their abilities in practice based on their activity plans that began in the second session.
9	Note three incidents or three things that they wanted to do but failed, then check if there was another door or problem, another door or another way out for them? Increasing meaning	Focusing on themes of hope, faith, and optimism, as well as the practice of "one door closes, another opens."
10	Using the technique of improving relationships and creating positive social relationships and happiness in life, discussing the meaning of life	Response style training and training to improve relationships. Completion of questionnaires by participants.

4. Therapy based on acceptance and commitment: Hayes et al.'s (2006) protocol

was used to implement positive therapy sessions in this research.

Table 2. Summary of session content based on Hayes et al.'s (2006) treatment protocol.

Session	Content
1	Establishing a therapeutic relationship, introducing breast cancer sufferers to the topic of research, answering the questionnaire and concluding a treatment contract.
2	Discovering and examining the patient's treatment methods and evaluating their effectiveness, discussing the temporary and ineffectiveness of treatments using metaphors, receiving feedback and presenting assignments.

3-4	Helping clients to recognize ineffective control strategies and realize their futility, accepting painful personal events without conflict with them by using metaphors, receiving feedback and presenting assignments. Example of a computer and a piece of cheese
5	Explaining about avoiding painful experiences and being aware of its consequences, teaching the steps of acceptance, changing language concepts using metaphors, teaching calmness, receiving feedback and presenting assignments, self-awareness exercises.
6	Introducing the three-dimensional behavioral model in order to express the joint relationship between behavior/emotions, psychological functions and observable behavior and discuss efforts to change behavior based on it, continuing the analysis of personal investment in private events. Receive feedback and submit assignments.
7	Explaining the concepts of role and context, observing oneself as a platform and making contact with oneself using metaphor, awareness of different sensory perceptions and separation from the senses that are part of the mental content. Emphasize the practice of constantly paying attention to depressing thoughts and feelings and practicing distancing. Receive feedback and submit assignments.
8	Explaining the concept of values, motivating change and empowering clients for a better life, find rare but very enjoyable events. Focused practice, receiving feedback and presenting assignments.
9-10	Teaching commitment to action, identifying behavioral plans in accordance with values and creating commitment to act on them, summarizing meetings, feedback on the meeting process, conducting post-examination.

Implementation

Ethical considerations in this research were such that participation in this research was completely voluntary. Before starting the project, the participants were familiarized with the specifications of the project and its regulations. People's attitudes and opinions were respected. The members of the experimental and control groups were allowed to withdraw from the research at any stage. In addition, if interested, the members of the control group could receive the intervention performed for the experimental group in similar treatment sessions after the completion of the plan. All documents, questionnaires and confidential records were only available to the executives. Written

informed consent was obtained from all volunteers. In the descriptive analysis of the data, the statistical indices related to each of the research variables were calculated. In the inferential statistics section, analysis of variance with repeated measurements and SPSS-22 software were used.

Results

Demographic characteristics showed that 33.3% of single people and 66.7% of people were married. Most respondents were between 25 and 30 years old, and the least respondents were between 40 and 45 years old. Also, 45 percent of people were between 25 and 30 years old. 45% of people have an Associate's degree and 14 have a Bachelor's degree.

Table 3. Mean and standard deviation of pre-test, post-test research variables for test and control groups

Variable	Stage	Positive		ACT		Control	
		Mean	SD	Mean	SD	Mean	SD
Hope	Pre-test	30/67	6/33	29/50	6/30	30/71	7/41
	Post-test	39/73	8/34	35/53	7/31	30/91	7/42
	Follow-up	40/97	8/35	34/86	8/33	30/85	7/43
Body Image	Pre-test	95/61	16/35	94/57	15/25	97/77	15/38
	Post-test	114/79	18/37	100/61	17/26	97/89	15/51
	Follow-up	110/97	17/44	101/81	17/49	98/17	16/40

At first, the Kolmogorov-Smirnov test was used to check the assumption of normality of data

distribution, and its results indicated the confirmation of this assumption. Then, to check

the homogeneity of the variances of the studied variables in the experimental and control groups, Levene's and Mbox tests were used,

and the research data were analyzed through the analysis of variance with repeated measurements.

