

**EFFECTIVENESS OF SUPPORTIVE PSYCHOTHERAPY AND MUSIC THERAPY ON  
STRESS AND COPING IN PATIENTS WITH BREAST CANCER.****Sr. Bertha Pereppadan\***

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**ABSTRACT**

The study was done to assess the effectiveness of supportive psychotherapy, music therapy on stress and coping in patients with breast cancer. A quantitative research approach with experimental design - Time series non - equivalent control group design was adopted for the study. The sample consists of 120 patients with breast cancer was taken only after the mastectomy and on the third day after the surgery as participants for the study. **Tools:** The tools used were demographic proforma for patients with breast cancer and their caregivers. Stress Scale - I and Coping scale -I for patients with breast cancer, stress scale -II and coping scale -II for the caregivers of patients with breast cancer were used for the study. Judgemental Sampling technique was adopted for the study. The findings of the study revealed that the combined therapies of supportive psychotherapy, music therapy and psycho education were highly effective for patients with breast cancer in order to reduce the stress and coping with breast cancer. The psycho education was very effective for their caregivers to accept the situation of breast cancer for their partner.

**KEYWORDS:** - Effectiveness, Supportive psycho therapy, Music therapy, Psycho education, Stress, Coping, patients, Breast cancer.

**INTRODUCTION**

Men and women are aroused by it, artists represent it, poets apostrophize it, babies are nourished by it, fashion and commerce fetishize it, and disease affects it. All these references to the breast, including the last one, conditioned it, not wholly determined by the culture in which they operate. The breast attracts so much attention and is a site of conflict for so many societies' values and beliefs that it often seems not to belong to women.

Women's breasts require very little introduction. It is acknowledged as the cultural obsession that surrounds them in India. As an icon of sex and fashion, the breasts first and foremost function is infant nourishment. Through the lifecycle, the female breast changes significantly and basic breast biology contextualizes the effect of breast cancer.

Breast cancer is a salient issue for many women today because of the biological, psychological, and social implications of the disease. Breast cancer patients and their families are affected by the physical devastation of the disease and its common treatments, the internal emotional turmoil that accompanies it, and the social changes that the patient must go through to maintain the friendship and family ties. Breast cancer is an insidious disease that intrudes on the well being of women, both

diagnosed and undiagnosed. Women can feel like a moving target for breast cancer, navigating the battle field of cancer and watching friends and relatives fall prey to their destructive effects.

Breast carcinoma is the leading cancer diagnosis and the second cause of cancer death among women in the U.S. Globally, every three minutes a woman is diagnosed with breast cancer in the world, amounting to one million cases annually. The incidence could go up by 50 % to 1.5million by 2020. Breast cancer is the second most cancer seen in middle aged Indian women. The incidence of breast cancer is ever increasing. About 90% of patients in India approach the physician in an advanced state, reported that there was a rise in the total number of female breast cancer cases in India from 60,000 in 1991 to 80,000 by 2001. The frequency of breast cancer seemed to be increasing in Kerala. By seeing the progress of breast cancer and the main part increase of cases due to increase stress and overburdened faced by the wives in the family.

**Need and Significance of the study**

Cancer is a compendium of stresses, which includes the fear and the diagnosis of cancer, the nature of treatment decisions, confronting one's mortality, physical limitations as well as physical and emotional pain, the

arduous treatment to be endured, and the changes that one's social and family environment may undergo because of cancer.

Breast cancer is one of the main causes of morbidity and mortality among women all over the world. Studies showed that more than 54,000 new cases of breast cancer occur each year in the world (U.S .Breast cancer Statistics, 2004).

It was the second most common cancer in females in Madras, Bangalore and Delhi Kumar, et al (1998). In 2001 – 2005, the average incidence was 1,300 cases in Mumbai, Tata Memorial Hospital, and highest in the 50 – 70 age groups. Breast cancer cases are likely to double to over 2,500 cases by the year 2025 (I year, M.2012).

The prevalence of breast cancer was increasing as the years go by as per the annual report of 2016 from the Regional Cancer Centre, Thiruvananthapuram. The Hospital Cancer Registry showed that 27.1 per 10,000 and 1007 new cases in all age groups per year are reported (Regional Cancer Centre, Annual Report 2016-2017).

