

Efficacy of Group Logotherapy on Decreasing Anxiety in Women with Breast Cancer

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Abstract

Background: Breast cancer is the most incident cancer and the fifth cause of death due to malignancies among Iranian women. A strong breast cancer patients' sense of meaning and purpose in life appears to decrease anxiety in their life. The present study has investigated the effectiveness of group Logotherapy on the reduction of anxiety in women with breast cancer.

Methods: The research was quasi-experimental with pre-test, post-test and control group. For this purpose, 30 patients with breast cancer were randomly divided into two experimental group and control group. Then, all patients completed the Beck Anxiety Inventory (BAI). The experimental group received Logotherapy-based group counseling for eight sessions; however, the control group did not receive any specific training. In the end, both groups were tested again. After collecting the questionnaires, data was analyzed by the statistic software SPSS version 18 and using analysis of covariance.

Results: The research results showed that group Logotherapy was effective in reducing anxiety in women with breast cancer ($p < 0.005$). In other words, this intervention could reduce anxiety in the experimental group.

Conclusion: The results suggest that in line with current medical treatment, psychosocial interventions can be used to reduce anxiety in the breast cancer patients.

Keywords: Logotherapy; Anxiety; Breast Cancer

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Introduction

Breast cancer is the most incident cancer and the fifth cause of death due to malignancies among Iranian women [1]. Overall, five-year survival rate of breast cancer throughout our country was 71%. This figure varied (from 76.2% to 62.1%) based on different data obtained from different geographical regions. These varieties may be due to multiple factors such as disease staging, knowledge and attitude, geographical and ethnic issues, socioeconomic factors and finally quality of care by caregivers [2].

The diagnosis and treatment of breast cancer can be a distressing experience for anyone [3]. The women's psychological health with breast cancer is affected both during and after treatment. Psychological distress in these patients, including anxiety and depression has independent associations with quality-of-life impairment, especially emotional, functional, physical and social well-being

[4]. In women with early breast cancer, the prevalence of depression, anxiety or both after diagnosis is around twice that of the general female population [5]. The results of research conducted by Kyranou et al. showed that regardless of pain status, anxiety and depression are common problems in women before breast cancer surgery [6]. Findings also indicate that the diagnosis of breast cancer is associated with heightened levels of negative emotions and psychological distress, especially symptoms of anxiety and depression [7]. Hence, it can be concluded that breast cancer patients are often plagued by various psychological problems. These problems are related to the patients' personal, treatment and other socio-psychological factors. Also, they can weak the sufferers' immunity, aggravate the secondary reaction of treatment and cause the recurrence and deterioration of the disease, thus affecting the therapeutic effect and prognosis [8].

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According to Stark et al. study, anxiety symptoms are common in cancer patients [9]. Anxiety is a normal adaptive response to a threat, but in some condition (ie, in cancer patients) it can change to maladaptive. It is manifested by a broad array of physical signs of autonomic activation, such as changes in thinking (ie, intrusive thoughts) and behavior [10]. In other words, it is a common disorder to a cancer diagnosis and an average response to perceived threats like loss of body functions, alterations in appearance, family disruption, death, etc. It can persist throughout the disease process and affect on the patient's quality of life, significantly. In addition, it often coexists with depression in cancer patients. Anxiety appears or worsens at critical phases during the period of illness (diagnosis, beginning and end of treatment, recurrence, survival and terminal stage) [11].

Generally, diagnosis of an illness like cancer, often causes a complex set of issues that patient should be confront, such as physical symptoms (especially pain), psychological reactions, concern for the family and their endangered future, facing the existential issues of life or death, spiritual or religious belief system to help give a tolerable meaning to the new world of illness [12]. Because cognitive, behavioral and social factors can affect how patients adapt to cancer diagnosis and treatment, many investigators have evaluated the impacts of psychosocial interventions on psychological adaptation during treatment [13].

Making meaning is an important part of adjusting to a life-threatening illness [14]. In the other words, issues of meaning and spirituality are essential parts in the experience of persons with serious illnesses. They greatly shape how individuals view themselves, their illness, and their future [15]. A strong sense of meaning and purpose in life of breast cancer patients appears to facilitate their psychological adjustment and may reduce the impact of intrusive thoughts on their mental health status [16]. Logotherapy is an existential psychotherapy that focuses on knowledge of the meaning of one's life as an avenue to mental health. This sense of meaning is derived through the realization of three types of "values": (a) creative values (what the individual gives to the world), (b), experiential values (what the individual receives from the world), and (c) attitudinal values (the ability to change one's attitude toward unchangeable circumstances) [17].

