



The effect of spiritual cognitive emotional group therapy in reducing psychological problems in cancer patients

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Abstract

Breast cancer is the most common type of cancer among women that can cause many psychological problems in patients. The aim of this study was to assess the effectiveness of spiritual cognitive-emotional group therapy in the reduction of psychological problems in female patients suffering from breast cancer. In this quasi-experimental study, the pretest-posttest design was used. From the hospitals, 18 female participants diagnosed with breast cancer were selected according to their availability and then, randomly distributed into two groups of experiment and control. The therapy program included the participation of the experimental group in 10 sessions of spiritual cognitive emotional group therapy. Each session lasted 90 minutes. Beck depression inventory, Beck anxiety inventory, and identity crisis questionnaire were used for collecting data. The ANCOVA results demonstrated that the spiritual cognitive emotional group therapy was effective in reducing anxiety, depression, absurdity, despair, life dissatisfaction, sadness, and increasing self-esteem in women with breast cancer. Therefore, according to these findings we can conclude that spiritual cognitive emotional group therapy was effective in reducing the psychological problems of patients suffering from cancer.

Keywords: Cancer, Cognitive, Psychological, Spiritual

Introduction

Cancer is a serious and life-threatening illness which has different effects on the well-being of patients and their families. In the United States of America, approximately 1.3 million cancers are diagnosed each year [1]. Some types of cancers are common among men and women. Breast Cancer (BC) has been diagnosed as the most common type of cancer among women all over the world [2]. More than half of studies have demonstrated that cancer patients are suffering from some psychological disorders among

which, depression is the most prevalent [3]. After depression, anxiety seems to be the next psychological problem, especially among women [3].

Therefore, these two mental problems are highly comorbid and they have a great influence on breast cancer patients' quality of life [4]. Undergoing chemotherapy and surgeries can leave some side effects in cancer patients and these side effects can increase mental distresses such as anxiety and depression [5,6].

One of the first therapies for reducing the distress and anxiety in cancer patients was existential therapy [2]. Another type of therapy which was first introduced by Beck is cognitive therapy [7,8]. Reports have illustrated that cognitive behavioral therapy in groups have considerable positive effects on anxiety and depression and hopefulness of cancer patients [9]. Cognitive Behavioral Therapy (CBT) techniques have had a significant impact on distress and pain in cancer patients [10]. Logotherapy in a group has also been reported to reduce the signs of depression among breast cancer patients [11,12].

However, the recent studies have shown that some other factors are highly associated with the ability of life satisfaction in depressed cancer patients [13]. These new factors can be referred to as spirituality and religiosity. These two factors can immensely increase the hope and positive mood of people coping with cancer [14]. Furthermore, numerous studies have found a positive correlation between religion and physical and mental health. It is suggested that religion can help the patient to have a better adjustment with cancer [15,16]. That could be the reason why lots of cancer patients perform religious and spiritual practices [17].

Many psychotherapists have tried to use religious spiritual concepts in psychotherapy. These religious interventions are being used with different types of psychotherapy theories including Behavior Therapy [18], Psychoanalytic [19], Existential–humanistic Therapy [20], Gestalt Therapy [21], Adlerian Therapy [22], and Rational–Emotive Therapy [23], and Cognitive Therapy [24].

Because of the importance of religious and spiritual concepts in meaning of life, it seems that psychotherapies with spirituality components can help cancer patients to deal with their psychological problems. Therefore, a new form of therapy has recently been introduced, which is called Religious Cognitive-Emotional Therapy (RCET). This therapy is basically a cognitive one with the spiritual approach. In this therapy, three different dimensions are being focused. These three dimensions are physiological, cognitive, and spiritual [25].

In the physiological level, the therapist identifies the physical and emotional reactions of the client (such as increased heart rates, respiration, feelings of pain in some area of body and so on) that have unpleasant sensations and are produced by classical conditioning. In this level, the therapist describes the automatic connection between the stimulus and the situation with these physiological symptoms. The therapeutic method in the physiological level is to teach relaxation and breathe control which helps the client to control his physiological reactions and reduce his unpleasant emotions [25].

The RCET therapist, in the second level of treatment, considers the ways of thinking and interpreting events of the person's daily life. The therapist tries to identify and change distorted and unrealistic ways of thinking which cause emotional disturbance and maladaptive behavior in individuals [25].

