The impact of the implementation of the empowerment family-centered model on the performance scale of the lives quality of women with breast cancer undergoing chemotherapy.

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ABSTRACT

Breast cancer is one of the most common cancers and chemotherapy in Iran, followed by the most significant impact on the quality of life of patients and family members. Therefore, they need the knowledge, understanding, and abilities rather than factors influencing the quality of their lives. This study was to determine the effects of family empowerment model based on the scale of life for women with breast cancer undergoing chemotherapy quality performance was done. A quasi-experimental study is an applied research. The selection of 70 women with breast cancer undergoing chemotherapy in both intervention and control groups was done through purposive sampling. The research tools included demographic questionnaire, questionnaire information about the disease and treatment, and quality of life are two standard questionnaires (QLQ-C30, QLQ-Br23). Family-centered empowerment model in the intervention group and post-test one month after the intervention examined. The results showed that the implementation of family-centered empowerment improving the general performance scales (physical, role, cognitive, emotional and social) for patients in the intervention group (P <0.05). The specific function of scales in the two groups after the intervention in terms of body image, sexual performance and sexual pleasure, there was no significant difference (P > 0.05) but after coming back attitude was improved in the intervention group. The results showed that the implementation of the empowerment family-centered on the promotion of general and specific functional scale (with the exception of the aspects of body image, sexual function and sexual pleasure) quality of life for women with breast cancer undergoing chemotherapy was effective.

Keywords: quality of life, empowerment, breast cancer, chemotherapy.
INTRODUCTION

Breast cancer in developed countries and developing countries is the most common cancer in women. (1) This form of cancer in Asia one of the most common cancers, including in Iran and is the second leading cause of death among women. The incidence of breast cancer in women 22 per 100 thousand people and its prevalence rate is 120 per 100 thousand people (2). Chemotherapy is one of the main treatments for cancer (3) that combined with the numerous complications that can have a negative effect on quality of life (4,5). That is why the most important aspects regarding the care of these patients, evaluating and improving the quality of life (6). Quality of life, the people feel about the work and abilities of physical, emotional and social (7) in the last two decades the number of families who are responsible for the care of patients with chronic diseases, have uncontrolled growth (8).

Illness of a family member, the whole family lifestyle changes and upsets the balance of the family (9). The most valuable and most vulnerable families are the source for the chronically ill, they play a vital role in the protection of their patients, are responsible (10). As a result, the main objective is to improve the quality of life of patients and their families in all aspects of physical, mental - emotional and social family that nurses and other health care workers in providing supportive care for patients and families to improve their quality of life play a major role (11). Need help these patients to return to their normal life to adapt and meet the needs of their impaired (12). Of course, without the participation of families, care though high-level technical expertise, can have positive effects in some areas but in other areas have negative effects (13). Hence, health educators as a way of enabling practical measures of the health of patients and their families are emphasized. Empower engage patients and their families in making decisions for the health and well-defined (14). One of the patterns that focus the patient and family is family-centered empowerment model. Alhany in 1381 for the prevention of iron deficiency anemia in adolescent girls is presented (15). In this model, the purpose of empowering the family-family it can be changed. Ways to help individuals and families to take an active role in health care should be focused on empowerment.

Nursing interventions for empowerment, should the establishment and participation of nurses and family with the emphasis on reducing risk factors and promoting health. Methods for family nurse must have a capacity greater emphasis to the problems and deficiencies. The purpose of establishing a partnership between the nurse and family empowerment is through responsibility and cooperation. The main objective of the empowerment model to enhance the health of the family system is with the emphasis on the effectiveness of the role of the family in three dimensions motivational, psychological and functional design and the main steps include understanding the threat, self-efficacy, and self-esteem and evaluation methods. Implementation of a program with the goals of improving the perceived threat empowerment, self-esteem and self-efficacy to self-control and preventive behaviors and improve health and quality of life eventually leads (15). Due to the increasing incidence of breast cancer and the impact of the disease and its treatment on all aspects of life of patients and their families were researchers and the effect of family-centered empowerment model on quality of life and functional scale upgrade their experiences.

