Original Article

Investigating the Role of Palliative Care Education in Improving the Life Quality of Women with Breast Cancer

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Abstract

Considering the high prevalence of breast cancer and its effect on the life quality of affected people, the current study was done to investigate the role of palliative care education in improving the life quality of women with breast cancer. In this clinical trial, 46 breast cancer patients were randomly selected and placed in two intervention and control groups. The control group of routine care and the intervention group additionally received 4 weeks of designed training care. The Missoula quality of life questionnaire was completed before, immediately after, and one month after the intervention for both groups. Data analysis was done by independent t-test, paired t-test, and chi-square with SPSS version 23 software. Based on the obtained results, the average quality of life scores of the intervention group patients after and before the intervention had a statistically significant difference (P = 0.003) and this difference was not significant in the control group (P = 0.67). In addition, there was a statistically significant difference in the average quality of life scores of the two control and intervention groups immediately and one month after the intervention (P<0.0001). From the results of this study, it can be stated that palliative care training can improve the life quality of breast cancer patients, so the systematic and comprehensive provision of this care can be improved by training them with an emphasis on the centrality of the patient's role.

Keywords: Quality of life, Palliative care, Breast cancer, Education

Introduction

Breast cancer is the most common and psychologically affecting cancer among women [1-3]. Its incidence is increasing in the world, especially in developing countries [4, 5]. The average age of breast cancer in developing

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countries is more than a decade lower than in developed countries [6, 7]. A younger age of onset is very important to involve a younger woman who still has a long time ahead of her in terms of social and personal activity [8]. Breast cancer, in addition to the potential menace to life, can have side effects on the social, psychological, physical, and economic dimensions and the overall life quality of patients [9].

Today, quality of life is one of the important measures of the outcome of care in cancer patients [10]. Life quality is a multidimensional concept that, in addition to individual assessment of physical, psychological, and social aspects of life's well-being, includes the impact of diagnosis, treatment, and disease progression on the lives of breast cancer patients [11]. WHO has offered palliative care as a method to improve the life quality of patients with irremediable diseases and their families. These cares start with the disease diagnosis and continue during the disease [12]. Its purpose is to relieve suffering by determining, evaluating, and alleviating pain and other psychosocial, physical, and spiritual problems [13]. The health system is faced with an increasing number of chronic patients, and a lack of manpower and special care beds in its health centers [14], and from this point of view, the issue of palliative care becomes more important because it reduces the costs of the health system, shortens the duration hospitalization, reduction of hospitalization complications, and prevention of re-hospitalization of patients [15-17]. However, results show that some countries do not have palliative care programs in their health system structure [18] and patients are wandering to receive these services and decrease the suffering and pain caused by their illness. Most of the time, proper and timely services are not given to these patients [19].

Evidence reveals that palliative care is provided in isolation and limited centers, and most patients are excluded from this type of care [20]. Providing care for these patients is the responsibility of family members. Although the hospital accepts these patients and provides them with services, the special services for these patients are very limited [21].

At the same time, palliative care has received more attention in recent years, and due to the increase in the activities number and programs implemented for the development of this care, especially for patients with cancer, it seems that the progress and development of this Programs require collective and multi-purpose efforts and support [20]. Studies based on self-care training for breast cancer sufferers and similar studies have sometimes been conducted and the results have been different [22-25]. However, a study that has been conducted on the education of breast cancer patients from palliative care with this focus was not found. Therefore, this research was conducted to investigate the role of palliative care education in improving the life quality of women with breast cancer.

Materials and Methods

This randomized controlled clinical trial was done on 46 patients with breast cancer. The participants were chosen by convenient sampling and among those eligible to enter the study. In this study, the sample size was determined based on the estimation of the correlation coefficient of previous studies [26] and considering the confidence level of 95% and the test power of 80%. After obtaining informed consent, people were randomly assigned to two groups of 23 people using a random numbers table.

The criteria for entering the research include being over 18 years of age, having proven breast cancer, lack of known mental illness, willingness to voluntarily participate in the study, not participating in other related educational programs, not having a specific accident before the study, not having Drug use, lack of physical illness other than breast cancer, lack of sensory disorders such as vision or hearing problems affecting learning, and exclusion criteria were unwillingness to continue cooperation in the research and the occurrence of accidents affecting the quality of life during the study.

