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EVALUATE THE EFFECTIVENESS OF COGNITIVE THERAPY ON DECREASING PSYCHOLOGICAL PROBLEMS (SOMATIC COMPLAINTS, OBSESSIVE-COMPULSIVE SYMPTOMS, INTERPERSONAL DYSFUNCTION) IN WOMEN WITH BREAST CANCER

T. Seifollahi[1]*, A. Shafi Abadi[2]

[1]MA in Counseling and Guidance, Khatam University, Tehran, Iran

[2]Professor of Allameh Tabatabai University

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ABSTRACT

The purpose of this study was to examine the effects of cognitive therapy on reduced mental disorders in women with breast cancer. The population included all women working in twenty areas of education who are diagnosed with breast cancer. Convenience sampling method was used for sampling, so that the researcher selected required subjects among the District 19 Education teachers in Tehran. 24 selected participants were assigned on a voluntary basis in both experimental and control groups. The data was collected through scl 90-R questionnaire and completed in both pre-test and post-test by subjects in each group. Finally, the mean difference in the test scores of the two groups was compared and the main hypothesis was confirmed. In other words, it became clear that group therapy is effective in reducing the disorders in patients with breast cancer.

Keywords: breast cancer, cognitive therapy, psychological therapy.

Author Correspondence, e-mail: author@gmail.com

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INTRODUCTION

Cancer is considered as one of the horrible diseases that human suffers from a variety of it and persistently exposes to its risk (Abadi, 2004). Public concern about this disease is not specific in any particular country and region and is seen in all parts of the world. The reason is fairly obvious. Advanced cancer of any kind threats human life and because of fear of it, many people always avoid even periodic testing for cancer awareness. The epidemic plague in underdeveloped countries causes a higher percentage of morbidity (Hariri, 2001). Cancer is the second leading cause of morbidity worldwide after heart disease. In the *United States, cancer* will affect *1* in *2 men* and *1* in *3 women*, (Rosenbaum and Rosenbaum, 1998). Each year in the United States, over one million people become aware of their disease and some types of cancer for the first time. According to the America Cancer Society estimation, cancer causes the death of 538 thousand people in 1994 that accounted for 23% of the total deaths in this year (Rabins, translated by Bahadorie, 1998). Cancer is of different types and the form of its progress determines its advancement. Cancer occurs when cells become abnormal and begin to proliferate irregularly leading to the appearance of the tumor. There are two types of tumors: benign and malignant. Benign tumor does not attack specific area or does not eliminate it, yet malignant tumor grows through cell division and attacks to a certain area (lymph or blood) and quickly spreads to the other parts of the body. (Phillips, 1995)

Cognitive Therapy was invented by Aaron. T. Beck and he stressed the role of belief systems and behavior on thinking and feeling. The focus of cognitive therapy is on the recognition of distorted ideas and changed maladaptive thinking using by some techniques including emotional and behavioral techniques. During this type of treatment, thoughts and belief systems which humans are unaware of it will be influenced by stereotypes (Havasi, 2002). Cognitive therapy is defined as proactive, directive and time limited approach used to treat mental disorders. Beck believes that his theory is based on the premise that affection (moods, emotions) and the individual's behavior are greatly influenced by the assessment of the world, that is how a person thinks (Katrinoo et al., 2001). Cognitive therapy is formed based on the attitudes and assumptions

derived from past experience (schemas) and its main objective is creation of logical thought patterns and attitudes in patients. Blackburn and Freeman (1990), Shay (1998), in describing stereotypes suggest that they are the results of experiences and interactions in the early life. There is a relationship between some cognitive stereotypes and vulnerability preparation for mental illness. For example, depressed people have negative stereotypes, for instance I cannot do anything right or other people are better than me. So the cognitive vulnerability is the product of provocative or negative stereotypes. When the patience offers negative stereotype, therapist may notice a cognitive shift. In any psychiatric disorder, there are certain cognitive distortions. By identifying disorder, therapist can understand how data is summarized by clients. The basis for displaced signs is also the appearance of excitement or stress on the face and body (Beck, Emery and Greenberg, 1985).

Considering the above, cognitive therapy tries to:

* Reduced belief in dysfunctional stereotype or making them inactive.

* Reduced the use of cognitive distortions / logical errors and increased use of objective perception of events and the use of correct logic,

* Reduce the frequency of your negative thoughts

* Reduced the negative content of your thoughts, the world and the future (Freeman, 1993).

In the case study, it is obvious that dysfunctional stereotypes or cognitive distortions are one of the problems of patients with cancer. Beliefs such as: I shall soon die, I bother everyone, I feel well if I die soon, or my children will be miserable after me.... are very abundant thoughts in these patients, therefore, it is recommended that an action be taken to correct these beliefs. On the other hand, the group itself is also beneficial for these patients; hereby they understand that the problem is not unique (Shafiabadi, 2013).