According to this therapy, people try to find their answers to some questions such as who am I? where do I come from and where is my destination? Also, in spiritual level of this therapy three different basic religious beliefs of people about God, Existence, and Human being has been considered which can be useful for the treatment of some psychological disorders [26]. The RCET was later changed to SCET, which focuses on the spirituality more than religiosity. The general psychopathology and therapeutic model of SCET is presented in Figure 1.

Method

For this study, we selected 18 women with breast cancer according to their availability among patients referred to the hospitals of Mashhad city in Iran and then randomly distributed into two groups of experiment and control. The mean age of total sample was 46.27 (SD= 8.28, in range of 21-64). The education level of participants was at least high school diploma. These patients have been under radiotherapy and chemotherapy for six months. They did not have the history of any psychological treatments for psychological problems related to cancer.

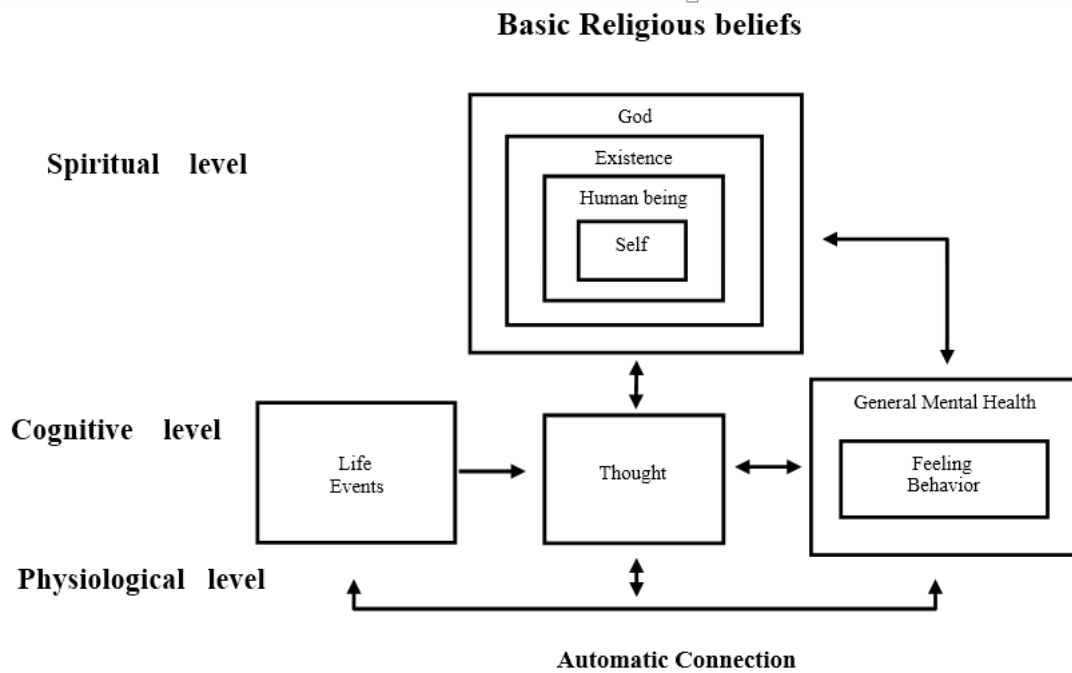


Figure 1 Psychopathology and therapeutic model of SCEGT

Study design and procedures: In this quasi-experimental study, 18 women with breast cancer were randomly assigned in an experimental group and a control group, nine subjects in each group. The experimental group participated in ten weekly 90 min sessions of Spiritual Cognitive-Emotional Group Therapy (SCEGT). The women in control group were waitlisted to receive the SCEGT intervention (if desired) at the end of the study.

After assigning women with breast cancer randomly in experimental and control groups and before starting the SCEGT program, we invited two group members to participate in a preliminary session. In this session, the two groups' members were welcomed to gather. They were asked to completed Beck Depression Inventory (BDI-II), Beck Anxiety Inventory (BAI), and Identity Crisis Questionnaire (ICQ). Also in this session, the participants received overall information about the relationship between mind and body with focuses on cancer and psychological states. A brief overview of the SCEGT program was introduced to the experimental group and it was said to the control group that they must wait for about two months before starting the program. SCEGT intervention

In SCEGT, the intervention was directed in three levels: physiological, cognitive and spiritual levels. These three levels were related to each other. In the physiological level, the therapist clarified the physical and emotional reactions of patients to cancer disease. In this level, patients became aware of their sensations and emotions. The therapeutic method in the physiological level was to train spiritual relaxation

(muscle relaxation and breath control along with spiritual context) that helps cancer patients to control their physiological reactions and reduce their unpleasant emotions. to reach these objectives, we made CDs on Spiritual Relaxation and gave them to the participants. The physiological level was conducted in three sessions by asking the cancer patients to exercise the spiritual relaxation techniques at home one or two times in everyday during the period of treatment.

