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EFFECTIVENESS OF GROUP TRAINING OPTIMISM ON DEPRESSION, ANXIETY AND STRESS IN WOMAN WITH BREAST CANCER

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ABSTRACT

Cancer is a chronic and Life-threatening disease, and breast cancer is the most common and fatal, also it is influential cancer on the women emotionally and mentally. The purpose of this study was to examine the effect of *group* training optimism on depression, anxiety and stress in women with breast cancer. In this research 30 women among all women who referred to Mahdieh charitable medical diagnostic - therapeutic center of Hamadan were chosen then they were placed randomly into two groups of 15 participants. The experimental group received 12 sessions of *group* training optimism for 90 minutes. Three questionnaires of depression, anxiety and stress (Lovibond and Lovibond, 1995) were used to obtain information. Finally, in the follow up both of them (Two groups) were evaluated after 3 months. Data were analyzed using by mixed ANOVA. Results showed that the experimental group compared with the control group at the posttest and follow-up, had significantly low scores ($p < 0.05$) of depression, anxiety and stress. According to the conclusions of this study, it is necessary to design and implement both of interventions (psychological and medical) to improve patient's adjustment.

Keywords: Breast Cancer, Optimism, Depression, Anxiety, Stress

INTRODUCTION

The cancer is cell disease which it's characterized is unrestricted and uncontrolled multiplication of cells and formed Malignant neoplasm. In light of recent advances in medical science, cancer not to be considered as an incurable diseases. The evidences show that today the length of patients' life with cancer, even when the disease is diagnosed as incurable, is greater than ever. This means that cancer has been determined as chronic disease more than before (White, 2001, translated by Molavi and Fatahi, 2010). In this regard, breast cancer is the most common and deadly cancer among women which has the most emotional effectiveness on them (Akbariye, 1999)

After the diagnosis, cancer may be followed by stress, anxiety and other mood disorders that occur in individuals and these symptoms` would be changed over time in response to detection of recurrence and improved disease (Dengand, 2005). Generally, prevalence of mental disorders in women with breast cancer is higher than the general population. For example, in study by Kissane *et al.*, (2008), in women effected by breast cancer in the first stage, they have 36.7 percent bad temper that 9.6 of them have very much dejection and 27.1 have little dejection. Agitation disorder see in 14.6 percent of them and about 8.6 percent were in the first stage and 6 percent were in the progress stage (reported by Ranjbarekoocheksari and Mostafavi, 2006).

Therefore the design and implementation of interventions to reduce emotional disorders and enhance the quality of life of these patients is necessary. In this regard, a psychological intervention is probably will

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have a significant impact on reducing mental disorders in patients with cancer such as Behavioral interventions which included education optimism. About the importance of cognitive-behavior in general and optimistic specially, Wait (2001, translated by Molavi and Fatahi, 2010) expressed that if it is reasonable to believe, there is almost no physical or cognitive difficulties which can potentially help to reduce the symptoms or complications or even did not use their full style of CBT. The effect of cognitive behavioral therapy on depression and mood disorders in women with breast cancer in other research (Cocker *et al.*, 2007; Kuijter *et al.*, 2004; Simpson 2001; Edelman *et al.*, 1999; Kooker *et al.*, 1994). Also, Abend and Williamson (2002) confirmed the role of optimistic in decreasing agitation patient effected by breast cancer.

Although some studies (Given *et al.*, 2004; Fukuietal, 2000; Maguire *et al.*, 1985). Also, there is no assessment on the effectiveness of cognitive-behavioral training.

Based on last research, this study aimed to examine the effectiveness of group education optimism on depression, anxiety, stress and women with breast cancer.

MATERIALS AND METHODS

Method

Research method, statistical data, sample and sampling method: present Study in terms of design, result oriented approach and purpose was applicable. Research method was as pretest – posttest with control group and lasted for 3 months. The population of this research was all of the women affected by breast cancer in 2012 who had lived in Hamedan. The sample was 30 people. Research method based on samples obtained in the first stage was available. Participates has been replaced random in two group s(experimental and control). Each group consisted of 15 people. Inclusion criteria for participating in the study include: 1. Affected by certain with nature of depression (minimum 14 grade) and agitation (minimum 10 grade) and stress (minimum; 2. Duration of breast cancer shouldn't be for more than a month; 3. Don't receiving psychological treatment after diagnosis;4. Lack of cancers other than breast cancer.

Instruments

Individual Features Questionnaire: The questionnaire were included questions on age, marital status, education, socioeconomic status, number of people living with the patient, The amount of information on disease duration, disease stage, the level of perceived support from family, history of mental illness and suicide.

