

RESEARCH ARTICLE

Effectiveness of Acceptance and Commitment Therapy on Life Expectancy of Female Cancer Patients at Tehran's Dehshpour Institute in 2015

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Abstract

Background: Acceptance and commitment therapy (ACT) increases the psychological flexibility of people afflicted with cancer, and consequently improves their adaptability. The present research was conducted with the aim of determining the effectiveness of ACT for people afflicted with cancer. **Materials and Methods:** The present research was of semi-pilot type with a pre-test and post-test plan for the proof group. The demographics of the community were composed of all the women with cancer who were under treatment in Tehran's Dehshpour therapeutic center in 2015. The sample was composed of 24 people who were selected as available and chosen randomly in two groups of test and proof. All the participants responded to Snyder questionnaire in two pre-test and post-test stages, and the test group participated in treatment sessions after conducting the pre-test. **Results:** After collecting the information, data analysis was conducted in two description and inferential levels. The test results of covariance analysis showed that the two groups' hope was meaningfully different. Hope in the test group, compared to the proof group, increased meaningfully. **Conclusions:** The results show that the ACT is effective in increasing hope of patients with cancer.

Keywords: Hope - breast cancer - acceptance and commitment therapy (ACT)

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Introduction

According to the global statistics, the breast cancer is diagnosed as the most common type of cancer among the world's women (Jemal et al., 2011). It has also been reported as the most common type of cancer and the second cause of death among Iranian women (Akbari et al., 2012). The research results are indicative of the significant outcomes of breast cancer such as physical complications (pain and fatigue), psychological problems (anxiety and depression) and other psychological-social problems, all of which lead to the decrease in life expectancy especially with regard to the younger women (Howard et al., 2012). Psychological health and lack of anxiety and depression are crucial in the people with cancer. The research show that not only does depression have a negative impact on the improvement process of the people with cancer but it has an effect much more than what is usually known.

Depression during the treatment period of cancer causes the person being treated not to pay due attention to her treatment and not to take the physician's diagnoses seriously; as a consequence she would not does her best to improve (Rezaeian et al., 2012). Many treatments

have been conducted for the health of the people with cancer such as group therapy, hope therapy, life skills therapy, cognitive-behavior therapy and Acceptance and commitment therapy (ACT). Molavi et al. (2014) say in their research that they have been able to reduce anxiety and depression. Iran doost et al. (2014) has also succeeded to reduce the women's chronic backaches. They also remark that the ACT has promoted the life quality of the women with chronic pains. Carolyn et al. (2015) remark that both cognitive-behavioral and ACT lead to anxiety reduction. Also Jiayi et al. (2015) have shown in researches that ACT along with audio and visual training and cyber texts are effective in physical pain reduction. Amanda and Lee (2015) remarked that ACT is an emerging though different type of cognitive-behavioral treatment.

Despite having been widely accepted by researches during the recent years, ACT is not only a new treatment but it has also a long history in that it is a type of clinical analysis which is used in psychological therapy. This method is a psychological intervention based on evidence which combines acceptance and awareness strategies with commitment and behavior change in various ways. This is

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done with the aim of increasing psychological flexibility. This approach was initially named “comprehensive distancing” and in late 1980s was compiled by Steven and et al (Rezaeian et al., 2012).

Taking into consideration the impact of this treatment, the relationship between health and hope, and the void resulting from the disease, the question remains that whether one can enhance hope in people with cancer by means of ATC. The aim of the present research is the effectiveness of this type of treatment on creating hope for the patients with breast cancer.

Materials and Methods

The present research is of semi-pilot type with pre-test, post-test plan and proof group. The demographics are composed of all the women with breast cancer in Tehran’s Dehshpour institute in 2015. The sample was consisted of 24 people who were selected through screening and were randomly placed in two 12-people groups of test and assignment. The test group went through an 8-session group ACT.

Snyder Expectancy life questionnaire: In this research Snyder hope 12-question questionnaire with 8-degree Likret was used for collecting data. The tools validity from retest method was reported 0.85 after two weeks, and for subscales of the agent’s thought and paths were reported 0.81 and 0.74, respectively. The alpha coefficient was reported to vary from 0.74 to 0.84, and in student population it amounted to 0.82.

After selecting the sample the subjects were assigned in two groups of test and proof, and pre-test was conducted in both groups. Then the independent variable, i.e., interventions regarding therapeutic acceptance and commitment, were conducted in eight 90-minute sessions one day a week for the test group. No intervention was conducted in the proof group. After the sessions were finished, the post-test stage was conducted. The treatment plan of the test group sessions is summarized in Table 1.

The questionnaires were distributed by the facilitator among the groups the session before the invention, i.e., in the pre-test stage. It took about 60 minutes to fill in the questionnaires. After conducting the interventions, i.e., about two months later, the facilitator gave the groups another test.

In the present research the data analysis was conducted by means of spss21 software. The utilized statistical tests were average, criterion deviation and covariance analysis.

Results

Totally there were 24 participants out of whom 4 were 35-40, 10 were 41-45, 6 were 46-50 and 4 were 51-55 years old.

The results of table 2 shows that the average and criterion deviation of the test group in pre-test stage were 22.75 and 3.11 which has increased to 35.61 and 13.92, respectively. But no palpable change was noticed in proof group.