METHOD

This quasi-experimental study is an applied research. The study population of women with breast cancer has health records chemotherapy was at the center of Hajar Hospital in Shahrkord by using purposive sampling method with random allocation to treatment or control groups were selected. Using the formula and table Pookak GB (16), and similar results (17) number of samples required to ensure 98% and power of 80% for each 30 and taking into account the 10% loss for each group of 35 people and a total of 70 cases were investigated.

\[ n = \frac{s_1^2 + s_2^2}{(\mu_2 - \mu_1)^2} f(\alpha, \beta) \]

\[ S_2 = 23/23 \quad S_1 = 20/15 \quad \mu_2 = 59/26 \quad \mu_1 = 41/40 \]

Inclusion criteria included: registration of breast cancer care in the case of married women 35 to 55 years (married or at least one child greater than 15 years), able to communicate verbally and in collaboration with researchers, received at least one session of chemotherapy after mastectomy, lack of mental illness or
other acute and chronic diseases. Exclusion criteria were: patient's unwillingness or key member of his family to continue working, confirm the diagnosis of secondary, do therapy such as radiation therapy and hormone therapy.

The instruments included:

1. Patient demographic questionnaire (22 questions)
2. Inventory information about the disease and treatment based on the file (3 questions)
3. cancer patients' quality of life questionnaires (EORTC QLQ -C30)
4. Specific Quality of Life Questionnaire breast cancer patients (EORTC QLQ-BR23)

EORTC QLQ -C30 questionnaire with 30 items, including three subgroups (quality of life, functioning and symptom scales), 2 items related to overall quality of life score based on the Likert scale from 1 to 7, but other questions ranged from 1 to 4. Functioning of the five subgroups (physical, role, emotional, cognitive and social) and symptom scale includes three items related to fatigue, 2 items related to nausea and vomiting, pain and six single item 2 items (dyspnea, insomnia, anorexia, constipation, diarrhea and financial difficulties) is formed. Each domain is based on a 0-100 score more points, in the areas of performance, the level of performance and in terms of symptoms, the symptoms are more severe symptoms (18). The European Organization for Research and Treatment of Cancer questionnaire confirmed its reliability and validity studies conducted in Spain and America was appropriate (19). In Iran, Montazeri et al., it is the perfect tool for measuring the quality of life of cancer patients are diagnosed (20) in this study, Cronbach’s alpha in various aspects was between 0.87-0.95.

EORTC QLQ-Br23 special questionnaire assess quality of life in patients with breast cancer. The questionnaire included four-performance measure (sexual performance, sex, body image and future prospects). 4 scale marks (arm symptoms, breast symptoms, the discomfort of hair loss and side effects of treatment) which is designed as Likert and each question has four options (by no means small, high, very high) from 1 to 4 rating and its overall score is in the range of 0 to 100. Validity and reliability of the Persian version of this questionnaire has been reviewed and approved by Montazeri et al. (31) in this study, Cronbach’s alpha in different dimensions between 0.93 -0.73.

The first stage (pre-intervention): After analyzing data from pre-test to identify the sources, limitations, needs and weaknesses in different bases were patient, content empowerment program and the curriculum for the training cards and intervention, the experimental group was prepared. The control group received no intervention.

The second phase (intervention): This step was performed in four steps.

The first step (perceived threat): increasing the perceived threat (including the severity and susceptibility) holding focus group meetings were conducted for patients. Patients were divided into groups of 7-5-1-2 meeting about the anatomy and physiology of the breast and disease been penetrated, necessary treatment, prognosis, symptoms, complications and concrete examples of their symptoms, were discussed. The supportive role of investigator meetings is guidance and training to participate.

According to patient preference, meetings took 40-60 minutes. At the end of each session is concluded and the questions were answered C and contain instruction card session were presented to them has been an active member of your family. Family members of a family member have the power to decide to the patient confirmed.