It was in this background that a study was planned to test the comparative effectiveness of supportive psychotherapy, music therapy and psycho education on stress and coping in patients with breast cancer on the third day after mastectomy to be taken for the study.

#### Statement of the problem

A comparative study of the effectiveness of supportive psychotherapy and music therapy on stress and coping in patients with Breast cancer.

#### Objectives of the study

1. To assess the stress and coping in patients with breast cancer.
2. To evaluate the effectiveness of supportive psychotherapy, music therapy and psycho education on stress and coping in patients with breast cancer by comparing with the control groups.
3. To find out the effectiveness of psycho education on stress and coping of caregivers of patients with breast cancer.
4. To compare the results of supportive psychotherapy, music therapy and psycho education and to identify the most effective therapy in reduction of stress and improvement of coping in patients with breast cancer.
5. To find out the association between pre interventional stress and coping scores with selected socio demographic variables of patients with breast cancer.
6. To find out the association between pre interventional stress and coping scores with selected socio demographic variables of caregivers of patients with breast cancer.

#### Hypotheses

Hypothesis will be tested at 0.05 level of significant difference.

**H<sub>1</sub>:** There will be significant difference between posttest stress and coping of patients with breast cancer when comparing the control group and experimental groups.

**H<sub>2</sub>:** There will be significant difference in scores of stress and coping experienced by patients with breast cancer before and after interventions of supportive psychotherapy and psycho education.

**H<sub>3</sub>:** There will be a significant difference in the scores of stress and coping experienced by patients with breast cancer before and after interventions of music therapy and psycho education.

**H<sub>4</sub>:** There will be significant difference in the scores of stress and coping in comparison with the above groups before and after interventions of supportive psychotherapy, music therapy and psycho education in patients with breast cancer.

**H<sub>5</sub>:** There will be significant difference in stress and coping of caregivers of patients with breast cancer before and after the intervention of psycho education.

**H<sub>6</sub>:** There will be significant association between pretest scores of stress and coping of patients with breast cancer and their caregivers and selected socio demographic variables.

#### Research methodology

**Research design:** Experimental design - Time series non – equivalent control group design was adopted for the study.

**Research setting:** Amala Medical College Hospital, Trichur, Kerala State, India.

**Population:** Breast cancer patients were between the age group of 35 to 65 years, who were admitted in Amala Medical College Hospital, Trichur, and undergone mastectomy and their caregivers.

**Sampling and sample size:** 120 Patients with breast cancer on the third day after mastectomy were taken for study. And ninety caregivers were also included for the study.

**Sampling technique:** Judgmental sampling technique was adopted for the study.

#### Criteria for sample selection

##### Inclusion criteria:

1. Patients admitted with breast cancer and after the mastectomy.
2. Age group of 35 to 65 years.
3. Who are willing to participate in the study.

##### Exclusion criteria:

1. Patients who were critically ill and not able to respond verbally for the study.
2. Not willing to participate in the study.

#### Tools and techniques:

The instruments were developed and used for generating necessary data, considered to be the most appropriate ones for the present study. The tools developed were:-.

1. Base line Proforma for patients with breast cancer and their caregivers.
2. Stress Scale for patients with breast cancer (Stress Scale -I) (45 items)
3. Coping Scale for patients with breast cancer (Coping Scale -I) (30 items)
4. Stress Scale for caregivers of patients with breast cancer (Stress Scale -II) (25 items)
5. Coping Scale for caregivers of patients with breast cancer (Coping Scale -II) (25 items)

1. **Phase: I Control group (Group – I):** *Group - I refers to the patients with breast cancer after mastectomy in control group to whom no interventions were given.*
2. **Phase II: Experimental group (Group –II):** Group- II refers to patients with breast cancer after mastectomy in the experimental group to whom supportive psychotherapy and psycho education were provided by the researcher.
3. **Phase III: Experimental group (Group –III):** Group – III refers to patients with breast cancer after mastectomy in the experimental group for whom music therapy and psycho education were implemented by the investigator.
4. **Phase IV Experimental group (Group –IV):** Group –IV refers to the patients with breast cancer after mastectomy for whom interventions like supportive psychotherapy, music therapy and psycho education were provided by the investigator.
5. **Phase V:** The effectiveness of interventions like supportive psychotherapy and psycho education, music therapy and psycho education, supportive psychotherapy, music therapy and psycho education were analyzed on the 7<sup>th</sup> day by post test in Group II, Group III and Group IV. And then at the end of 2<sup>nd</sup>, 4<sup>th</sup> and 6<sup>th</sup> month the data collections were done only for the experimental groups like Group II, Group III and Group IV, in order to find out whether any variations in the reduction of stress and coping of patients with breast cancer had taken place from the first findings of post test results. After the post test only psycho education was implemented for patients with breast cancer and their caregivers of Group I. The interventions of the long term effect were maintained till 6<sup>th</sup> month of time respectively. Statistical analysis was performed by using descriptive and inferential statistics. The caregivers were assessed by pre test stress and coping and then psycho education was provided to the Groups II, III, IV of experimental groups and then the post test were done for the caregivers in order to find out the outcome of the interventions of psycho education for care givers of patients with breast cancer after mastectomy.