The data of the research were prepared during the three stages the beginning of the study, the end of the intervention (the end of the fourth week), and the end of the follow-up period (one month later). The research tool included the checklist of demographic and clinical characteristics made by the researcher and the Missoula Quality of Life Questionnaire. The Missoula Quality of Life Questionnaire has been used in many studies to measure life quality in advanced diseases with a reliability of 0.83 [27]. Factor analysis in the context of instrument validity in Zaki's (2008) study showed the KMO ratio for quality of life index equal to 0.696 and Bartlett's test coefficient equal to 113.48. Cronbach's alpha coefficient was calculated to be 0.744 to check the reliability of the research tool with 25 materials and 200 subjects [28]. This questionnaire has 25 questions with 5 options on a Likert scale and 2 self-report questions on quality of life and symptoms. The final score of the life quality of the research units is calculated based on the answers to the questionnaire as follows.

$$\text{Total score} = 15 + (10/\text{Total weighted scores of each dimension}) \tag{1}$$

The quality of life raw data of this questionnaire was organized and analyzed using a Microsoft Excel spreadsheet (Missoula-Vita 2 quality of life analysis module). This spreadsheet was provided by the team that created the questionnaire and the calculation of quality-of-life scores is done automatically [29].

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The intervention group received the educational protocol and routine care, and the control group received only routine care. The educational protocol of the study included a four-week educational program that was implemented by the researchers in the form of one-hour training sessions, twice a week in the clinic and on the days of patients' visits. The content of the 8 sessions was compiled by reviewing the needs assessment studies of these patients and palliative care protocols and consultation with the relevant experts and was as follows: 1. Strategies for accepting breast cancer, treatments, disease complications, and treatments, having the right to receive information about treatments and the right to choose and participate in treatment decisions; 2. The concept of palliative care, the patient's role in this care, how to make the most of the care, the introduction of support and care systems and networks; 3. Medicinal and non-medicinal solutions to manage pain and fatigue; 4. Medicinal and non-medicinal solutions for managing anxiety, stress, depression, and sleep disorders; 5. Nutritional drug care and healthy lifestyle in breast cancer; 6. Medicinal and non-medicinal solutions for managing sexual disorders; 7. Body image, factors affecting body image, acceptance, and self-respect, relationship management; 8. Solutions for spiritual and psychological improvement.

After calculating the quality of life scores of the research units by the special module of Missoula-Vita quality of life analysis, the data were entered into SPSS 23 software and analyzed by chi-square, independent t, and analysis of variance with repeated measures.

Results and Discussion

All 46 participating patients participated in all educational sessions and completed the study. Demographic data analysis showed that the two intervention and control groups were different in age terms (P=0.96), marital status (P=0.85), occupation (P=0.46), education (P=0.7), place of residence (P=0.53), living status (P=0.38), number of children (P=0.83), number of treatment sessions (P=0.94), duration of treatment (p=0.88), type of treatment (p=0.34), source of information (p=0.88), support network (p=0.89), place of infection (p=0.35), disease stage (P=0.18), new disease or recurrence (p=0.44) had no statistically significant difference and were the same.

The majority of research units were between 36-45 years old (42.98 ± 1.572), and married (74%). Most of them had primary disease and were treated between 13 and 18 months, the most treatment was chemotherapy, the most important source of information for nurses, and the most important supporter of the family. In most cases, the involvement of the left breast was seen.

The findings of this study comparing the quality of life scores at three-time points showed that there was a statistically significant difference between the quality of life scores of the test group patients before and after the intervention (P=0.0001). Also, there is a statistically significant difference between the quality of life scores of the test group patients in the follow-up period and before the intervention and the follow-up period and after the intervention (P= 0.0001). In addition, the findings of the study reveal that there was no statistically significant difference between the quality of life scores of the control group patients after and before the intervention, and between the follow-up period and after the intervention (P=0.05), but in the follow-up period and before the intervention, there was a statistically significant difference (P=0.0001) **(Table 1)**.

Table 1. Comparison of the average quality of life score of breast cancer patients before, immediately, and one month after training in the test and control groups.

