ORIGINAL ARTICLE

An Investigation of the Effect of Music Therapy on Body Image of Women with Breast Cancer

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ABASTRACT

Background: Breast cancer is the most important factors concerning health in the women. Current cancer care increasingly incorporates psychosocial interventions. Today much emphasis is on non-pharmacological methods of pain relief called behavioral method..

Methods: The study population included all women with breast cancer referred to Ayatollah Khansari hospital in Arak City. And the sample composed of 30 patients with breast cancer into two groups of 15 control and experimental. Sampling method was purposive. Participants got relaxation session added music therapy .Data was gathered by Multidimensional Body Self Relations Questionnaire (MBSRQ with 6 Subscales) Appearance Evaluation 2) tendency to appearance 3) assessing the Fitness 4) tendency to Fitness, 5) obsession with overweight 6) and Satisfaction with the body areas.

Results: mean score of pretest- post test showed mean score of satisfaction with the body areas in higher than other subcategories and low means was belong to tendency to fitness .also other results showed that this approach effects to bias appearance of women and assessment of fitness of women with breast cancer.

Conclusion: As this study has shown, techniques such as muscle relaxation (relaxation) and music therapy have a positive impact on body image in women with breast cancer. In this case, expansion of the use of music in the community of cancerous patients by familiarizing people with musical instruments and emphasizing the benefits and positive effects of music therapy in various fields are highly important and valuable.

Keywords: Music therapy, relaxation therapy, breast cancer, body image, satisfaction

INTRODUCTION

Breast cancer is the most important factors concerning health in the women, because is the most common type of cancer and after lung cancer is the second leading cause of death arising from cancer among women[1].

According to statistics of WHO, in the world is recognized over 1.1 million new item of breast cancer among women yearly which this number is equivalent to 10% of all new cancer and 23% of all cancers in women.

The incidence level of breast cancer in 100000 of female population in developed countries is 67.8 of people, in developing countries is 23.8 of people and in the world is 37.5 of people[2].

The most common cancers in women is breast cancer, followed by colorectal cancer, lung cancer and cancer of the uterus[3,4].

Having cancer may result in extensive emotional, physical and social suffering. Music

interventions have been used to alleviate symptoms and treatment side effects in cancerpatients[5].

Current cancer care increasingly incorporates psychosocial interventions. Cancer patients use dance/movement therapy to learn to accept and reconnect with their bodies, build new self-confidence, enhance self-expression, address feelings of isolation, depression, anger and fear and to strengthen personal resources[6].

Problems with attention and symptom distress are common clinical features reported by women who receive adjuvant chemotherapy for breast cancer.

Aggressiveness, assertiveness, and coping strategies with stress are the most important predictors of perceived stress in women with breast cancer.

In these patients, treatment side effects cause the increase of disorders such as self-concept in them that show the necessity of psychological interventions. So this research was done with the aim of the effectiveness of cognitive-behavior therapy on self-concept in women with breast cancer[7].

Many factors can influence the body image of women suffering from breast cancer. These factors were predictors of patients' inter-personal and intra-personal relationships with their partners and others

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who influenced various other aspects of their lives, possibly leading to many life's issue[8].

It is important to be cognizant of women's body image concerns following breast cancer given the poignant and lasting effects they can have on their psychosocial and emotional well-being[9].

Today much emphasis is on non-pharmacological methods of pain relief called behavioral method. Relaxation techniques, music therapy, therapeutic touch, heat and cold application, and acupuncture are among these methods. These methods lead to patient autonomy and can be done by the patients themselves with simple tools . In addition, these methods come with the easy acceptance and good cooperation on behalf of all the patients and they do not have negative and undesirable consequences of pharmacological interventions. As noted, one of the non-pharmacological analgesic interventions is relaxation of muscle development which is very effective and can increase the activity of the parasympathetic cycle and consequently neutralizes the muscle tension[10,11,12].

There are two basic methods in music therapy: active and passive methods. Passive methods involve listening to music in which the patients are treated by listening to the music that is being played. In this method the most effective way to motivate and influence emotional and mental reactions. While in active music therapy method that playing, singing and dancing is the basis of the work, various emotional, mental, and physical reactions are stimulated and motivated[13].