Depression, Anxiety and Stress Scales (DASS): This scale prepared by Lovibond and Lovibond in 1995 and the collection includes three rating scale for assessment of negative scenarios, i.e, depression, anxiety and stress. Antony *et al.*, (1998) expressed Coefficient alpha for these subscales test 0.92, 0.97, 0.95.

Research Design

After selecting subjects and their replacement in both control and experimental groups of 15Inc. Control group has been exposed to the standard care group pilot in addition to standard care during treatment as the intervention group. In Optimism group, members exposed to intervention and optimistic education in 12 sessions of 90 to 120 minutes - and a couple of times a week. In order to teaching the basic principles of optimistic, the book by Seligman about optimistic child in (1996), Learned Optimism (1998) and inner Joy (2006) has been used. Also in this study followed by some ethical points such as: participants selected with respect to the purpose of the study and informed consent. Multivariate analysis method used to analyze the data.

In optimism group, members were exposed to intervention and education and training optimistic during 12 sessions for 90to 120min and twice a week. For teaching optimistic, basic principles used which introduced by Seligman in optimistic childs' books (1996) Learned Optimism (1998) and inner happiness (2006). Support group also received designed plan based on educational instruction handbook of psychiatric disorders by Kaplan and Sadook (2007). This program was carried out during12 sessions, 90 to 120 minutes, twice a week.

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Determining appointment and scheduling were characterized by coordinating meetings with clients. According to the research objectives, three months after intervention to follow-up therapy activities of the overall effectiveness of the intervention took with the aim of evaluating, both groups. Educational headlines of support group are in Table 1 and optimistic group is in Table 2.

Table 1: Educational headlines of psychotherapy in support group for women with breast cancer

Session	Description
First session	Understanding the importance of supportive psychotherapy, introducing members and implementing pretest
Second session	Familiar with the principles of group members together and hearing the cancer story of each member
Third session	More familiar of members with the disease, methods of diagnosis and treatment, adverse effects, drug-free method of dealing with the adverse effects and answer the questions by specialist
Fourth session	Members discussion about the impact of cancer on the person, the image of thoughts and feelings associated with it. Members discussion about the impact of cancer on family and marital relationships.
Fifth session	
Sixth session	Member discussion about death anxiety and coping strategies
Seventh session	Recreational day camp by members with the ability to increase and create more intimacy of members together.
Eighth to eleventh session	Encouraged to express their feelings and talk about problems and coping strategies of each Members
Twelfth session	Collection, get feedback and posttest execution

Table 2: Educational headlines of optimistic group for women with breast cancer

Session	Description
First session	Familiar with the treatment group optimism and its importance in pretest
Second session	Familiar with, and teaching principles and formal model of ABC for each member
Third session	Understanding the importance of inner dialogue and its importance, hearing inner dialogue about illness.
Fourth session	Modified documents; changed pessimistic explanatory style (internal, general and stable) to an optimistic explanatory style (outside, specific and transient), and generalization of disease attributable to members
Fifth session	Introducing Dysfunctional thoughts and false beliefs and investigating mental errors of Members about illnesses.
Sixth session	Teaching to deal and debate with false beliefs and introduces three techniques to disrupt concentration, conflict, distancing by expressing examples of members about the disease.
Seventh session	Familiar with the techniques of self-acceptance, self-esteem, focus on the capabilities and limitations to treat impotence.
Eighth to eleventh session	Identifying and challenging irrational thoughts of every member of the group
Twelfth session	Collection, get feedback and posttest execution

Finally, in order to check the assumption of homogeneity of variance before the intervention, the box test was used and in order to determine the differences between groups, the covariance analysis and Scheffe's test was used.

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Ethical research Principle

Also in this study, in order to observe ethical research, following items were regarded: participants with respect to informed consent on the purpose of the study and selected voluntary.

At all stages of the research, the researchers tried to answer the questions about how the research conducted and content questions in a way that the response does not affect the answer. There was an emphasis on the need to names of participants for confidentiality at all stages. The control group were assigned on a waiting list so that after research and in case of cooperative research centers are invited to participate in treatment of the research.

Findings

Table 3 reflects mean and standard deviation of depression, anxiety and stress at different stages of evaluation. Table 3 shows the mean of depression, anxiety and stress in the post-test and follow-up stages in optimistic groups which has decreased compared to pre-test, While these changes have very little in control group. In the next stage for assured of observe the presuppose this test (equality in covariance variables in all level of independent variable), BOX test has been used that results show observing upper assumed ($p > 0.05$, $f_{(45 \text{ and } 1833.246)} = 1.210$).