Therefore, the present study sought to answer the question: whether cognitive therapy group can reduce psychological problems (somatic complaints, obsessive-compulsive symptoms, and interpersonal dysfunction) in women with cancer?

Methodology: This is a quasi-experimental study in which the researcher studied the effectiveness of cognitive group therapy in reduced psychiatric disorder through a special situation. The study population consisted of all female teachers working in the 20 education centers who were diagnosed with breast cancer and their diagnosis, prevention and treatment of diseases were under the auspices of Women's Affairs Organization. Convenience sampling method was used for sampling. 24 female teachers were selected from 19 districts and voluntarily assigned in two experimental and control groups. In the present study, SCL-90-R questionnaire was used to collect data. For data analysis, mean and standard deviation and t-test were used for descriptive and inferential statistics, respectively. **SCL-90-R questionnaire:** This questionnaire is one of the most widely used test for mentally ill persons and also is successfully applicable for alcohol and drugs addicts, sexual dysfunction, cancer patients, patients with heart failure. The basic form of the questionnaire (SCL-90) was designed by Deragotis, Lympen and Kowiee (1973) to show the psychological aspects of physical and mental patients.

Deragotis et al., revised the questionnaire in 1984 and developed it as Symptom cheeklist-90-revised type.

In general, SCL-90-R test has desirable validity and reliability. Natalie (1970) reported reliability coefficients for all test aspects using retest between 78% to 90%.

In a study by Derogatis, Rickels and Rock (1976) on a sample of 219 voluntary recruited people in America, the reliability coefficient for the genera mental health index and each 9 dimensions were reported desirable by using Cronbach's alpha, Kuder Richardson and retest. The scope of this ratio was fluctuated between 77% to 90% (according to Poladied cited by Ray, 1995). Some studies are also conducted regarding the reliability of this test inside the country.

Marashi (1996) reported the reliability of all aspects of this test between 80% to 93% by split method and 57% to 85% by Cronbach's alpha, respectively.

Regarding the validity of the test, it also can be said that this questionnaire was utilized in a lot of research inside and outside the country and its reliability is good. Derogatis, Rickels and Rock (1976) calculated the concurrent criterion-related validity of the 9 dimension test by comparison

with MMPI and reported its convergence between 36% to 73%. Yar Ahmadi (1997) reported criterion-related validity of this method with the same dimensions between 27% to 56%. In addition, Rezapour (1997) reported the validity of the test between 38% to 66% and the overall validity with the MMPI as r =72%.

Findings:

In Table 1, features of subjects such as age, education, disease term and number of chemotherapy sessions are shown in terms of the mean and standard deviation.

Table 1. Distribution of demographic variables in the control and experimental groups

Groups	**Control**		**Experimental**	
variables	standard deviation	Mean	standard deviation	**Mean**
Age (in years)	9.3	36.1	7.2	**34.9**
Education (in years)	2.3	15.8	2.7	**16.5**
The disease duration (in months)	28.11	48.36	30.26	**51.70**
The number of chemotherapy sessions	**6.18**	**12.83**	**5.48**	**17.31**

As we see in the above table, there is a little difference between two groups in terms of mentioned variables.

Table 2. Mean and standard deviation of two groups in pretest

Psychological factors	Control		Experimental	
	S	M	S	M
Somatization	0.91	2.34	0.75	**2.47**
Obsessive-Compulsive	1.80	2.11	1.12	**2.01**
Interpersonal sensitivi	**1.14**	**3.18**	**1.27**	**2.91**

The difference between variances is not meaningful.

As shown in Table 2, there are no significant differences between the mean scores of experimental group in any of the three components with control group in pre-test.

After comparing scores at pre-test, post-test scores of two groups were compared and the main hypothesis were tested.

In order to test the hypothesis, it is necessary to calculate mean difference scores of pre-test and post-test between groups and to determine the significance of the differences between them by comparison of the results.

First hypothesis: cognitive group therapy is effective in reducing somatic complaints in patients with cancer.

To test the hypothesis, the average somatic complaints scores were compared with each other at pre-test and post-test groups. The results are shown in Table 3.

Table 3. Comparison of mean differences scores for somatic complaints between two groups in pretest and post-test

Statistical indicators / Groups	T	~	Df	S	M
Experimental	3.76	0.01	22	0.73	**1.12**
Control				**0.51**	**-0.14**

Since the t calculated (3/76) is greater than t in table with 22 degrees of freedom, we reject the null hypothesis and concluded that with 99% confidence, the mean difference of scores in the experimental group is significantly different with the mean difference scores of somatic complaints.

Cognitive group therapy decreased somatic complaints in cancer patients.

Second sub-hypothesis: cognitive group therapy is effective in reducing obsession in in patients with cancer.

To test this hypothesis, the mean difference of obsession scores between the two groups is compared in pretest / posttest. The results are shown in Table 4.