In the second level of SCEGT, we considered the ways of thinking and interpreting events of life especially the type of patients beliefs about the problems that they have already experienced in their cancer disease. In the next four sessions, we trained women with BC to identify and change distorted and

unrealistic beliefs which caused the emotional disturbance and maladaptive behaviors in them. The cognitive level in SCEGT is similar to the traditional cognitive therapy that was proposed by Beck and Ellis.

Finally in the spiritual level of SCEGT, we considered the patients' philosophical beliefs about the self, existence, and God and the meaning of life. We challenged the negative and nihilistic patients' beliefs about the self and existence and helped them to change these beliefs into positive and purposeful ones, so that they acquire new insights of self and existence. Also, they learned about the God's role in their life. (God is the best patron with best characteristics that guides human beings best through). In the spiritual level, at the end of four sessions, participants prayed for 15 minutes in calm and relaxing conditions .

The Spiritual cognitive–Emotional Therapy was conducted in group form by authors (PhD in psychology and his coworkers in Master degree in psychology). All group sessions were administrated in a conference room at Imam Reza hospital.

In this study, the ethical issues about cancer patients were fully considered. According to this consideration , after selecting the groups , the participation of patients was entirely free and each subject could have left the sessions at any time. The tests were completely classified and the data were given to the subjects , if needed. After the accomplishment of the study, the control group received a 6-session therapy. In this study, questionnaires were included: *Beck Depression Inventory (BDI-II)*: This questionnaire is the revised version of beck depression questionnaire that was first published in 1961 for measuring the severity of depression .

The BDI-II consists of 27 items and each item is a list of four statements arranged in increasing severity about a particular symptom of depression. These new items bring the BDI-II into alignment with DSM-IV criteria. The range of score varies from 0 to 63. The BDI-II is positively correlated with the Hamilton Depression Rating Scale with a Pearson r of

0.71, showing a good agreement [27]. This test has shown high reliability in one–week test–retest

(Pearson $r = 0.93$). Also, the test has high internal consistency (Cronbach's Alpha) $\alpha = 0.91$ [28] .

Beck Anxiety Inventory (BAI): The BAI, created by Aaron T. Beck and his colleagues, is a 21-item multiple-choice self-report inventory that measures the severity of anxiety in adults and adolescents.

The BAI's original proposal included only two components: cognitive and somatic [29]. Since the introduction of the BAI, other factor structures have been implemented including a four-factor structure used by Beck and Steer with anxious outpatients that included neurophysiologic, autonomic symptoms , subjective and panic components of anxiety [30]. In 1993, Beck, Steer, and Beck used a three-factor structure including subjective, somatic and panic subscale scores to differentiate among of clinically anxious outpatients [31].

The total score has a minimum of 0 and a maximum of 63. The scale was validated in a sample of 160 psychiatric outpatients with various anxiety and

depressive disorders, diagnosed with the structured clinical interview for Diagnostic and Statistical Manual of Mental Disorders (DSM)-III [31]. The BAI has a high internal consistency (Cronbach's Alpha) $\alpha = 0.92$ and a test-retest reliability over one week of 0.75 [32].

Identity Crisis Questionnaire (ICQ): The ICQ was created by Rajaei and his colleagues in 50 items which evaluates the 10 signs of identity crisis based on SCET. The signs include aimlessness, absurdity, despair, lake of self-esteem valuelessness, life dissatisfaction, anxiety, sadness, aggression, and anger. The ICQ has a high internal consistency when Cronbach's alpha was used ($\alpha = 0.93$) [26].

After data collection, the questionnaire scores were analyzed by statistical SPSS-19 and using descriptive and inferential statistics (analysis of covariance).

Results

As shown in Figure 2, 3 and 4 the experimental group score in anxiety, depression, and identity crisis decreased considerably in the posttest, whereas in the control group, the score did not have

any reduction and even, it increased. This matter suggests that the spiritual cognitive emotional group therapy has been effective in treatment of psychological problems of women with cancer.

