

Effect of an Educational Supportive Program on Mastectomy Patients' Satisfaction

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Abstract:

Background: Mastectomy is physically, emotionally, and sexually challenging procedure for patients, so it is important for patients to be educated as much as possible about their care to accommodate and live satisfied with their new condition.

Purpose: The present study aimed to evaluate the effect of an educational supportive program on mastectomy patients' satisfaction.

Subjects and Methods: A random controlled trial design was utilized in this study that implemented on (65) adult female mastectomy patients receiving chemotherapy or radiotherapy, at the oncology department of Suez Canal University Hospitals, Egypt, between July 2016 to December 2017.

Instruments: Patient questionnaire sheet to assess demographic data and the disease history, and self-reported BREAST- QTM Mastectomy module to assess patients' satisfaction during three-stage program (pre, 2 weeks post, and 3 months follow-up).

Results: The study sample age ranged between 18-45 years divided into (32 intervention group & 33 control group) with mean 30.25 ± 8.95 . The intervention group shows high statistical significance in patients' satisfaction after implementation of the educational program with breast; medical staff; physical, sexual, and psychosocial wellbeing with $p < 0.001$. But no significance within the same group in their satisfaction about the surgeon and the office staff.

Conclusions: The study concluded that there is high statistical significant difference between the control and the intervention group in patients' satisfaction with breast, physical wellbeing, sexual wellbeing, and psychosocial wellbeing with $p < 0.001$. But no significance between the two groups in their satisfaction about the surgeon, medical staff, and the office staff.

Recommendations: The study recommended effective health education for mastectomy patients pre and postoperatively to improve their perception which in turn help them satisfied with care and outcome, depending on the results of the present study.

Keywords: Educational Supportive program, Mastectomy, Patients' Satisfaction

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I. Introduction

Cancer of the breast is a pathologic entity that starts with a genetic alteration in a single cell and may take several years to become palpable. Various treatment options are available; the patient and physician may decide on surgery, radiotherapy, chemotherapy, or hormonal therapy or a combination of therapies. Mastectomy is the surgical procedure used to remove breast cancer and is identified as removal of the whole breast. There are different five types of mastectomy which identified as simple, total, modified radical, radical, partial, and subcutaneous (nipple-sparing) mastectomy (1). It is estimated that almost 1.7 million new cases of cancer are diagnosed in 2017. Among females, breast cancer is the most common and represent 30% according to the (Cancer Facts & Figures, 2017) (2). The breast cancer is the highest cancer in women worldwide and is increasing particularly in developing countries where the majority of cases are diagnosed in late stages; the higher number of cases in these countries is partially due to their larger portion of the world's population (3). Breast cancer is now the leading cause of cancer-related deaths in women in the developing countries according to (4)

The population of Egypt is approximately expected to increase to 160% the 2013 population size during the period 2013–2050. A progressive increase in the number of incident cases from 114,985 in 2013 to 331,169 in 2050, approximately 290% of 2013 incidence will occur. Population growth alone would increase the number of incident cases by 55.2% in 2015. This fraction progressively decreased to become 32.8% in 2050. Among females, the pattern was dominated by the high frequency of breast cancer in Lower, Middle, and Upper Egypt (33.8%, 26.8% and 38.7% resp.) (5).

Cancer treatments resulted in numerous of adverse physiologic effects during active disease treatment, but may resolve spontaneously upon treatment withdrawal. Whereas some of them contribute to early physical impairments, others occur months or years after withdrawal of the treatment. As a result of these impairments, breast cancer patients often develop decreased tolerance to the activities. Patients expressed the need for education about treatment-related impairments as well as information to help them return to exercise and activity. Rehabilitation care reduces the incidence of breast cancer-related physical impairments (6)

The nurse is the key member of the professional health team, who provide patient care and promote the quality of life of the patient and their satisfaction. Nurses have a major role in managing patients with mastectomy before and after the operation and later on at the follow-up. Preoperative nursing care includes providing education and preparation for surgical treatments, reducing fear and anxiety, improving the coping ability of the patients, and promoting decision-making ability. The postoperative nursing interventions include relieving pain and discomfort, managing postoperative sensations, promoting positive body image, promoting positive adjustment and coping, improving sexual function, monitoring and managing potential complications, home- and community-based care, teaching patients self-care and maintain patients' satisfaction with care(7)

Patient satisfaction is one of the important outcome measures following breast surgeries, it is important to assess patients' satisfaction as a measurement of quality of care and to understand what expectations women have toward the procedure (8). There is clear evidence showing that unrecognized or unfulfilled expectations regarding surgical outcomes are directly related to poor patient satisfaction and greatly influences patient's perception of the surgical result. Patients with breast cancer should be familiar with treatment and cope with side effects of the operation, and other treatments, in addition to special supportive education program. (9).