In a study conducted by Bakht and Najafknown titled as body image and sexual problems in women with breast cancer and healthy people reported that a variety of treatments has special effects on body image, menopause, and, eventually sexual problems. Cancer patients score lower on all measures of body image but weight compared to healthy people[14].

Several studies have examined the music efficiency in reduction of chemotherapy and radiotherapy-induced pains in patients with breast cancer[15,16].

The research shows that body image can play a significant role in mental performances of women with breast cancer. One of the most important issues in mental functions of people is self-esteem. As the results showed body image scales can explain 25% of the variance of self-esteem. Most patients who feel better about themselves have stronger belief in their own ability to cope with their illness and its treatment[17,18,19].

Therefore, this study was conducted with the aim to contain the impact of music therapy on body image in women is breast cancer.

MATERIALS AND METHODS

The study population included all women with breast cancer referred to Ayatollah Khansar ihospital in Arak City. And the sample composed of 30 patients with breast cancer into two groups of 15 control and experimental. Sampling method was purposive and the instrument of the study was Multidimensional Body Self Relations Questionnaire (MBSRQ).

This questionnaire which is used to assess body image is a self-rating scale and has been made by Cache et al in 1986 and 1987. In this study, the Cache's revised format has been used. Subscales of this questionnaire are: 1) Appearance Evaluation 2) tendency to appearance 3) assessing the Fitness 4) tendency to Fitness, 5) obsession with overweight 6) Satisfaction with the body areas. Scoring method was carried out through Likert scale and numbers ranging from strongly disagree to strongly agree. The scores of this scale ranges from 46-230. Examining reliability and validity in Iranian samples (Rahati, 2004) has shown that convergent validity of it with self-esteem has correlations of 0.52, 0.55, and 0.58 in girls, boys and the total sample respectively.

Relaxation sessions are a set of activities in which all parts of the body from the head down are loose and relaxed one after another.

The contents of music therapy sessions issues such as the music selection, group selection based on the willingness of the patient, requesting the patient to join the group are considered.

Music therapy is effective in promoting relaxation, relieving anxiety and stress and depression treatment. Various studies on patients have shown that music therapy allows patients who suffer from and emotional disorders and problems to make positive mental and temporal changes in their own and at the same time gain the ability to solve problems. However, music therapy has been very effective in hospitalized patients at the Institute of Mental Health.

In order to describe the data (including demographic variables) frequency tables as well as bar graphs would be used. Besides, in order to describe the data better, measures of central tendency such as mean and standard deviation and index of dispersion such as standard deviation were used. Inferential statistics used in this study was covariance analysis. All subjects participated willingly and completed the consent form willingly.

Summary of relaxation and music therapy sessions

First session:

Session Description: familiarization and introduction of the members

Second session: Relaxation training as a strategy to reduce the physical symptoms of stress, defuse tensions and promote peace in mind and body

Third session: cognitive therapy and Interaction of thoughts, feelings and behaviors, the role of negative thoughts in creation of unpleasant and undesirable behaviors and feelings.

Assignment: people were asked to determine unpleasant emotions associated with negative thoughts in a stressful situation and keep on relaxation.

Fourth session: Improving self-talks

Assignment: people were asked to write down their stresses related to their diseases and body images on a sheet of paper and continue relaxation at home or in the hospital.

Fifth session: stress distraction strategies

Assignment: 1. focusing on an object 2. Sensory awareness 3. Mental exercises 4. Pleasant memories and imagination 5. Interesting activities

Sixth Session: Problem solving and singing

Assignment: The patients were asked to learn more songs and sing them for the next session.

Seventh session:

Assignment: they were told to prepare happier songs and listen to music more and keep on relaxation.

Eighth session:

Assignment: Summarizing activities of the week and tasks performed during the week, performing songs,recalling the repeated process of relaxation and memorizing the songs and listen to more music

Ninth session:

Task: Repetition of relaxation and music during the day.

Tenth session: leading the group by self-help group of patients and review of the words by the patients

Assignment: As with past sessions, just training and gaining positive energy.

Eleventh Session: Evaluation of effectiveness and improvement in the assigned exercises

Assignment: Member participation with a relative and practicing in their presence

Twelfth Session: exercising group relaxation with the accompaniment of a family and performing a group song

Assignment: performing group relaxation and listening to music and cooperation of members with each other.