The second step (self-efficacy): 4-5 one-hour sessions held to brainstorm the problem or the solution. So that their problems are identified, defined and solutions by themselves presented, discussed and prioritized, then the problems actually were taught to scientific demonstration. Patients mentioned their problems on how to prevent and reduce nausea and vomiting, hair and skin lesions, fatigue, anxiety and depression discussed and actually participated suggestions and solutions. The sessions of nighttime sleep pattern is set to increase skills, set the reminder time written plan of medications, correct principles discussed hiking and muscle relaxation techniques and hand and arm exercises for practical queries. Then the patients were asked to exercise and repeat the behavior and skills are self so without the presence of the researcher,
able to do it. Feel learn, feel able and get encouragement by himself and the researchers increased self-esteem, self-efficacy and outcome of disease. During the intervention, as well as self-efficacy and self-esteem and the adoption of preventive behaviors, was assessed by the investigator at each meeting thus, in connection with the meeting to questions about the use of correct behavior or asked to remove inappropriate behavior.

The third step (increasing self-esteem): This step was conducted in a participatory manner. The patients were asked to family members on issues related to breast cancer and chemotherapy teach and encourage them to help themselves. In this case, the patient education cards to deliver an active member of his family to read it. In other words, the patient learned skills and active member of his family transferred to it. After reading the card, the patient’s family member wants to ask them questions in this area on the back of cards to write the patient in the next session to deliver researcher all cards received training in the next session and the quality of patient education sessions for family members was investigated. Given the strong likelihood of being active member families through patient education and reading instruction card, all active members of their families were invited to the second meeting of the matters to which the patient is taught and what they learned from the tutorial card also under discussion with the researcher. In these meetings, the content was expressed by a member of the family was pivotal researcher.

According to a member of the family group discussions, the researcher found 1 To what extent patients have been successful in transmitting educational content 2 Notes that patients are not transferred to family members, discussed 3 questions were answered an active member families. At this stage of the disease and the mental and practical family came to believe capable of self-control and preventive behaviors prevent complications of chemotherapy and its consequences.

The fourth step evaluation: Evaluation consists of 2 stages. 1 evaluation process 2 Final evaluation during the meetings empowerment process evaluation and final evaluation was conducted one week after treatment. Perceived threat was evaluated by asking questions about material from previous sessions. Through self-taught skills (such as relaxation techniques, exercise, etc.) were evaluated. Self-evaluation of the patient’s level of cooperation and interest in educational participation was evaluated.

THE THIRD PHASE (POST-INTERVENTION)

A month after the implementation of the empowerment, quality of life questionnaires completed again by the intervention and control groups and the effect of family-centered empowerment model on quality of life were measured. Data analysis using SPSS 16 SPSS v using descriptive and inferential statistics, paired t-test with significance level of p <0.05 was done.

FINDINGS

Demographic information and data of the samples in Table 1 is presented in Table 2.

<table>
<thead>
<tr>
<th>variable</th>
<th>group</th>
<th>Control group</th>
<th>Test group</th>
<th>Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Patient Education</td>
<td>illiterate</td>
<td>7</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>23</td>
<td>65/7</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Guidance</td>
<td>3</td>
<td>8/6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>High school</td>
<td>1</td>
<td>2/9</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Collegiate</td>
<td>1</td>
<td>2/9</td>
<td>1</td>
</tr>
<tr>
<td>wife Education</td>
<td>illiterate</td>
<td>5</td>
<td>14/3</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Primary</td>
<td>16</td>
<td>45/7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Guidance</td>
<td>9</td>
<td>25/7</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>High school</td>
<td>2</td>
<td>5/7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Collegiate</td>
<td>3</td>
<td>8/6</td>
<td>2</td>
</tr>
<tr>
<td>wife Jobs</td>
<td>Working</td>
<td>3</td>
<td>8/6</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Employee</td>
<td>2</td>
<td>5/7</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Self-employed</td>
<td>27</td>
<td>77/1</td>
<td>22</td>
</tr>
</tbody>
</table>
Retired & 1 & 2/9 & 2 & 5/7 & P= 0/231 \\
Unemployed & 2 & 5/7 & 3 & 8/6 &  \\
Education is an active member of family & 7 & 20 & 4 & 11/4 &  \\
Primary & 13 & 37/1 & 12 & 34/3 &  \\
Guidance & 14 & 40 & 19 & 54/3 &  \\
High school & 10 & 28/6 & 12 & 34/3 & P= 0/84  \\
Collegiate & 13 & 27/1 & 11 & 31/4 &  \\
Job active member of family & 12 & 34/3 & 12 & 34/3 &  \\

Table 2: Frequency distribution and percentage of women with breast cancer two groups in terms of data records.