#### Validity and Reliability of the tool

Content validity of the tools and module on Psycho education was done by 11 experts. The reliability of the structured interview schedule for assessing the stress and

coping of patients with breast cancer and their caregivers was obtained by Cronbach's Alpha. Stress Scale – I for patients with breast cancer Cronbach's Alpha = 0.781. Coping Scale -I for patients with breast cancer Cronbach's Alpha = 0.741. Stress Scale - II for the caregivers, Cronbach's Alpha = 0.796. Coping Scale - II for Caregivers, Cronbach's Alpha = 0.814. All tools had very good reliability for the data collection in patients with breast cancer and their caregivers.

#### Ethical consideration

The study was presented to the research committee, ethics committee and certificates were obtained from the authorities of Medical College, Thiruvananthapuram, in order to conduct the study without causing any harm to the human beings.

#### Method of data collection

A written permission was obtained from the Director of Amala Medical College Hospital, and a written consent from each respondent was collected and they were assured that their responses would be kept confidential. Time taken for the data collection was nearly 45 minutes for each participant. Interventions were taken about 30 - 45 minutes for each participant of the experimental groups. The control group was not given any interventions only pre assessment was done for them and then on seventh day post assessment was done for patients with breast cancer. After the post tests the patients and the caregivers were the therapy and gave the psycho education in order to keep up to the Ethics. Data collection was done as per the above the phases.

#### Data analysis

Data were organized, tabulated, analyzed and interpreted by using descriptive and inferential statistics on the basis of objectives and hypotheses of the study. To assess the effectiveness of supportive psychotherapy, music therapy and psycho education on stress and coping of patients with breast cancer and their care givers, one-way Repeated Measures ANOVA was carried out. Analysis of covariance (ANCOVA) was used to compare the effectiveness of different intervention programmes such as supportive psychotherapy, music therapy and psycho education on stress and coping of patients with breast cancer and their care givers of patients with breast cancer.

**RESULTS OF THE STUDY**

**Table 1: Comparison of effectiveness of Supportive psychotherapy, Music therapy and Psycho education on stress among Groups II, III, IV. No intervention for control group (Group I).**

Comparison of effectiveness of interventions on stress (ANCOVA) Stress among groups (Group I, II, III, IV) N- 4x30 = 120					
Stage	GroupII	Mean ± SD	df	F	p
Pre	Group I	150.9 ± 8.8	(3,116)	2.83*	0.042
	Group II	144.6 ± 13.8			
	Group III	142.7 ± 13.3			
	Group IV	147.8 ± 10			
Post	Group I	150 ± 10.7	(3,116)	85.98**	0.000
	Group II	121.9 ± 14			
	Group III	118.5 ± 10.7			
	Group IV	106.3 ± 7.2			
Adjusted post	Group I	147 ± 1.4	(3,115)	151.83**	0.000
	Group II	123.1 ± 1.4			
	Group III	121.1 ± 1.4			
	Group IV	105.4 ± 1.4			

\*\* : Significant at 0.01 level

Table 1: Show that the comparison of interventions was done in order to find out the difference in the results of Groups. In Group IV the interventions were highly