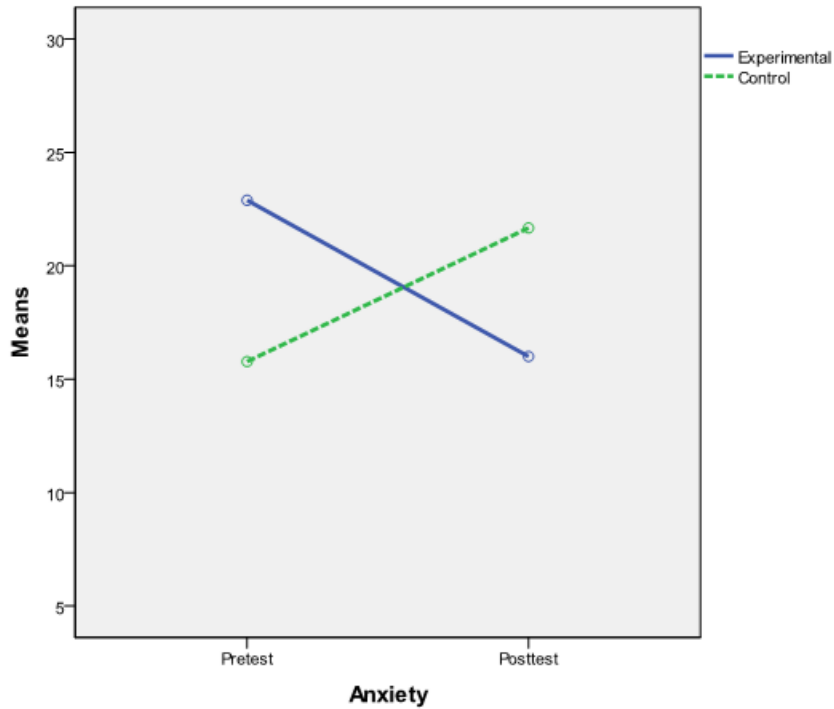


Figure 2 Mean scores of anxiety in pre and posttest of experimental and control groups

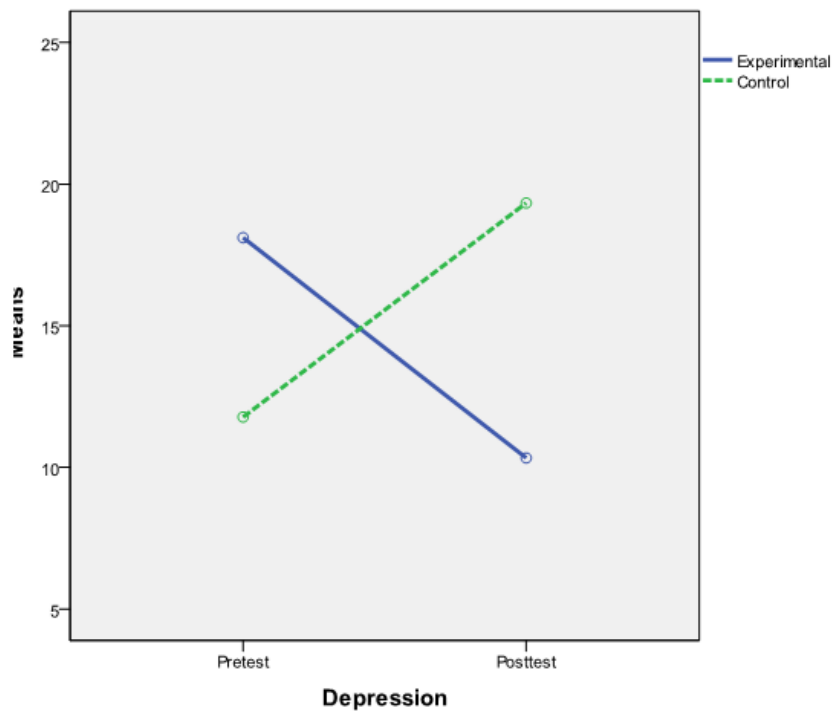


Figure 3 Mean scores of depression in pre and posttest of experimental and control groups