Table 4. Comparison of the mean difference scores in the somatic complaints

Statistical indicators	T	~	Df	S	M
groups	3.76	0.01	22	0.52	**0.79**
Experimental				**0.32**	**-0.18**

Since the t calculated (2/46) is larger than t table with 22 degrees of freedom, therefore, the null hypothesis is rejected. In other words, we can say that with 95% confidence, the mean difference of obsession scores is significantly different between the experimental and control groups.

The difference level of a=0/01 was not significant. Thus, we conclude that cognitive group therapy decreased the amount of obsessive-compulsive in patients with cancer.

Third sub-hypothesis: cognitive group therapy is effective in reducing inefficient interactions in patients with cancer. To test this hypothesis, the mean difference between two groups in interpersonal sensitivity item was compared in the pre-test / post-test. The results are shown in Table 5-4.

Table 5. Comparison of the mean difference of scores for interpersonal sensitivity in the pre-test and post-test groups

Statistical indicators groups	T	~	df	S	M
Experimental	2.96	0.01	22	1.10	**1.41**
Control				**0.68**	**-0.27**

Since the t calculated (2/96) is larger than t table with 22 degrees of freedom, therefore, the null hypothesis is rejected. In other words, we can say that with 99% confidence, the mean difference of interpersonal sensitivity scores is significantly different between the experimental and control groups. Thus it becomes clear that cognitive group therapy is effective in reducing inefficient interactions in patients with cancer.

CONCLUSION AND DISCUSSION

The aim of this study was to evaluate the effectiveness of cognitive therapy on psychological problems (somatic complaints, obsessive-compulsive symptoms, interpersonal dysfunction) in women with breast cancer.

For this purpose, the researcher selected 24 students from the Advisory Center for Women's Affairs in education districts using the convenience sampling method. Subjects were voluntarily assigned in both experimental and control groups.

Features of subjects including age, disease duration, education, etc. are listed in Table 1. The main hypothesis of the study as "cognitive group psychotherapy is effective in reducing psychological distress in patients with cancer" was divided into three sub-hypothesis. The results for each hypothesis are explained in the following.

First hypothesis: cognitive group therapy is effective in reducing somatic complaints in in patients with cancer.

As seen in Table 3, the obtained T (3/76) is statistically significant at confidence level 99% and thus we can say that cognitive group therapy is effective in reducing somatic complaints in patients with cancer.

Perhaps we can say that by cognitive therapy, the patient avoids the wrong thoughts such as "My illness is incurable" or "The symptoms are getting worse every day," or my family and doctors will not pay attention me if I don’t express my pain and sadness. A patient who is placed in a group therapy does not need to attract the attention of others in exaggerating the symptoms of his illness. Results are consistent with Myers (1990), Catherine (2001), Havasie (2002) and Barabadi (2004).

Second sub-hypothesis: cognitive group therapy is effective in reducing OCD in patients with cancer. As shown in Table 4, T obtained (2/46) is larger than T table with 22 degrees of freedom. Therefore, we can say with 99% confidence that the hypothesis is confirmed.

By using techniques such as habituation training and stop thinking, cognitive group therapy can greatly reduce obsessive thoughts in patients with cancer. The phrase “I may transfer illness to other family members" are among the common obsession thoughts in patients with cancer. In the sessions, we tried to prevent these kinds of thoughts. The result is consistent with Karaspigel (1988).

Third sub-hypothesis: cognitive group therapy is effective in reducing inefficient interactions in patients with cancer.

According to the data in Table 5, we see that T obtained (96/2) is significantly higher than T table and therefore at the confidence level 99%, we conclude that this hypothesis is confirmed.

Basically in patients with cancer, relationships with others are based on healthy or weak - strong attitude. On the one hand, patients with cancer think that others sympathize them because of their disability and early death and think that they should be paid special attention due to their illness on the other hand. Cognitive group therapy can help these people regulate their relationships with others based on mutual needs and expectations. The research findings are consistent with Havasie (2002) and Barabadi (2004).

In general, by observations about the experimental group, I found that cognitive therapy has caused them to gain more self-esteem.

Consequently, this has led to fewer physical complaints, less depressive thoughts, less aggressive behaviors, less anger, controlled anxiety and more importantly, improved interpersonal relationships.

Undoubtedly, a significant part of these changes can be attributed to the process of group therapy and cognitive techniques. Finally, comparing the difference between the average scores of the two groups showed that cognitive psychotherapy in group therapy is effective in reducing psychological distress in patients with cancer and thus the research hypothesis is confirmed by confidence level 99%.

It should be noted that the results achieved are somewhat consistent with the findings of Artazik (1994), Zalan (2001), as well as Nasri et al., (2001).

In the end, according to the results of doctors and experts, it is recommend that to treat cancer patients, physical and psychosocial care will also be considered in addition to medical problems.

Also, due to the lack of public knowledge about the correct management of such patients, it is recommended that the authorities should provide the necessary knowledge through mass media or an appropriate text books and manuals.

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