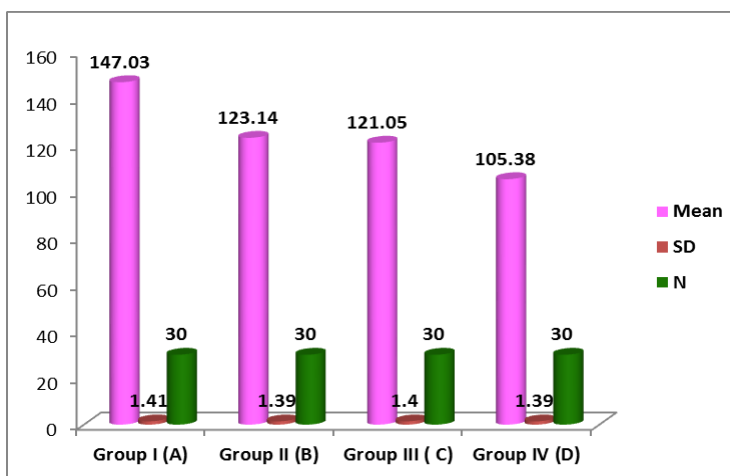
effective when compared to other Groups, II, III of post test stress scores of patients with breast cancer and found significant at 0.01 level.

**Table 2: Pair wise comparison of adjusted post test stress among Groups I, II, III, IV.**

Pair wise comparison of adjusted post test stress among Groups I,II,III,IV (Post hoc test) N - 4x30 =120				
	Mean	SD	Pair	F`
Group I (A)	147.03	1.41	A&B	49.66**
Group II (B)	123.14	1.39	A&C	58.7**
Group III (C)	121.05	1.40	A&D	150.92**
Group IV (D)	105.38	1.39	B&C	0.38
			B&D	27.44**
			C&D	21.38**

Table: 2: Show that the comparison of interventions was done in order to find out the difference in the results of Groups. In Group IV the interventions were highly

effective when compared to other Groups, II,III of post test stress scores of patients with breast cancer and found significant at 0.01 level.



**Figure 1: Cylinder Bar diagram showing the Pair wise comparison of adjusted post test stress scores of patients with breast cancer in Groups I, II, III, IV (Post hoc test).**

**Table 3: Comparison of effectiveness of Supportive psycho therapy, Music therapy and psycho education on Coping among Groups II, III, IV. No intervention for control group (Group I).**

Comparison of effectiveness of interventions on coping (ANCOVA) N- 4x30 =120					
Stage		Mean ± SD	df	F	p
Pre	Group I	91.7 ± 5.3	(3,116)	4.42**	0.006
	Group II	87.1 ± 6.7			
	Group III	86.2 ± 5.9			
	Group IV	88 ± 7.2			
Post	Group I	96.1 ± 5.2	(3,116)	20.98**	0.000
	Group II	105.3 ± 5.9			
	Group III	99.5 ± 4.9			
	Group IV	104.4 ± 4.6			
Adjusted post	Group I	95.9 ± 1	(3,115)	20.59**	0.000
	Group II	105.4 ± 1			
	Group III	99.6 ± 1			
	Group IV	104.4 ± 1			

\* Pair wise comparison of adjusted post test coping among (Post hoc test) Groups I, II, III, IV.

**Table 4: Pair wise comparison of adjusted post test coping among Groups I, II, III, IV (Post hoc test).**

N - 4x30 =120				
	Mean	SD	Pair	F <sup>^</sup>
Group I (A)	95.91	0.99	A&B	16.53**
Group II (B)	105.39	0.96	A&C	2.54
Group III (C)	99.62	0.96	A&D	13.41**
Group IV (D)	104.44	0.95	B&C	6.12**
			B&D	0.16
			C&D	4.28**

Table: 4 Pair wise comparison of adjusted Post hoc test reveals that among four groups taken two at (pair wise) whether a significant difference exists. No difference

was found in the pair wise analysis of Groups I, and III and II and IV of patients with breast cancer after the mastectomy.