Most of the studies which measure patients satisfaction are implemented on patients with reconstruction surgeries such as a study implemented by (8) who studied quality of life and patient satisfaction after immediate breast reconstruction: a prospective study. Another study by (10) who studied Patient satisfaction and health-related quality of life after autologous tissue breast reconstruction: A prospective analysis of early postoperative outcomes. In addition to studies that measure patients satisfaction with the operation such as in a study by (11) who studied Breast Reconstruction Post Mastectomy. Moreover, study to measure marital satisfaction by (9) who studied Effect of an Educational-Supportive Program Based on Roy Adaptation Model on Marital Satisfaction in Mastectomy Patients Receiving Chemotherapy. Thus, it is obvious that limited or no studies were performed in the nursing field for mastectomy patients to measure their satisfaction using an educational program. Therefore, the present study is unique and originally implemented.

II. Significant of the Study

Breast cancer is the second cause of death in women after lung cancer in the United States, as most women are diagnosed with breast cancer than any other type of cancer. It is expected that 41,070 people (40,610 women and 460 men) will die from breast cancer this year. The average 5-year survival rate for patients with breast cancer is 90% According to the ("Breast Cancer: Statistics | Cancer.Net," 2017.) (12). The peak mortality rate is in the black ethnic group, followed by whites, then American Indian/Alaska Native, and the lowest mortality rate is for Asian/Pacific Islanders. There is a combination of biological and environmental factors as all affect prognosis of patients.(13). In Egypt, patients' knowledge regarding cancer treatment; and patients' decision-making abilities are limited. So their satisfaction for treatments and adjuvant therapies is also limited. As people know, they will satisfy, then the will live in a qualified manner with peace. This study will help mastectomy patients to satisfy with their health state through exploration of needed information by the studied patients.

III. Methodology

Aim: The present study aimed to evaluate the effect of an educational supportive program on mastectomy patients' satisfaction.

Research hypothesis

Mastectomy patients who will participate in the educational supportive program will have higher level of satisfaction more than who will not receive the program (2 weeks post the program, and at 3 months follow-up).

Research questions:

1. What is the level of mastectomy patients' satisfaction?
2. What is the effect of the educational supportive program on mastectomy patients' satisfaction?
3. Are there difference between the intervention and the control group in their level of satisfaction?

Research Design:

A randomized controlled clinical trial (RCT) research design was utilized at this study.

Subject & Setting:

A randomized 65 female mastectomy patients receiving radiotherapy or chemotherapy (32 patients in the intervention group, and 33 patients in the control group), who were referred to the Oncology Unit of Suez Canal University Hospitals, Egypt between July 2016 to December 2017. The inclusion criteria included being in age ranged from 18-45 years, undergoing chemotherapy or radiotherapy at least one session, having unilateral or bilateral mastectomy, being metastatic, being married (and their spouses is alive), don't have history of psychological disorders or psychiatric hospitalization, and having no history of other malignancies (breast cancer should be primary). The exclusion criteria include: unwillingness to participate in the study, hearing or visual impairments which prevent effective communication, patients with secondary metastatic breast cancer, and single patients. Before evaluating effect of the program, socio-demographic differences between the two groups (control & intervention) were examined and no significant differences were founded.

Tools for data collection:

1- Patient questionnaire sheet, which was designed by the researcher in the light of relevant and related literatures and written in simple Arabic language, to assess age, educational level, occupation, duration of disease (cancer), financial income, current treatment modality, presence of metastasis, and receiving other health education.