<table>
<thead>
<tr>
<th>File View</th>
<th>Stage of the cancer</th>
<th>Stage1</th>
<th>3</th>
<th>8/6</th>
<th>11/4 &amp; P=0/794</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Stage2</td>
<td>22</td>
<td>62/9</td>
<td>20</td>
<td>57/1</td>
</tr>
<tr>
<td></td>
<td>Stage3</td>
<td>10</td>
<td>28/6</td>
<td>11</td>
<td>31/4</td>
</tr>
<tr>
<td></td>
<td>Days since the cycles of chemotherapy</td>
<td>7-14</td>
<td>17</td>
<td>48/6</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15-21</td>
<td>18</td>
<td>51/4</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Diet therapy</td>
<td>CMF,Epi</td>
<td>15</td>
<td>42/9</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Endoxan,Adria,Taxol</td>
<td>10</td>
<td>28/6</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CAF</td>
<td>8</td>
<td>22/9</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Epi,Taxol</td>
<td>2</td>
<td>5/7</td>
<td>3</td>
</tr>
</tbody>
</table>

Groups were similar in terms of all the properties mentioned above and t-test and chi square statistic significant difference between the intervention and control groups before intervention. The average age of patients in the control group is (5.12 ± 46.7 4) and in the intervention group (5.09 ± 64.45). (97.1%) patients in the control group (100%) in the intervention group home and the majority covered by social security insurance and economic status are the same. The average number of family members in the control group (0.92 ± 4.4571) and in the intervention group (1.14 ± 4.4286). The average age of family members in the intervention group (8.5 ± 26.7) in the control group (7.5 ± 25.2). Significant differences between the two groups in terms of number of family members, education and jobs will not be an active member of the family. Information on disease outcome and treatment of patients in both groups showed the highest percentage in the second phase disease and most of them have passed their first 15-21 days of chemotherapy cycle and most of them in both the treatment regimen CMF (Cyclophosphamide + Methotrexate +5 Fluorouracil ) received.

Table 3: The mean scores of public and private life quality performance before and after intervention.

<table>
<thead>
<tr>
<th>Dimensions sign</th>
<th>Test group</th>
<th>Control group</th>
<th>Independent t-tests after intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before intervention</td>
<td>After intervention</td>
<td>Before intervention</td>
<td>After intervention</td>
</tr>
<tr>
<td>Mean</td>
<td>St. deviation</td>
<td>Mean</td>
<td>St. deviation</td>
</tr>
<tr>
<td>Physical</td>
<td>83/8</td>
<td>15/3</td>
<td>93/3</td>
</tr>
<tr>
<td>Role</td>
<td>82/3</td>
<td>12</td>
<td>93/8</td>
</tr>
<tr>
<td>Cognitive</td>
<td>63/6</td>
<td>18/3</td>
<td>81/2</td>
</tr>
<tr>
<td>Feeling</td>
<td>56/1</td>
<td>23/1</td>
<td>76/1</td>
</tr>
<tr>
<td>Social</td>
<td>75/7</td>
<td>24/3</td>
<td>88</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>70/4</td>
<td>10/8</td>
<td>85/7</td>
</tr>
<tr>
<td>Body image</td>
<td>78/5</td>
<td>14/8</td>
<td>87/5</td>
</tr>
<tr>
<td>Sexual function</td>
<td>88/5</td>
<td>17</td>
<td>86/1</td>
</tr>
<tr>
<td>Sexual pleasure</td>
<td>96/1</td>
<td>10/7</td>
<td>94/2</td>
</tr>
<tr>
<td>Attitude to the future</td>
<td>50/4</td>
<td>27/2</td>
<td>71/4</td>
</tr>
</tbody>
</table>
DISCUSSION

One of the most important parameters in determining the quality of life in cancer treatment success (19) in the present study the general quality of life for each patient, the dimensions of performance as an indicator of the effectiveness of family-centered empowerment model was evaluated.