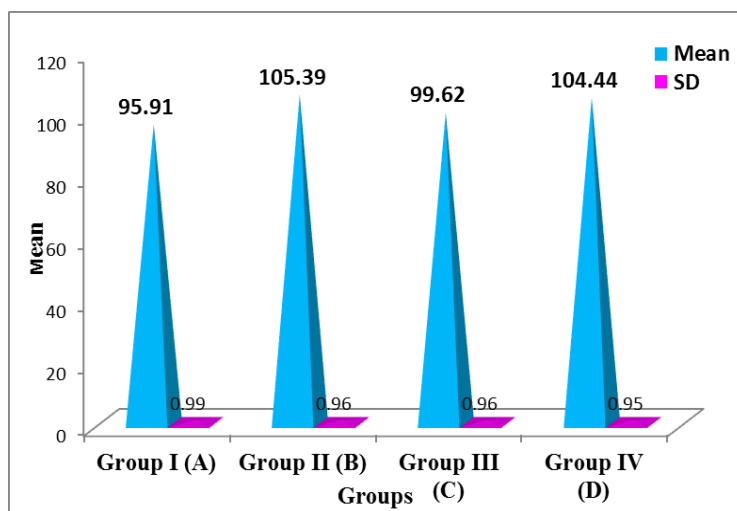


Figure: 2: Significant at 0.01 level.

**Table 5: Pre test and post test on stress scores in Group I (Control group) of caregivers. N = 30**

	Mean	SD	N	Mean Difference	Paired t	P
Pre	86.0	8.1	30	1.1	0.94	0.357
Post	87.1	7.8	30			

Table: 5 Shows that the pre test stress scores 86.0 and post test stress scores 87.1 in 30 caregivers in control groups (Group I). Intervention was given after the post

test to Group I in order to observe the ethical principles. There was no significant difference in Group I stress scores after the analysis of the data of caregivers

**Table 6: Effectiveness psycho education on stress among caregivers in Groups II, III, IV. N – 3x 30 = 90**

	Mean	SD	N	Mean Difference	Paired test	p
Pre	80.3	11.0	90	11.4	11.04**	0.000
Post	68.9	10.3	90			

\*\*:- significant at 0.01 level

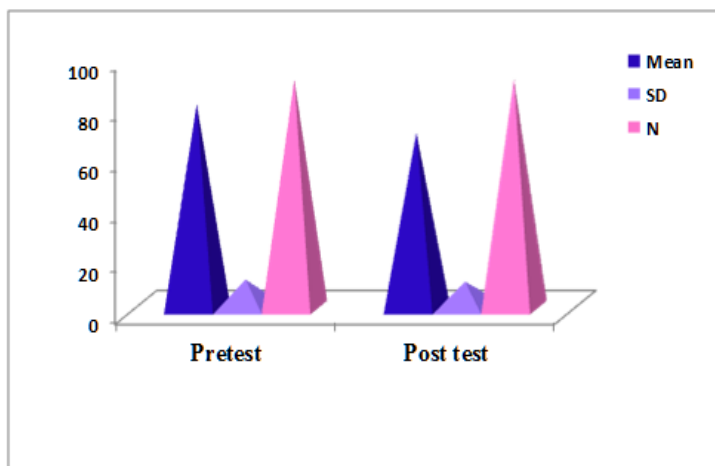
**Table 7: Effectiveness of Psycho education on stress in Groups II, III, IV of care givers.**

Effectiveness psycho education on stress among caregivers in Groups II, III, IV. N – 3x 30 = 90						
	Mean	SD	N	Mean Difference	Paired t	p
Pre	80.3	11.0	90	11.4	11.04**	0.000
Post	68.9	10.3	90			

\*\*:- significant at 0.01 level

Table 7: depicts the pre test stress scores were 80.3 and post test stress scores of caregivers 68.9. The mean difference was 11.4 and the paired t value 11.04 \*\*.It revealed that the psycho education was very effective for

the care givers of patients with breast cancer in Groups II, III and IV. There was significant difference in the pre test and post test stress scores among caregivers, and significant at 0.001 level.



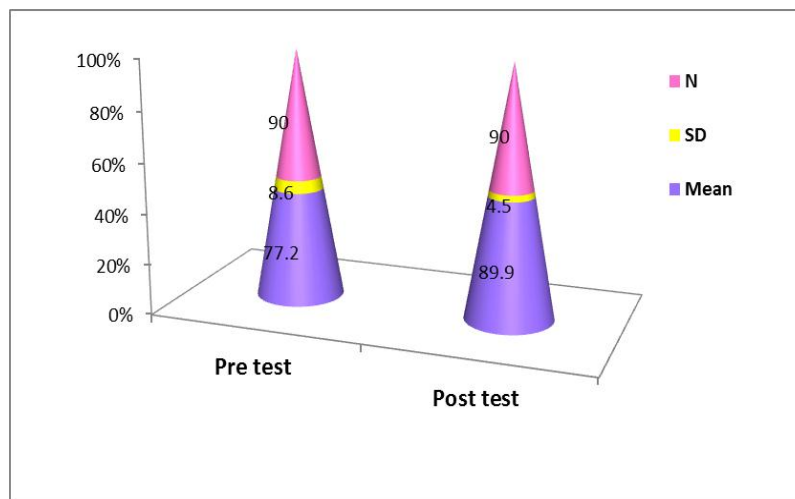
**Figure 3: Cone Diagram showing the Pre test and Post test of stress scores of caregivers after Psycho education in Groups II, III, IV.**