2-Breast-QTM-Mastectomy Module: The BREAST-Q is a patient-reported outcome (PRO) instrument specifically designed for use in women undergoing mastectomy and breast reconstruction surgery. The BREAST- QTM-Mastectomy module consists of a core of independent scales assessing 3 quality-of-life domains (physical, psychosocial, and sexual well-being) and 3 satisfaction domains (satisfaction with breasts, outcome, and care) with total of 63 items. There is no overall or total BREAST-Q score, only scores for each independent scale; it is 3-5 likert scale, the questionnaire responses are entered into Q score, a data analyzing program that converts raw scores into a summary score between 0 and 100 with higher scores reflect a better outcome. The recall period along the scale is in the past 2 weeks with an exception to the sexual well-being scale which has no recall period as it is considered since the surgery. The scale completed by the patients in 10-12 minutes. The BREAST-Q has been validated in multiple studies and proven to be highly reliable, valid, and responsive to differences in patient outcomes. Scale reliability was supported by high α (>0.80), item-total correlations (range of means, 0.58 to 0.87), and interclass correlation coefficients (>0.80), by (14). The domains of the scale are divided as follow:

A- Quality Of Life domains: they are 3 domains as explained here

1. **Psychosocial Well-being:** Contains items that ask about body image as accepting of body , attractiveness, a woman's confidence in social settings, emotional health, and self-esteem.
2. **Sexual Well-being:** Contain items that ask about feelings of sexual attractiveness when clothed and unclothed and sexual confidence as it relates to one's breasts, as well as how comfortable or at ease a woman feels during sexual activity.
3. **Physical Well-being:**
 - a. **Chest and Upper Body:** Entails questions about shoulder, neck, back, arm, chest muscle and rib pain. There are also questions about breast area discomfort such as tightness, pulling, nagging, tenderness, aching and throbbing, activity limitations and balance.
 - b. **Abdomen and Trunk:** Items cover abdominal discomfort, bloating and pain as well as difficulty doing certain activities due to abdominal weakness. There is a single item asking about abdomen appearance.

B- Satisfaction domains

1. **Satisfaction with Breasts:** It asks questions regarding how comfortably bras fit, and how satisfied a woman is with her breast area both clothed and unclothed.
2. **Satisfaction with Care:**
 - a. **Surgeon:** Items ask about the surgeon's manner as professional, reassuring, thorough, or sensitive; communication skills, the extent to which the patient was involved in the decision making and understand the process.
 - b. **Medical team:** Items ask whether the staff (other than surgeon) were professional, knowledgeable and friendly, as well as how comfortable the woman was made to feel and whether she felt she was treated in a respectful manner.
 - c. **Office Staff:** Items ask whether staff were professional, knowledgeable and friendly, as well as how comfortable the woman was made to feel and feeling as she was treated in a respectful manner

3.Educational Booklet: It was prepared by the researcher with reference to the related literatures; and it contains explanation about the disease, its diagnosis and treatment modalities, chemotherapy and radiotherapy, side effects of treatments and their care, fatigue, exercise, healthy eating habits, daily activities, stress and anger management, anxiety and depression management, reconstruction surgeries, non-surgical cosmetics, sexual management, physical & psychosocial wellbeing strategies. The booklet guided by information based on the European Society for Medical Oncology by (15), (16), (17), Princess Margaret Cancer Survivorship Program (18), and (19).

Pilot study: A pilot study was conducted on Six patients from the same setting to test the feasibility and applicability of the tools and the intervention, and some modifications were done accordingly. Data obtained from the pilot study were not included in the main study.

Ethical considerations: A permission to carry out the study was obtained from pertinent authorities after explanation of the study aim. An oral informed consent was obtained from every patient to participate in the study, confidentiality and privacy were assured for each participant. The study maneuvers didn't entail any harm to patients, and the participants have the right to withdraw any time. Telephone number of the researcher is available to the participants.

Procedure: The study used a multistage simple random sampling method to select 65 mastectomy patients who are divided by half randomly into two groups (intervention & control). The intervention group is the one who received the educational program through four stages classified into 18 months from April 2016 to September 2017 as follow:

- 1-**Assessment phase:** The aim of this phase was to collect patient's baseline data as well as to identify personal needs in order to design the appropriate educational sessions. It was done for the patients who have undergone mastectomy and on chemotherapy or radiotherapy. The previous stated tools were completed by patients to assess their satisfaction at 3 stages (pre the application of the program as a baseline for the two groups, and 2 weeks post intervention , and at the follow-up period after 3 months). The result of the pretest was used as a guide for modifications of the educational program, as it specifies the patient's needs. It is implemented throughout the study.
- 2-**Planning phase:** An Arabic educational booklet with illustrations has been developed based on the assessment phase, literature review, with the guidance of the previously listed literatures contains knowledge about different aspects and domains of the study, in addition to the intervention modalities used to deal with patients' needs and problems either physically or psychosocial. It is completed and revised within 2 months.
- 3-**Implementation phase:** The educational program was performed using structured interview with patients by the researcher in one session extended for (50-60) minutes during the patients' visit to the oncology unit for the purpose of treatment and follow-up for the intervention group. Small group discussions (2-4 patients) were used to implement the educational program through 4 days/week for 4 months with some teaching aids such as colored pictures and power point presentation. At the end of the session, the researchers make conclusion and take feedback from every participant and the educational booklet given to the intervention group.
- 4-**Evaluation phase:** Each patient was evaluated three times during the study period utilizing the same previously listed tools. The first evaluation was at the assessment phase; the second evaluation was after implementation of the program by 2 weeks, and the third evaluation was done three month after the second evaluation. The same data collection tools were used in the three evaluations. Then the educational booklet given to the control group.

IV. Statistical design

Statistical analysis was implemented using SPSS version 21. The descriptive statistics assessed by frequencies and percentage, t-test and chi-square test were used in more specified data analysis. Chi-square test (X²) was used to determine differences in socio-demographic characteristics in the two groups. t-test used to analyze differences between mean scores for the two groups, and fisher test (F) used to determine differences and significance between phases of the study. Significant level was pre-set at $p < 0.05$.

V. Results

Table (1): Baseline data and disease history. N (65)

Variables	No	%
Age (mean &SD)	Mean (S.D) 30.25± 8.95	
Educational level :		
Intermediate	17	26.15%
Secondary	43	66.15%
Postgraduate	5	7.69%
Occupation		
Employed	13	20%
Not Employed	52	80%
Duration of disease (cancer):		
Less than 1 year	26	40%
1-5years	39	60%
Financial income :		
Enough	12	18.46%
Not enough	53	81.54%
Current treatment :		
Chemotherapy	30	46.15%
Radiotherapy	35	53.85%
Presence of metastasis:		
Yes	34	52.31%
No	31	47.69%
Other health education:		
Yes	5	7.69%
No	60	92.31%

Table (1) explained the baseline patients' data and disease history for the total study sample and clarifies that mean age of the studied sample was 30.25± 8.95, 66.15% of the studied sample were secondary educated and 26.15% were intermediate educated, 80% of the total studied sample were not employed, 60% of the sample has the cancer disease from 1 to 5 years, 81,54% of the sample their financial income is not enough, 53.85% of the sample were currently on radiotherapy and 46.15% were currently on chemotherapy, in 52.31% the disease was metastasize, in addition to 92.31% of the sample had no previous health education.

Table (2): Comparison of the baseline data and disease history for the control and the intervention group

Variables	Intervention (N=32)	Control (N=33)	Test	p
Age (mean &SD)	30.73± 6.95	32±6.76	t=-1.31	0.39
Educational level :				
Intermediate	7 (21.88%)	10 (30.30%)	X2 =0.8	0.71
Secondary	22(68.75%)	21 (63.63%)		
Postgraduate	3(9.37%)	2 (6.07%)		
Occupation				
Employed	5(15.63%)	8(24.24%)	X2=0.04	0.85
Not Employed	27(84.37%)	25(75.76%)		
Duration of disease (cancer):				
Less than 1 year	12(37.5%)	14(42.42%)	X2=0.08	0.68
1-5years	20 (62.5%)	19(57.58%)		
Financial income :				
Enough	5(15.63%)	7(21.21%)	X2=0.04	0.86
Not enough	27(84.37%)	26 (78.79%)		
Current treatment :				
Chemotherapy	13 (40.63%)	17 (51.51%)	X2=1.0	0.30
Radiotherapy	19 (59.37)	16(48.49%)		
Presence of metastasis:				
Yes	18 (56.25%)	16(48.49%)	X2=1.44	0.24
No	14(43.75%)	17(51.51%)		
Other health education:				
Yes	3(9.37%)	2(6.07%)	X2=1.46	0.26
No	29(90.63)	31(93.93%)		

Table (2) shows no significance difference between the two groups regarding comparison of the baseline data and the disease history between the intervention and the control group.

Table 3: Breast-Qtm-Mastectomy for the control group throughout the study (n=33).