Table 4. The results of the normal distribution of scores and homogeneity of variances test

Variable	Group	K-S			Levene's test			Mauchly's test		
		df	Statistics	Sig.	df	Statistics	Sig.	df	Statistics	Sig.
Hope	Exp.	45	0/532	0/924	42	1/070	0/221	2/18	0/89	0/36
	Exp.	45	0/627	0/735						
	Control	45	0/748	0/516						
Body Image	Exp.	45	1/07	0/129	42	2/702	0/112	2/44	0/85	0/24
	Exp.	45	0/933	0/334						
	Control	45	0/745	0/651						

The results of the analysis of variance of the repeated measurement of several variables among the studied groups in the variables of life expectancy and body image showed that the effect between the subject (group) is significant and this effect means that at least one of the groups is at least One of the components of life

expectancy and body image are different. The within-subject effect (time) was also significant for the research variables, which means that there was a change in at least one of the average variables during the time from pre-test to follow-up.

Table 5. Analysis of variance with repeated measures to compare pre-test, post-test and follow-up of life expectancy and body image in experimental and control groups.

Scale	Source	SS	Df	MS	F	Sig	Eta ²
Hope	Group*Time	25/68	2	12/84	28/59	0/0001	0/50
	Control	49/94	1	49/94	36/35	0/001	0/33
Body Image	Group*Time	220/15	1/24	176/29	134/92	0/0001	0/82
	Control	100/27	1	100/27	0/91	0/34	0/03

The results from Table 5 showed that the F ratio obtained in the factor of groups in life expectancy and body image dimensions is significant (p<0.01). This finding indicates that acceptance and commitment therapy and positive therapy improved life expectancy and

body image. In this regard, an analysis of variance with repeated measurements was performed for the experimental group in three stages of therapeutic intervention, where the F ratio observed in the improvement of life expectancy and body image was (p<0.01).

Table 6. Post hoc Bonferroni test for pairwise comparison of experimental and control groups on life expectancy and body image scores.

	Groups		Mean diff.	Sig.
Hope	ACT	Positive	-4/42	0/001
		Control	5/44	0/001
	Positive	Control	9/62	0/001
Body Image	ACT	Positive	-14/89	0/001
		Control	-3/45	0/001
	Positive	Control	-16/76	0/001

As can be seen in Table 6, the average life expectancy and body image in the positive group at the end of the post-test was higher than the acceptance and commitment treatment group ($p < 0.01$). However, there was a significant difference between both experimental and control groups in terms of research variables. It can be said that both groups of positive psychotherapy and therapy based on acceptance and commitment had a significant effect on life expectancy and body image ($p < 0.01$).

Conclusion

The aim of the present study was to compare the effectiveness of positive psychotherapy and psychotherapy based on acceptance and commitment on life expectancy and body image of women with breast cancer. The results showed that after positive psychotherapy and treatment based on acceptance and commitment, the life expectancy of women with breast cancer has increased to a great extent. In other words, the lives of women with breast cancer experienced a significant increase in life expectancy after positive psychotherapy. As shown, according to the mean values after positive psychotherapy and acceptance and commitment based treatment, the body image of women with breast cancer has increased to a great extent. In other words, the lives of women with breast cancer after positive psychotherapy and treatment based on acceptance and commitment experienced a significant improvement in the body image variable. These results were consistent with the findings of the following studies. Golestanifar and Dashtbozorgi (2021); Zarezadeh et al. (2021); Bahrami Abdulmaleki et al. (2021); Hakimi et al. (1400); Parsakia et al. (2022), Ali Akbari et al. (2020); Moghadam et al. (2018); Darbani and Parsakia (2022); Afrooz, Dalir and Sadeghi (2017); Mashrafe (2016); Farmanian and Khalatbari (2016); Vogelquist et al. (2020).

The findings of the present study showed that between the two methods of positive psychotherapy and treatment based on acceptance and commitment in women with breast cancer, positive psychotherapy was somewhat more effective than treatment based on acceptance and commitment. Although not much research was found on the comparison of the effectiveness of two treatment methods, but in explaining the lack of significant difference

between the two methods, the characteristics and strategies of both treatment methods can be pointed out. In positivist psychotherapy, people are taught to improve their health and well-being through cognitive restructuring of irrational thoughts by emphasizing positive thoughts, scheduling controllable and enjoyable activities, and teaching courage and problem solving (Khu et al., 2019).