Results showed that after implementation of the intervention, the gastrointestinal symptoms: nausea, vomiting, anorexia, constipation, diarrhea, dry mouth, taste changes decreased patients in the control group no significant difference. The results Samii (1389) also showed that after the implementation of the program of family counseling in groups, decreased symptoms in patients in the control group with the exception of diarrhea, gastrointestinal symptoms escalated and because it followed more patients in the event of an escalation aggravate diarrhea and other side effects of chemotherapy is mentioned (17). Study results Heravi (1385) also showed group counseling in Tehran also improve physical functioning, role emotional, mental, social groups (20). The results Shariati (1389) to study the effect of relaxation on measures of quality performance life of patients with breast cancer receiving chemotherapy showed the program is relaxation improve all aspects of performance (21) The results of this study are also studies.

In the same study showed heravi after consulting program, in the intervention group scales symptoms of nausea, vomiting, diarrhea and constipation compared to pre-intervention was reduced (22). The results of the study Sharif (1391) determine the effect of peer education on quality of life in patients after mastectomy in women who cancer clinics affiliated to Shiraz University of Medical Sciences showed. The results Yazdani the impact of yoga on the scope of quality performance life for patients with breast cancer receiving chemotherapy after the yoga sessions in groups for 75 minutes on days even weeks to 8 weeks showed significant differences in physical functioning, social role was not seen, but the scale of cognitive function and meaningfulness (23).

The results of this study showed that after implementation of the intervention group, fatigue, malaise, decreased congestion, and sleep disorders \( (0.005 < P) \). Zeighami study showed that the quality of life and fatigue associated with cancer-related fatigue leads to dysfunction as physical, occupational, social and emotional affected and it reduces the quality of life. Identify factors contributing to fatigue and teaching self-care measures to patients in order to fix it, contribute to improving the quality of life of the patients (24).

Results Sharif study (1391) showed that peer education can improve symptoms of fatigue and insomnia are two months after the intervention in the experimental group (23).

According to Nancy and Radkr insomnia in cancer patients who are chemotherapy is negatively related to quality of life (25).

Fobiri (2006) believes that Asian women do not want to talk about sexual issues and talk about sexual matters shamefully and illogical know as well as Fobiri suggest that women with breast cancer benefit from talking to each other about sexual issues (26).

Heravi in the study group counseling improves sexual function, body image and sexual pleasure patients (27,20). In this study, Sharif (2012), the impact of peer education on quality of life in breast cancer patients after surgery, sexual function and satisfaction improved after the intervention. The researcher believes that the culture of the factors affecting body image and sexual problems (28).

Yazdani results showed in yoga group after the intervention, significant differences were observed in terms of sexual pleasure and mental image of the body, but the scale of sexual function were significantly influenced the overall quality of life score (23). Saffarzadeh study results showed that after the training, stress management, relaxation measures of the performance of the experimental group, and sexual pleasure was not significantly different, but improved body image scale (22). While the Prophet and colleagues studied changes in these areas before, one week and three months after intervention were not significant (29) which is in line with the study.

Before applying the model, the future outlook was not significantly different between the two groups \((0.05 < P)\), but after the intervention, there was a significant difference in the attitude that represents the
future of improving the quality of life in this test group and in the control group had no significant difference in the time. Safarzadeh study results showed that after training the experimental group improved prospect Scale (22). Yazdani results showed that in yoga, future prospects, there was no statistically significant difference (23). According to the results of the study on the effects of family empowerment general and specific performance measures (with the exception of the aspects of body image, sexual function and sexual pleasure) quality of life in women with breast cancer undergoing chemotherapy, can lead to self-efficacy and self-esteem of families stating empowerment of patients and their families. The family-centered approach, involving families in decision-making, cooperation and bilateral relationship (family and treatment), mutual respect, acceptance of the families, support families, families in information sharing, persons is the specific service delivery and efforts to empower families (30).

CONCLUSION

As the results showed implementation of family-centered empowerment in improving the quality of life of women with breast cancer symptom scale chemotherapy has been effective and recommended that this template for other cancer patients in other age groups and other chronic diseases run at large.

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