**Table 8: Effectiveness of psycho education on coping of caregivers in Groups II, III, IV. N – 3 x 30 = 90**

	Mean	SD	N	Mean Difference	Paired t	p
Pre	77.2	8.6	90	12.7	13.83**	0.000
Post	89.9	4.5	90			

\*\*:- Significant at 0.01 level.

Table 6: Shows the pre test coping scores are 77.2 where as the post test coping scores 89.9 of the caregivers. The mean difference was 12.7 and the paired t values 13.83\*\*. Psycho education was very effective for improvement in coping of caregivers of patients with breast cancer.



**Figure 4: Corn diagram indicates the Pre test and Post test of coping scores of caregivers after Psycho education in Groups II, III, IV.**

### Implications of the study

In the evidence of the findings of the present study there are wide implications for nursing profession in different areas, like, nursing practice, nursing education, nursing administration and nursing research.

### Nursing practice

Women are more prone to stress, when they realise the diagnosis of breast cancer, because it affects the body image of the person. In this situation supportive psychotherapy and psycho education are very essential in order to release the stressful condition of the patient. And also they may have number of queries related to the disease. Before the surgery of mastectomy all patients with breast cancer need to have supportive counselling therapy. A nurse could clear all their doubts related to the disease of breast cancer and how to cope with surgery and recovery from the disease condition. All nurses should undergo training on supportive psychotherapy counselling, when they work in hospital setting.

### Nursing education

In curriculum planning for BSc and GNM and MSc Nursing students even though psychotherapy comes under the psychology branch, the student nurses also could undergo the training on different types of psychotherapy and implement them in nursing practice in the clinical area. Psychotherapy could reduce the stress, anxiety and enhance the coping status of patients with different diseases (Example: MI patients, other Cardiac problems or any other disorders).

### Nursing administration

Nurse administrator could implement these interventions in the hospital setting in order to give best quality care to the patients who are suffering with various tension provoking diseases and other mental problems. Thus the mental relaxation could be achieved by the patients with these this interventions.

### Nursing research

Nurse researchers can be motivated to do research by using supportive psychotherapy, music therapy and psycho education in different disease conditions and those results will be a very good contribution for the nursing profession.

### Limitations of the study

1. The study was limited to a particular geographical area (Only one Hospital at Thrissur) which found a restriction for generalization.
2. The data collection tools for the research investigation were used as modified tools and for the first time, and did not permit extensive standardization of the tools.
3. The 2<sup>nd</sup> month, 4<sup>th</sup> month and 6<sup>th</sup> month post test were done only for the experimental groups and not for the control group. So Investigator could not make out whether any variations occurred in the participants of the control group while recovering from breast cancer.
4. Control group had only 30 subjects for all the three experimental groups.
5. Matching was not done on the variables of the ages of patients with breast cancer in all four groups.
6. Post test was done on the 7<sup>th</sup> day for the control group. Then psycho education was given for the control group and their caregivers. Did not repeat the post test in order to find out any benefit occurred for the control group and their caregivers after the intervention of psycho education
7. Data collections were done for 2<sup>nd</sup> month, 4<sup>th</sup> month and 6<sup>th</sup> month of post tests up to six months only by telephone methods. Post test could be done after one year also in order to find out any change that occurred in the stress and coping scores of patients with breast cancer in Groups II, III and IV.

### CONCLUSION

In conclusion of the study the breast self examination (BSE) test was taught to all the women who were in rural

as well as in urban area because women in the study were ignorant of BSE test and they need to be done every month as a routine test. Even though they had read and known from the magazines and from the media, they were not practicing in their daily lives. These findings of the study really revealed that supportive psychotherapy, music therapy and psycho education were very effective in the reduction of stress and improvement of coping of patients with breast cancer and their caregivers.

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