Generally, Logotherapy can readily be integrated with techniques that mental health professionals frequently use, and thus it has much to offer mental health professionals regardless of their theoretical orientation [18].

Materials and Methods

The present study was a quasi-experimental with pre-test, post-test and control group. After pre-test for both experimental and control groups, eight sessions were held for 90 minutes during the one month. Psychological intervention was implemented according to Viktor Frankel's books and Articles of William Breitbart and et al. [19] and adapted by Iranian and Islamic culture (Table 1). After the end of sessions, both groups were asked to complete Beck Anxiety Inventory (BAI) again. The SPSS software version 18 and covariance analysis test has used in order to analyze the test data.

Statistical population

Statistical population of this research was selected from the breast cancer patients who were covered by the Cancer Research Center (CRC), Shahid Beheshti University of Medical Sciences. Among them, 30 patients were randomly chosen and divided into the experimental (n=15) and controls (n=15) groups. Target samples aged 30 to 65 years, were literate, last at least six months of their diagnosis, had not participated in psychological courses previously and lack of mental and physical diseases that can be prevented in participation. Demographic characteristics of the subjects are given in table 2.

Research tool

The Beck Anxiety Inventory was used as a research tool. Beck Anxiety Inventory (BAI) is a 21-item scale that showed high internal consistency ($\alpha=0.92$) and test-retest reliability over one week, $r(81)=0.75$ [20]. Scoring is easily accomplished by summing scores for items. The total score ranges from 0–63. The following guidelines are recommended for the interpretation of scores: 0–9, normal; 10–18, mild to moderate anxiety; 19–29, moderate to severe anxiety; and 30–63, severe anxiety [21]. Among sex and age classes of the Iranian population, the results showed that the test has good validity ($r=0.72$, $p<0.001$), reliability ($r=0.83$, $p<0.001$) and internal consistency ($\text{Alpha}=0.92$) [22].

Table 1. Summary of sessions for Women surviving from Breast Cancer

Sessions	Summary of sessions
Sessions 1	Goals: Introduction and Concept of Meaning. Summary: Meet the therapist and group members together. Explain the rules and expectations. A brief description of the therapeutic approach of Logotherapy and explain the concept of meaning in life.
Sessions 2	Goals: Cancer as a source of meaning. Summary: Explain the consequences of cancer and derive meaning from the cancer as a meaningful event in the lives of patients.
Sessions 3	Goals: Three sources of meaning from Frankl's approach. Summary: Explain the Creative values, Experiential values and Attitudinal values. Find evidence from these three sources of meaning in the lives of patients.
Sessions 4	Goals: Will, Freedom and Responsibility Summary: The therapist emphasized the temporary nature of life for all people. And noted that human freedom and responsibility to choose a suitable approach in face of all the circumstances of life.
Sessions 5	Goals: Spirituality as a feature of a human being. Summary: Description of Appealing technique and learning the power of empathy to extract prominent features of the human spirit.
Sessions 6	Goals: Modification of attitude, Paradoxical intention and De reflection Summary: Teaching the techniques of Logotherapy and the use of these therapeutic strategies against each one of the main problems in patients' lives.
Sessions 7	Goals: New attitudes of patients about cancer, Plans and purposes for present and future life. Summary: Prioritize plans and provide solutions to remove barriers.
Sessions 8	Goals: Summary and conclusions Summary: Patients described Achievements. A brief description of the concepts discussed in each session, were reviewed.

Results

To evaluate the effectiveness of group Logotherapy in decreasing anxiety of women with breast cancer, after calculating the score of pre-test and post-test in both experimental and control groups, analysis of covariance (ANCOVA) was used. Findings from this analysis are shown in the following tables (Table 3, 4, 5).

According to table 3, pre-test score of the experimental group is higher than the post-test score in anxiety scale. In order to examine the equality hypothesis of variances, Levene's test was used and for determining the significance of these differences, analysis of covariance (ANCOVA) was used.

As demonstrated in table 4, due to the significance level ($p < 0.05$), variances are equal and

according to table 5, Logotherapy intervention had an effect in reducing anxiety in breast cancer patients ($F=124.48$, $p < 0.0005$, $\mu^2=0.82$). The findings of present study has shown that breast cancer patients after participating in Logotherapy intervention had experienced lower levels of anxiety than breast cancer patients who did not participated in this intervention.