Table 3: Mean and standard error dejection grade, agitation and stress in two optimistic groups in control of women effected by breast cancer in pre- test, post test and following

Group and variation time	Optimistic group			Control group		
	Follow	Post test	Pre test	Follow	Post test	Pre test
Dejection	9±3.01	8.5±3.91	22.66±12.48	17.66±6.36	15.73±7.12	19.2±9.22
Agitation	8.75±2.86	7.5±4.27	19.83±12.57	16.66±6.61	15.33±8.5	15.06±7.28
Stress	16.11±2.32	8.33±5.95	23.83±10.49	15.46±8.73	18.53±6.16	19.6±8.32

Also, it has been determined that there is no significant difference between optimistic group and control group (with regard to amount of Wicks’ Lambda = 0.42, $p < 0.0001$, $F = 8.32$, square Ita = 0.58) compound liner variable (dejection, agitation and stress)in interaction with time (pre test, post test and following). Also result of Makli test is not meaningful ($p > 0.05$) and this means that general KeroitMakli theories were regarded.

Table 4: Interaction among group and time variables, depression, anxiety and stress, optimism and control groups

Effective	Meaningful	F	Mean square	Freedom degree	Interaction between group and time	
0.187	0.024	5.749	763.267	1	Post test with pretest	Dejection
0.241	0.009	7.924	981.452	1	Following with pre test	
0.238	0.010	7.778	1058.4	1	Post test with pre test	Agitation
0.323	0.002	11.903	1072.466	1	Following with pre test	
0.374	0.001	14.966	1388.807	1	Post test with pre test	Stress
0.147	0.048	4.325	485.452	1	Following with pretest	

As seen in the above table, depression, anxiety and stress in the post-test and group compared with the pretest is significantly different. According to the above data, research hypothesis is accepted.

DISCUSSION

The Cancer known as a chronic disease. In the meantime, breast cancer is the most common, fatal and most emotional - psychological influential cancer among women. However, research suggest that psychological factors are effective in susceptibility, risk and how they are coping and recovery breast

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cancer. The present study was conducted to determine the effectiveness of group education optimism on depression, anxiety, stress in women with breast cancer.

The results of the analysis of data using a mixed analysis of variance express that the hypothesis is accepted. The analysis showed that the scores of depression, anxiety and stress in optimism group compared with the control group in evaluation in post-test and follow-up decreased, significantly. Thus, group training optimism, depression, anxiety and stress in women with breast cancer compared with controls have been effective. This finding refer to study by Hopko *et al.*, (2008), Kooker *et al.*, (2007), Koojer *et al.*, (2004), Aband and Viliamson (2002), Edleman *et al.*, (1999), Brideg *et al.*, (1998), Kooker *et al.*, (1994), Kahrazei *et al.*, (2012), Bahmani (2010), Pedram *et al.*, (2009), Heidari *et al.*, (2008), Aminikhod (2008), Sajadiyehazave *et al.*, (2008), Nasri *et al.*, (2001).

For confirming these results are evidence that traits like optimism on coping responses and thus affect their psychological adjustment with disease. Optimistic people dealing with the disease by applying a problem-solving technique, positive review and accept the reality (Atkinson and *et al.*, 2003, translate by Barahani *et al.*, 2005). But more important than cognitive-behavioral interventions such as optimism can be effective in a sense of control over life extension of in these patients. The reason of this result indicates that traits such as optimism has impact on coping response and result of psychological adjustment to disease. Conducted research shows this fact that optimism as an explanatory style in adverse events can play a role in maintaining mental health (Saeed, 2006).

According to the presented material and results of this study, it can be inferred that optimists dealing with a disease by technique of addressing the problem-solving, positive review and accept the reality. (Atkinson *et al.*, 2003, translated Baraheni *et al.*, 2003). Previous studies also have suggested that in the explanation of the effects optimism on mental health, optimistic people using more effective coping strategies, such as reappraisal and problem solving, so they can better deal with stress (Seligman, 1998).

On the other hand, Seligman defined Optimism as an explanatory style instead of abroad personality trait. According to this view, people are optimistic explain about negative events or experiences with attribution them to external the transient and specific factors (Seligman, 1998). But more importantly, behavioral interventions such as optimism can be effective in the extension of control concept over life of these patients. In fact, there is no doubt that one of the most psychological problems of these patients is the lack of control feeling over circumstances and generally life, which in addition to exacerbating mental health problems, causes problem in processing of medical purposes. The advantage of this type of intervention influence on control feeling and believe on one's sense of effective on his destination targeted as a significant component (Sandval *et al.*, 2006). In addition, the findings indicate that this optimism education makes better use of resources, social support and social situation (Segerstrom, 2006).

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