	Pre-test	Post-test	Paired t-test		
	Standard deviation ± mean	**Standard deviation ± mean**	**T**	**Df**	**P**
Test Group	14.71 ± 0.91	15.62 ± 1.02	-10.95	22	0.001
	Pre-test	Follow-up	-14.12	22	0.001
	14.71 ± 0.91	16.22 ± 0.92			
	Post-test	Follow-up	-8.11	22	0.001
	15.62 ± 0.91	16.22 ± 0.92			
Control Group	Pre-test	Post-test	-2.04	22	0.05
	13.52 ± 0.63	13.59 ± 0.67			
	Pre-test	Follow-up	-6.04	22	0.001
	14.67 ± 0.58	14.52 ± 0.63			
	Post-test	Follow-up	-1.78	22	0.08
	14.59 ± 0.67	14.67 ± 0.58			

Also, the results of the study regarding the comparison of the life quality scores between the two groups reveal that there was no statistically significant difference between the two tests patients, and control groups in terms of

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the average score of the pre-test before the intervention (P=0.07). But, there was a statistically significant difference between the scores of the quality of life of the patients of the two test and control groups after the intervention (P=0.0001); so the life quality score of the test group was better than the test group in the follow-up after the intervention. Also, there was a statistically significant difference in the average quality of life score of the patients between the two groups in the follow-up period and after the intervention (P=0.0001) **(Table 2)**.

Table 2. Comparison of the average quality of life score of breast cancer patients, immediately before and one month after the training in the test group with the control group.

	Test Group	Control Group	T-test		
	Standard deviation ± Mean	**Standard deviation + Mean**	**P**	**Df**	**T**
Pre-test	14.52 ± 0.63	14.71 ± 0.91	0.07	44	0.80
Post-test	14.59 ± 0.67	15.62 ± 1.02	0.001	44	4.02
Follow-up	14.67 ± 0.58	16.22 ± 0.92	0.001	44	6.76

This randomized controlled clinical trial was conducted to investigate the impact of palliative care education on breast cancer patient's quality of life. This research seeks to find a solution for the vacuum of not providing palliative care in a centralized and comprehensive manner and whether teaching this care to the patient by emphasizing the parts in which he has a key role can improve the life quality of cancer patients. The presence of all 46 participants in all training sessions and cooperation to continue the study can be the reason for the need of these patients for such training.

The findings showed that the family is the biggest source of support for the patients and friends and neighbors were in the next ranks, these results have been confirmed in other studies as well [30, 31] which can indicate the lack of social support and in Indeed, there is a lack of palliative care, and part of the educational intervention of this research was to introduce existing support resources such as peer groups and relevant NGOs to cover this gap. The findings showed that palliative care training can improve the quality of breast cancer patients. There are contradictions regarding the impact of palliative care on the life quality of people with cancer. It can be said that the reason for the contradiction in the findings depends on factors such as the illness duration, the duration of supportive services and receiving palliative, as well as the variety and quality of these services. Mirzaei *et al.* [32] study showed that palliative and supportive services do not have a significant impact on improving the overall quality of life of breast cancer patients, although they have positive effects on some aspects. The reason for the difference between the results of Mirzaei *et al.*'s study and the present study can be affected by the mentioned factors so that Prigerson *et al.* [33] also reported the impact of palliative care on quality of life limited to patients who had good performance and life quality. The lives of patients with moderate and poor performance had not changed.

The findings of the research by Molenaar *et al.* [34] confirm the effect of palliative and supportive care in cancer patients receiving these types of services on improving and enhancing their life quality and the general health status of patients, which is in line with the present study. Shahsavari *et al.* [35] investigated the effect of patient education by nurses on the life quality of breast cancer patients and showed that self-care education can increase the quality of life of cancer patients, which is in harmony with the findings of this study. In the study of Barandeh *et al.* [36], there was no significant difference between the average scores of the total quality of life in the test and control groups before the intervention, and also there was a difference after the intervention. It was not found significant. The results of Barand *et al.*'s research are not consistent with the current study. Differences in data collection tools, time of intervention, duration of intervention, and type of educational content can justify this heterogeneity. In addition, the educational content of the present study was not limited to self-care, unlike the study of Barandeh *et al.* [36].

Kovačič and Kovačič [37] in the short-term and long-term effect of relaxation training and yoga on mental distress of 32 breast cancer patients observed that relaxation training according to the principles of yoga can be a useful physiotherapy intervention for breast cancer patients with mental distress. In the present study, relaxation training was taught to patients as part of a general program under the title of palliative care, and it was found that training patients improves their quality of life. These findings are also consistent with the findings of the study by Brumley *et al.* [38] and Moadel *et al.* [39].

Conclusion

The main responsibility of providing care for incurable patients, including cancer, is the responsibility of family members, although the hospital accepts these patients and provides them with services, the special services for these patients are very limited. Palliative care is provided in isolation and limited centers, and most patients are deprived of this type of care. Therefore, it can be useful to find alternatives to fill this care gap until the care is implemented and the desired situation is reached. According to the results of the training of these cares in the form

of an educational program according to the available facilities and resources, it can be effective in improving the life quality of breast cancer patients.

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