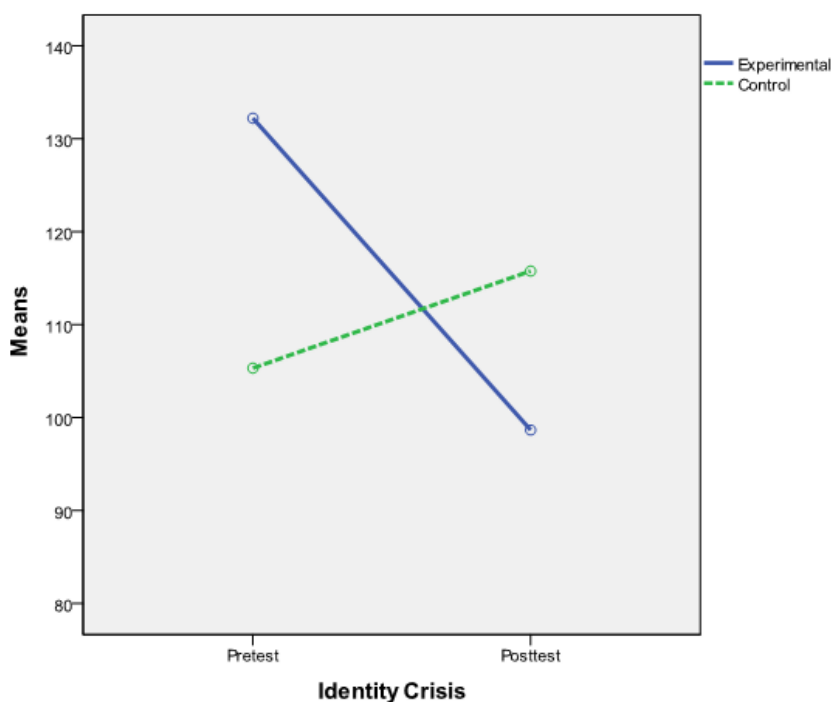


Figure 4 Mean scores of identity crisis in pre and posttest of experimental and control groups

Table 1 shows means, standard deviations, and the results of covariance analysis in considered variables of anxiety (BAI), depression (BDI-II), and identity crisis and its components. Before analysis of covariance, we examined the ANOVA assumption of homogeneity of slopes among the groups. The data met the assumption of homogeneity of slopes ($F=0.612$, $p=0.441$).

As the data in Table 1 shows, the mean of experimental group scores has had a fall in the post – test in comparison with the pre- test and this reduction was statistically meaningful in BAI ($F=5.71$, $p<0.05$), BDI-II ($F=9.77$, $p<0.01$) and identify crisis ($F=19.4$, $p<0.01$). In addition to, in comparison between identity crisis components in the experimental and control groups, the table shows that the experimental group scores decreased in all the components in the posttest in comparison to the pretest. However, these differences were only meaningful between these two groups in feeling absurd ($F=4.3$, $p<0.05$), despair ($F=13.66$, $p<0.01$), lack of self – esteem ($F=7.23$, $p<0.05$), life dissatisfaction ($F=12.75$, $p<0.01$), and sadness ($F=15.33$, $p<0.01$). The differences were not

meaningful in aimlessness, valuelessness, anxiety, aggression, and anger.

Discussion

The findings of the present study demonstrated that the experimental group in comparison to the control group has shown a higher decrease in their identity crisis scores after receiving SCEGT. It means that their despair, absurdity, sadness, and life dissatisfaction have been decreased and they have gained more self-esteem toward themselves. In many studies, it has been shown that a rise in spirituality can accompany positive psychological states [33-35].

Therefore, it seems as if a therapy based on SCEGT was able to correct inefficient beliefs and caused new spiritual insights about self, existence, and reality and finding the meaning of life while people are suffering disease and was successful in creating positive psychological states among patients.

Additionally, the depression and anxiety scores of cancer patients who participated in SCEGT sessions had a meaningful decrease. In addition to relaxation and cognitive techniques, one of the important aspects of