Discussion

The research results showed that Logotherapy intervention was effective in reducing anxiety of breast cancer patients. Among the multiplicity and complexity of psychotherapy theories and models, cognitive-behavioral intervention, interpersonal psychotherapy and psychodynamic therapy,

Table 2. Demographic characteristics of women surviving from Breast Cancer

		Frequency	percent
Education	Low literate	11	36.7
	Diploma	12	40
	Associate's Degree	2	6.7
	Bachelor's Degree	3	10
	Master's Degree	2	6.7
Marital Status	Single	2	6.7
	Married	28	93.3
N		30	100

Table 3. Mean and standard deviation for the breast cancer patients in Pre-post and post-test scores (n=15).

Group	Variable	Pre-test		Post-test	
		Mean	SD	mean	SD
Test	Anxiety	39.33	5.74	13.93	5.15
Control	Anxiety	32.20	8.06	32.53	8.08

Table 4. Levene's test for homogeneity of variances

F	Df1	Df2	Sig
1.34	1	28	0.26

Table 5. Analysis of covariance to compare two groups pre-test and post-test

Variance Source	Df	Mean Square	F	Sig	Eta square
Pre-test	1	594.09	23.23	0.000	0.462
Group	1	3183.92	124.48	0.000	0.822
Error	27	25.58	-	-	-

supportive-expressive therapy and some new models, namely meaning-centered psychotherapy and dignity therapy represent the most significant approaches in psycho-oncology [23]. The result obtained from this study is compatible with the research by Garfami et al., who has found that the group Logotherapy approach reduces somatization, interpersonal sensitivity, depression, anxiety, hostility and phobia in patients with breast cancer [24]. Results of Hamid et al. study, as Logotherapy effects on depression showed that anxiety and life quality of cancer patients represents a significant reduction in anxiety and depression scores and a significant increase in quality of life scores in the experimental group than the control group [25]. Also, Kang et al., demonstrated that Logotherapy was effective in reducing suffering and improving

the meaning in life of cancer patients [26]. Hoseinian et al., in their study showed that group Logotherapy increases life expectation in patients suffering from cancer [27].

About the role of meaning in life, Jaarsma et al. noted that the experience of meaning in life was positively related to feelings of psychological well-being and negatively to feelings of distress [28]. Dezutter et al. showed that meaning in life may be related to the well-being of chronically ill patients and the acceptance of their condition [29]. Anagnostopoulos et al. indicated that a strong sense of personal meaning and purpose in life, and an integrated understanding of self and life may lessen the impact of intrusive thoughts on breast cancer patients' psychological adjustment and mental health status [30].

In the study conducted by Breitbart et al. aimed at investigating Meaning Centered Group Psychotherapy (MCGP) to help patients with advanced cancer sustain or enhance a sense of meaning, peace and purpose in their lives, results showed a significant improvements in spiritual well-being and a sense of meaning [31]. In addition, Lee et al. demonstrated the meaning-making intervention during cancer treatment improves significantly higher levels of self-esteem, optimism, and self-efficacy in the experimental group participants compared to the control group [32]. Spek et al. emphasized that meaning-centered group psychotherapy in cancer survivors is key to adjustment to life after cancer; so, it can be implemented in the practice of psycho-oncology care [33].

Conclusion

According to the results of the present study, Logotherapy was effective on reducing anxiety level in women with breast cancer. Hence, it can be concluded that an explanation of comprehensive approaches in the treatment and management of cancer symptoms, would be an important step in improving psychological components in the lives of breast cancer patients. In study of Kaviani et al., the majority of participants (52.7%) declared that psychosocial care is necessary for all patients with breast complaints [34]. Therefore, relying on these researches, we need to better understand and enhance the utilization of psychological treatments and interventions. Psychological interventions such as Logotherapy can be an efficient group intervention in the hospitals and division of cancer care.

This study has a number of limitations that must be acknowledged: First, Non-random selection. Second, Lack of follow-up periods. Third, Variables such as marital status, occupation, and socioeconomic status of patients have not been controlled.

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Conflict of Interest

The authors declare that they have no conflict of interest in this study.

Authors' Contribution

Sahar Mohabbat Bahar designed and wrote this article. Mohammad Moradijoo analyzed the data. Mahmoud Golzari and Mohammad Esmail Akbari guided this article. All authors read and approved the final manuscript.

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