The thirteenth session: Examination of the training progress and its effects on patients

Assignment: The patients were asked to prepare their own conclusions from the treatment process for the next session.

Fourteenth session: The end of the exercises and expressing the effects of it and how to continue. Proposing solutions to fix it.

RESULTS

The highest mean value is for the variable of satisfaction of body in pre-test and post-test. And the lowest mean value in pre-test belongs to fitness variable and in post-test goes to variables of appearance bias variables and fitness assessment.

The highest mean value goes to the satisfaction of the body in pretest and posttest the lowest mean value is for the variable of consent fitness evaluation in pre-test and post-test (Table 2,3).

According to Table 3 covariance analysis defaults are normality assumption, equality of variances (Levene test) and uniformity of the slope of the regression line. Sincethe number of significance level is more than 5% for the tests, thus, defaults of the covariance analysis is established for all variables.

This issue raised in the first hypothesis is that music therapy and relaxation affect the appearance evaluation of women with breast cancer. The results of the table indicate that the F ratio calculated (12.602) is significant; in other words, the results suggest that music therapy and relaxation influences the appearance evaluation of women with breast cancer. Consequently, music therapy and relaxation can help improve the appearance of women with breast cancer. (Table 4)

In connection with the effect of music therapy and relaxation on bias appearance of women with breast cancer. The results of the covariance analysis are presented in the table below. The results indicate that the calculated F (29.200) is significant; in other words, the results suggest that music therapy and relaxation affect bias appearance of women with breast cancer (Table5).

Regarding the effect of music therapy and relaxation on the assessment of fitness of women with breast cancer, the tables show thatmusic therapy and relaxation affect the assessment of women with breast cancer and fitness in women with breast cancer can improve significantly by music therapy and relaxation.(Table 6)

In connection with the effect of music therapy and relaxation on fitness bias in women with breast cancer, the results showed that while the calculated F ratio (0.44) was not significant, in other words, the results suggests that music therapy and relaxation have no effect on fitness bias of women with breast cancer. (Table 7)

Regarding the impact of music therapy and relaxation on the mental weight of women with breast cancer, the results also showed that calculated F ratio (0.716) was not significant. In other words, the results suggests that music therapy and relaxation on

the mental weight women with breast cancer have no effect. (Table 8).

In connection with the effect of music therapy and relaxation on the body satisfaction in women with breast cancer, the table 9 identified that the F calculated ratio (3.32) is significant. The results suggest that the music therapy and relaxation have effect on the satisfaction of women with breast cancer. In other words, women with breast cancer who were treated with music and relaxation, have more satisfaction from the body compared with women who have not been treated.(Table 9)

Then, the effect of music therapy and relaxation on body image in women with breast cancer in table 10 indicates that calculated F ratio (31.06) is significant. In other words, the results suggest that music therapy and relaxation have effect on body image in women with breast cancer.(Table 10)

Table 1: Indexes of descriptive statistics of variables for control group

Variables	Pre test			Post test		
	Mean	Median	SD	Mean	Median	SD
Appearance Evaluation	26/10	27	3/31	26/40	26	4/11
Appearance bias	10/43	10/43	2/13	13	13	0/65
Fitness Evaluation	9/57	9/57	2/06	13	13	1/25
Fitness bias	19/28	19/28	4/22	23/28	23/28	2/64
Weight	12/71	12/71	3/04	15/43	15/43	1/24
Satisfaction of the body	33/60	32/50	8/51	30/20	26/50	8/12
Body image	10	10	2/45	14/14	14/14	0/96

Table 2.Indexes of the descriptive statistics for the test variables in experimental group

Variables	Pre test			Post test			Sample No
	Median	SD	Median	SD	Median	SD	
Appearance Evaluation	34/20	35	5/2	29/40	31	5/64	15
Appearance bias	13/17	13/17	0/88	13	13	0/84	15
Fitness Evaluation	6	6	0/65	5/33	5/33	0/97	15
Fitness bias	18	18	1/60	16/17	16/17	1/22	15
Weight	12/33	12/33	0/49	10	10	1/25	15
Satisfaction of the body	35	35	11/43	30	27	9/03	15
Body image	14	14	1/07	15/17	15/17	0/70	15