Treatment based on acceptance and commitment, which is one of the treatment methods derived from the third wave, aims to create and promote psychological flexibility through cognitive awareness, psychological acceptance, cognitive isolation, cognitive breakdown, clarifying values and creating motivation for committed action. The main goal of positivist psychotherapy is to improve health promotion through the processes of self-acceptance, purposeful life, personality development, mastery of the surrounding environment, autonomy and positive relationships with others; Therefore, according to the characteristics and effective strategies of both treatment methods, it can be expected that these treatments will lead to the improvement of psychological characteristics related to health, including life expectancy in women with breast cancer.

In order to explain the effectiveness of positive psychotherapy on the positive body image of women with breast cancer, it can be stated that women with breast cancer show higher levels of body image damage in cognitive, behavioral and emotional aspects. The fear of not being accepted and attractive from the eyes of others and important people in life is an important and major concern of women with breast cancer. They compare themselves with others and as a result they feel failure, depression and anxiety. It seems that positive psychotherapy has affected people's attitude to life, and there has been a wave of increasing life expectancy and positive body image in women with breast cancer. Because high levels of hope are positively related to physical and psychological health, positive thinking, and great social relationships (Benson, 2006). Probably, a synergistic cycle of hope and as a result paying enough attention to self-treatment and trying to improve a positive body image, and as a result, witnessing positive physical and psychological results, has led to an increase in hope and a

positive body image for life. In positivist psychotherapy, the content of thoughts is not directly targeted. However, as a result of using active or constructive responding techniques, sense of taste and counting three good things during the day, leads to increasing positive emotions and preventing negative emotions in the personal sphere and increasing positive communication. It has a positive effect on mental health and body image. In fact, positive psychotherapy assignments and exercises teach women with breast cancer how to distance themselves from disturbing thoughts, accept negative events, and emphasize their abilities that have been underappreciated (Khu et al., 2019).

In explaining the effectiveness of treatment based on acceptance and commitment on positive body image in women with breast cancer, it can be said that the goal of the cognitive element of this treatment can somehow include changing cognitions and behaviors that started or perpetuates the cycle of dissatisfaction with body image. This is done by accepting dysfunctional thoughts along with stopping body image dissatisfaction. Treatment based on acceptance and commitment uses cognitive methods to improve mental distortions and beliefs related to body image, cognitive errors and how to deal with these cognitions (relative to physical condition and body image). By allowing thoughts and perceptions related to body image to come and go without fighting them, the individual is taught to separate themselves from the mental experiences related to their physical condition (cognitive detachment). Therefore, it can act independently of these experiences, and this helps a person to know and clearly define his main personal values and turn them into specific behavioral goals (clarification of values). Finally, a motive for committed action, i.e. activity aimed at specified goals and values along with acceptance of mental experiences, is created in the individual. Therefore, women with breast cancer become psychologically aware of the values identified during treatment, including their physical condition, and through reducing rumination, increasing acceptance, and reducing emotional breakdown can affect the improvement of their positive body image; Therefore, treatment based on acceptance and commitment through cognitive and emotional strategies corrects and reduces negative body

image and subsequently creates a positive body image in people. Considering that the above treatment emphasizes on changing the positive attitude towards the body, this method can be effective in improving positive body images (Abolghasmi & Jafari, 2012).

Considering that the statistical population of the research was a special group of society, i.e. only women with breast cancer; Therefore, it is necessary to act with caution in generalizing the results. 2- The participants participated in the experiment voluntarily in the initial selection; Therefore, the results may have been affected by the effect of social desirability. 1- Due to the fact that the research was conducted on the community of chronic patients (women with breast cancer), it is suggested that it be conducted in other communities and the results are compared with the results of this research. Considering that the current research is a quantitative research, it is suggested to conduct a qualitative research (grounded theory based on semi-structured interviews and using a qualitative questionnaire and seeking opinions from experts) in the next researches. 1- It is suggested to the therapists, When faced with women with breast cancer, in order to treat the increase of social interactions, the emotional regulation and meaningfulness of their lives should be examined first. In this regard, the psychotherapy method based on acceptance and commitment, which were investigated in this research, can be used as effective and efficient treatment methods along with other psychological methods.

Conflict of Interest

According to the authors, this article has no financial sponsor or conflict of interest.

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