Table 1 Mean, standard deviation (SD) and ANCOVA of studied variables

Variables	Groups	Pretest		Posttest		Posttest after Deleting the pretest effect		F	d
		Mean	SD	Mean	SD	Mean	SD		
Anxiety (in BAI)	Experimental	22.89	9.75	16	14.54	-6.89	6.89	5.71*	0.28
	Control	15.78	7.03	21.67	9.8	5.89	12.03		
Depression (in BDI)	Experimental	18.11	5.51	10.33	7.31	-7.78	5.23	9.77**	0.40
	Control	11.78	4.15	19.33	5.92	7.56	8.26		
Aimlessness	Experimental	15.67	2.65	12.22	3.49	-3.44	2	0.01	0.001
	Control	10.89	3.82	11.33	3.2	0.44	5.81		
Absurdity	Experimental	10.22	3.31	8.67	3	-1.56	1.33	4.3*	0.22
	Control	9.11	3.72	10.56	4.06	1.44	3.81		
Despair	Experimental	11.67	3.74	8.44	4.27	-3.22	1.99	13.46**	0.47
	Control	8.89	1.83	10	1.32	1.11	2.03		
Lake of self- esteem	Experimental	13.33	1.32	10.33	3.5	-3	2.55	7.23*	0.32
	Control	11.22	3.63	13.67	2.24	2.44	4.06		
Valuelessness	Experimental	15.56	3.78	11.44	5.32	-4.11	3.06	2.34	0.14
	Control	9.22	3.42	9.89	3.1	0.67	3.75		
Dissatisfaction	Experimental	13.11	3.89	10.11	3.65	-3	1	12.75**	0.46
	Control	9.44	1.81	10.78	1.99	1.33	2.4		
Anxiety (in ICQ)	Experimental	14	4.03	9.67	5.17	-4.33	3.94	1.46	0.09
	Control	11.56	4.19	12.33	4.9	0.78	7.6		
Sadness	Experimental	13.33	2.18	9.33	3.71	-4	2	15.3**	0.50
	Control	13.89	3.85	16.56	3.81	2.67	6.28		
Aggression	Experimental	11.11	2.85	8.22	2.22	-2.89	2.93	0.01	0.00
	Control	9.33	3.97	8.33	3.5	-1	6.12		
Anger	Experimental	16	3.81	10.22	3.38	-5.77	2.73	1.65	0.10
	Control	11.56	4.25	12.22	3.8	..66	6.52		
Identity crisis	Experimental	132.22	21.92	98.67	31.12	-33.56	15.6	19.4**	0.56
	Control	105.33	18.68	115.78	9.95	10.44	15.56		

** p-value <0.01

*p-value <0.05

d: Effect Size

SCEGT is attention to God and asking for his help in life difficulties. So, attention this issue in therapy sessions along with spiritual relaxation, concentrating on God's power and spiritual quotes could be effective in reducing the anxiety and worriness and unpleasant feelings of patients. In other researches, the findings showed that spiritual therapies could be effective in treatment of psychological disorders in cancer patients [33-36].

When people face severe diseases which might put their health in serious risks, some unpleasant psychological reactions and feelings will be created. Cancer is one of these diseases which

arouses anxiety in a person . in Yallom's point of view [37], death anxiety is one of the most important fears of human which makes him change the life experience and view to the whole world. Perhaps, someone who is getting close to death and feels it with the entire existence, needs a new meaning in his previous, present, and future life .

CBT can change people's beliefs about cancer by cognitive correction and reconstruction these beliefs and help them to accept the reality. It seems as if the therapies which are based on mentality and spirituality can have positive effects on treatment of

psychological problems among cancer patients through their assistance in finding the meaning of life. [38-40]. According to Spiritual Cognitive Emotional Therapy, when people face severe problems in their lives, they may have confusion and identity crisis and deal with some basic questions in life such as what is the true reason for living? They try to find a meaning for their pains and problems. Spiritual Cognitive Emotional Therapy in addition to having techniques based on stress reduction to (relaxation), has cognitive therapy techniques (correction of inefficient beliefs) by using basic spiritual beliefs (spirituality) and providing answers to basic and existential questions and suggests a more comprehensive therapy for cancer patients.

As a result, it looks as if according to the special circumstances of those people who are suffering severe physical diseases which deal with death danger, the use of psychotherapies with spiritual approaches can have a considerable assistance in increasing their pleasant feelings and improvement of life quality and their dealing with psychological pressures which were caused by their illness.

The limitations of study were included:

Although the findings of this research demonstrated that Spiritual Cognitive Emotional Group Therapy was successful in reducing the psychological problems in women patients suffering breast cancer, in some variables such as (aimlessness, valuelessness, anxiety, (in ICQ) aggression and anger) these differences between the experimental and control group were not meaningful. Perhaps the reason was the small size of the sample in each group because the statistical tests are sensitive to the size of sample. On the other side, it is a fact that these patients often undergo chemotherapy and drug therapy for cancer disease, and sometimes their participation in therapy sessions was rather difficult. This could have left some effects on the results of this research.

Conclusion

We believe that the spiritual cognitive-

emotional group therapy could be effective in reducing some psychological problems such as anxiety, depression, and identity crisis of patients who are suffering different types of cancers.

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Contribution

Study design:ARR,HK

Data collection and analysis:ARR

Manuscript preparation: ARR, MS.

Conflict of Interest

"The authors declare that they have no competing interest."

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