Table 3. Results of covariance analysis defaults

Variables	Normality		Levin test		Uniformity of the slope of the regression line	
	K-S	Sig	F	Sig	F	Sig
Appearance Evaluation	0/46	0/98	1/79	0/19	1/06	0/09
Appearance bias	0/1	0/2	0/02	0/88	1/47	0/24
Fitness Evaluation	0/93	0/35	0/001	0/98	3/1	0/11
Fitness bias	0/14	0/19	0/000	1	3/52	0/08
Weight	0/52	0/95	0/06	0/81	1/11	0/31
Satisfaction of the body	1/1	0/24	0/18	0/68	0/49	0/49
Body image	1/07	0/09	0/67	0/42	3/51	0/079

Table 4. Analysis of covariance of music therapy and relaxation on the appearance evaluation of women with breast cancer

Source of changes	Sum of squares	Degree of freedom	Mean Square	F	Sig	Eta coefficient
Covariate	3/19	1	3/19			
The main effect	2/57	1	2/57	12/61	0/001	0/936
Interactional effect	3/19	1	3/19			
The model residual error	11/81	58	0/204			

Table 5: Analysis of covariance of the impact of music therapy and relaxation on bias appearance of women with ca breast

Source of changes	Sum of squares	Degree of freedom	Mean Square	F	Sig	Eta coefficient
Covariate	1/47	1	1/47			
The main effect	6/81	1	6/81	29/200	0.000	0/95
Interactional effect	1/47	1	1/47			
The model residual error	13/53	58	0/24			

Table 6: Analysis of covariance

Source of changes	Sum of squares	Degree of freedom	Mean of sums	F	Sig	Eta Coefficient
Covariate	1/59	1	1/59			
The main effect	4/71	1	4/71	2/34	0/0001	0/79
Reflective effect	1/59	1	1/59			
The residual error model	13/41	58	0/23			

Table 7: Analysis of covariance. The effect of music therapy and relaxation on bias fitnessin women with breast cancer

Source of changes	Sum of squares	Degree of freedom	Mean of sums	F	Sig	Eta Coefficient
Covariate	2/48	1	2/48			
The main effect	5/87	1	5/87	0/44	0/66	0/15
Reflective effect	2/48	1	2/48			
The residual error model	16/96	58	0/3			

Table 8: Analysis of covariance. The effect of music therapy and relaxation on mental weight in women with breast cancer

Source of change	Sum of squares	Degree of freedom	Mean of sums	F	Sig	Eta Coefficient
Covariate	9/85	1	9/85			
The main effect	5/64	1	5/64	0/716	0/478	0/26
Reflective effect	9/85	1	9/85			
The residual error model	19/25	58	0/33			

Table 9. Analysis of covariance of the effect of music therapy and relaxation on body satisfaction in women with breast cancer

Source of change	Sum of squares	Degree of freedom	Mean of sums	F	Sig	Eta Coefficient
Covariate	2/69	1	2/69			
The main effect	5/81	1	5/81	3/32	0/0001	0/85
Reflective effect	2/69	1	2/69			
The residual error model	14/52	58	0/25			

Table 10. Analysis of covariance of the effect of music therapy and relaxation on body image in women with breast cancer

Source of change	Sum of squares	Degree of freedom	Mean of sums	F	Sig	Eta Coefficient
Covariate	4/50	1	4/50			
The main effect	9/11	1	9/11	31/06	0/003	0/86
Reflective effect	4/50	1	4/50			
The residual error model	16/85	58	0/290			

DISCUSSION

The results suggest that music therapy and relaxation improve the appearance of women with breast cancer. The results of this study are consistent with the results of the other studies[20,21,22]. Results showed that music therapy and relaxation have effect on appearance bias in women with breast cancer . Results of this hypothesis also showed that music therapy and relaxation appearance of bias affects women with breast cancer. The results of this hypothesis is indirectly consistent with other researches[20,21,22].

In one research to aim of effects of an integrated yoga program in modulating perceived stress levels, anxiety, as well as depression levels and radiation-induced DNA damage were studied in 68 breast cancer patients undergoing radiotherapy. The result showed that an integrated approach of yoga intervention modulates the stress and DNA damage levels in breast cancer patients during radiotherapy[21].

The findings of the study provide some evidence that music therapy has both short- and long-term positive effects on alleviating pain in breast cancer patients following radical mastectomy[22].