To distinguish this difference the covariance analysis was conducted. Taking the size of the calculated effect into consideration, 84% of the group’s variances were subject to, and proof of, the independent coefficient effect. Also, the statistical power of the test amounted to 0.84. It means that the test was able to reject the zero assumption with 84% power. Table 3 merely indicates that there is a meaningful difference in one of the areas in the affairs and proof groups, but to recognize in which area the difference is meaningful the multi-coefficient covariance analysis

Table 1. Summary of the ACT Plan’s C ontents

Sessions	Contents
First session	Familiarizing group members with one another and establishing therapeutic relationship; familiarizing members with the research subject; general measurement, control methods measurement, establishing creative inability, and responding questionnaires
Second session	Investigating the inner and outer world in ACT; creating willingness to quit inefficient programs and the realization that the problem is control not solution, and substituting something for control, i.e., willingness
Third session	Identifying the individual’s values; specifying the goals; specifying actions; and specifying obstacles
Fourth session	Examining the values of each person and deepening the previous concepts
Fifth session	Realization of fusion and departure and doing exercises for departure
Sixth session	Realization of fusion to the conceptualized self and training how to depart from it
Seventh session	Mindfulness and emphasis on living the present
Eighth session	Examining the story of life and committed action

Table 2. Analysis of Data Obtained from Hope Variable in Pre-Test, Post-Test Stages

Variable	Acceptance and commitment therapy (ACT)		Control	
	Standard deviation	Mean	Standard deviation	Mean
Pre-test life expectancy	3.11	22.75	11.08	23.41
Post-test	13.92	35.61	4.16	24.50

Table 3. Results Obtained from Multi-Variable Covariance Analysis on Marks Average in Both Groups

value	F	Error df	Sig	Square Eta	
Pillai's trace	0.84	106.89	40	0.001	0.84
Wilks lambda	0.15	106.89	40	0.001	0.84
Hoteling's trace	5.34	106.89	40	0.001	0.84
Roy's largest rot	5.34	106.89	40	0.001	0.84

Table 4. Results Obtained from Multi-Coefficient Covariance Analysis of Post-Test Marks Average of Research Variables in Test and Proof Groups

Sources Change	Mean Square	Degrees of freedom	F	Sig	Square Eta
life expectancy	488.373	1	61.350	0.001	0.49

test in the Mancova context was used. The relevant results are shown in table

As the results of Table 4 shows there is a meaningful difference in $P < 0.001$ level between the post-test marks of test and proof groups. In other words, ACT has been efficient in creating hope among the participants of test group. Also, the test has been able to reject the zero assumption by 49% power.

Discussion

The present research was conducted with the aim of determining the effectiveness of ACT on the expectancy of the people with breast cancer. The obtained results showed that there is a meaningful difference between the average marks of post-test group and those of the proof group. In other words, ACT has been effective in creating hope in participants. This finding is consistent with the research results of Irandoost et al. (2014). ACT is a behavioral treatment which utilizes mindfulness, acceptance, and cognitive departure skills to enhance psychological flexibility. In ACT the psychological flexibility is the increase in the visitors' ability to establish relationship with their experience in the present, and to choose to act in a way that is consistent with their adopted values. Rajabi et al. (2014) state that ACT helps people become motivated, and that this motivation results in increase in expectancy. Also Narimani et al. (2015) state that this treatment affects the individual's hope through the promotion of self-efficiency and positive self-image. Despite the importance of the third wave of cognitive-behavioral treatments including the ACT approach as an important area of emerging psychotherapy which is cited by researchers to have an effective role on stress, anxiety disorders, depression, and other clinical conditions, and since it has proved to be effective in the promotion of the lifestyle of the people with chronic pains (Kahl et al., 2012; Dionne et al., 2012; Dionne et al., 2012), only a few researches have dealt with the application of ACT techniques in treating patients with cancer. William Herbert, Esevri and Wilson (2015) are among the researchers who introduced ACT as an effective intervention in adaptability with cancer.

As mention earlier, mindfulness is one of the key concepts in ACT model. Findings confirm that managing the cancer stress based on mindfulness can play an effective role in reducing psychological suffering and promoting life expectancy and spiritual health (Fish et al, 2014). Since cancer affliction requires strategies which enable patients to preserve their adaptability with their treatment process, psychological trainings can play an effective role in achieving this goal, especially in ACT which holds that references are never regarded as defeated, harmed, or disappointed. Instead, this approach is always a kind of empowerment which holds that a life based on values and meaningfulness is available to all

individuals. Also pain is regarded as a component of life, not an external entity to get rid of, and progress is not defined as an absolute level of success, but an increasing choice involves the present; a progressive outlook toward life is emphasized in this approach (Hayes, Pistorello and Levin, 2012).

The hidden secrets of this therapeutic method has made it fit for addressing anxiety, mental health, depression and other psychological variables. Therefore the above mentioned research is a verification of the suitable performance of this treatment in Iran and other countries. This treatment with its impact on mind has a direct effect on the mental health of individuals. In general an automatic thought is just a thought. When a person avoids or escape from it, there will be no acceptance. Here instead of departure we will have mixture. That is, instead of responding thought with thought, reality is perceived and the individual responds with a view to reality. For example a person whose life is void of meaning and has no hope for future actually sees herself in this stage, and instead of departure between thought and reality, she forms mixture in herself. Therefore this individual does not perceives her own values, nor is she satisfied with herself, and eventually she will not be responsible against her behavior. Similarly, the depressed and nervous individuals while accepting the current situation carry the departure towards problem solving, either by themselves or through a facilitator. Being able to reduce disorders and promote health, this treatment is effective with regard to lifestyle and life expectancy. This is a safe way for the individual to reach hope in that through reducing anxiety and depression and health promotion she acts better and makes better cognitive decisions, and consequently will have more hope for future.

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