Also In another research music therapy may improve pain perception in patients receiving chemotherapy . Additionally positive effects on toxicities, use of antiemetic medication, and immunological changes were observed[23].

Higher levels of vagally mediated heart rate variability (VM-HRV)in the music therapy group highlight the importance of a therapeutic relationship for the effectiveness of relaxation interventions in end-of-life care settings. Music therapy caused significantly stronger reductions of vascular

sympathetic tone and, therefore, may be indicated in the treatment of pain and stress-related symptoms in palliative care[24].

The results suggested that music therapy and relaxation have no effect on fitness bias in women with breast cancer. The results of this hypothesis is indirectly inconsistent with the other studies[20,21,22].

The results suggest that music therapy and relaxation have no effect on the mental weight of women with breast cancer. The results of this study in indirectly inconsistent with the results of the studies[20,21,22].

Mindfulness practice significantly improves attention and mindfulness programs significantly reduce symptom distress in patients with cancer, and, more specifically, in women with breast cancer. Recently, a pilot investigation of a music therapy program, built on core attitudes of mindfulness practice, reported significant benefits of enhanced attention and decreased negative mood and fatigue in women with breast cancer[25].

According to Warth et al music therapy is an effective treatment with a low dropout rate for the promotion of relaxation and well-being in terminally ill persons undergoing palliative care[26].

Results also showed that music therapy and relaxation have effect on body image in women with breast cancer. In one of the systematic review indicates that music interventions may have beneficial effects on anxiety, pain, fatigue and QoL in people with cancer. Furthermore, music may have a small effect on heart rate, respiratory rate and blood pressure. Most trials were at high risk of bias and, therefore, these results need to be interpreted with caution[27].

Symptom management extends beyond fluctuation in levels and intensity of a surface-level symptom to incorporate deeper lived experiences[28].

In another study evidence show the effect of complementary in breast cancer women. This study showed that the YGa group had significantly greater increases in physical component scale scores in the radiotherapy group at 1 and 3 months after them[29].

Researcher reported that mindfulness-based stress reduction appears to facilitate psychosocial adjustment in breast cancer patients receiving radiotherapy, in this research suggesting applicability for MBSR as adjunctive therapy in oncological practice[30].

Marieke Van P, et al to investigate the health benefits reported by breast cancer survivors following an 8-week yoga intervention . The findings revealed that the women in the study found health promoting benefits in the areas of physical health and healing, mental health and healing, and social health and healing.

Limitations of the study: The limitations of this study include (1) lack of access to sources of music that its effect on cancer patients was measured. Impatience, discomfort, bodily weakness due to chemotherapy and injection of the medicine that made sometimes some patients reluctant to follow sessions.

Long distances made research process too long. Cancer patients for reasons such as: pay for treatment cost (chemotherapy and pharmaceuticals) as well as physical disability (nausea, muscle weakness, headache) are not able to continue the process of therapy (music therapy and relaxation) due to chemotherapy.

RECOMMENDATIONS

This research should be conducted in a patient population, in a long time, and continuously. So far, time needed for the music, the number of sessions, duration of each session, continuity, and the effect of music has not been determined. Music in an easy, low cost and noninvasive method which does not interfere significantly with other medical treatments. However, music is often used along with other methods. Consider different individual tastes and cultural differences in choosing music.

CONCLUSION

As this study has shown, techniques such as muscle relaxation (relaxation) and music therapy have a positive impact on body image in women with breast cancer. In this case, expansion of the use of music in the community of cancerous patients by familiarizing people with musical instruments and emphasizing the benefits and positive effects of music therapy in various fields are highly important and valuable. Music therapy and relaxation are two easy, non-invasive and low-cost ways which has no personal interference with medical treatment.

If music and relaxation run together jointly, they can have a far greater impact. Taste and cultural differences must be taken into account in selection of the music for patients. Patients themselves have admitted that during these sessions, they paid less attention to their appearance and illnesses by listening to music and songs they were interested in and ignore this problem.

As shown in this study, women with this illness were more satisfied with their bodies and physical conditions than women who were not treated with music and relaxation. They could socialize better and easier with their families and friends than before they have a sense of vitality. The results of this research can be a great help to mothers and women who have

the disease to be able to treat their children and accompany their family members to have a more relaxed mind and more energy.

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ORIGINAL ARTICLE