Items	Pre	Post	Follow up	F	P
Satisfaction with breast	14.3701±3.057	16.1024±3.047	15.3701±3.057	0.394	0.675
Satisfaction with surgeon	11.5306±2.855	11.5773±2.843	11.2474±2.712	0.393	0.676
Satisfaction with medical staff	47.4692±12.955	47.7165±7.9780	47.8504±7.8650	0.049	0.952
Satisfaction with office staff	49.5204±11.904	46.3402±11.153	47.2990±10.421	2.079	0.127
Psychological well-being	42.4154±18.453	37.7638±17.634	43.4567±16.753	3.759	0.024
Physical well-being (chest)	49.9184±13.397	51.8763±12.995	51.1443±13.931	0.531	0.589
Physical well-being(abdomen)	40.71±18.523	44.75±18.324	43.4567±16.753	1.235	0.219
Sexual well-being	6.5615±3.864	6.3622±3.323	6.8268±3.055	0.585	0.558

According to patients' satisfaction for the control group throughout the study phases, table (3) shows no significance difference in all items of the BREAST-QTM-Mastectomy module through all phases of the study. While for the intervention group.

Table 4: BREAST-QTM-Mastectomy for the intervention group throughout the study (n=32).

Items	Pre	Post	Follow up	F	P
Satisfaction with breast	39.62±14.52	52.33±6.02	53.32±6.01	78.834	<0.001
Satisfaction with surgeon	32.71±10.43	30.42±9.41	29.94±9.61	2.225	0.110
Satisfaction with medical staff	19.01±7.31	26.04±3.73	26.43±3.72	83.197	<0.001
Satisfaction with office staff	28.53±8.22	27.81±8.81	27.06±9.14	0.722	0.487
Psychological well-being	19.02±7.33	26.05±3.72	26.43±3.71	83.197	<0.001
Physical well-being(chest)	7.405±0.54	11.71±2.11	13.62±0.79	5.085	<0.001
Physical well-being(abdomen)	87.12±14.18	51.65±12.48	68.81±16.44	68.834	<0.001
Sexual well-being	31.84±12.11	42.13±5.22	42.16±5.53	66.412	<0.001

Table (4) shows high statistical significance in patients' satisfaction after implementation of the educational program with breast, medical staff, physical wellbeing, sexual wellbeing, and psychosocial wellbeing with $p < 0.001$. But no significance within the same group in their satisfaction about surgeon and the office staff.

Table 5: BREAST-QTM-Mastectomy for the control and intervention group throughout the study (n=65).

Items	Control group (N=32)	Intervention group (N=33)	P
Satisfaction with breast	47.9 ± 21.9	69.3 ± 19.9	<0.001
Satisfaction with surgeon	64.2 ± 21.2	73.7 ± 19.2	0.086
Satisfaction with medical staff	87.4 ± 18.3	89.7 ± 17.8	0.46
Satisfaction with office staff	51.65±22.34	54.27±18.14	0.54
Psychological well-being	54.27±18.14	75.04±15.49	<0.001
Physical well-being(chest)	37.7 ± 26.8	55.2 ± 21.9	<0.001
Physical well-being(abdomen)	51.65±12.48	87.12±14.18	<0.001
Sexual well-being	37.78±21.39	57.17±17.45	<0.001

According to the differences between the intervention and the control group in level of satisfaction, table (5) shows high statistical significance difference in patients' satisfaction with breast, physical wellbeing, sexual wellbeing, and psychosocial wellbeing with $p < 0.001$. But no significance within the two groups in their satisfaction about the surgeon, medical staff, and the office staff.

VI. Discussion

Educational interventions support patients with cancer in acquiring or maintaining the skills needed to manage their life with a chronic disease and maintain a healthy lifestyle to optimize health and satisfaction. So, the current study aimed to evaluate the effect of an educational supportive program on mastectomy patients' satisfaction. So the results of the study entitled some answers for the research questions as follow:

According to the baseline patients' data and disease history for the overall study sample: The current study clarifies that the age of the studied sample ranged from 18-45 years old with mean 30.25 ± 8.95 , two thirds of the studied sample were secondary educated and slightly more than one quarter were intermediate educated, most of the overall sample were not employed and their financial income was not enough, more than half of the sample has the cancer disease from 1 to 5 years, the disease was metastasize and were currently on radiotherapy while less than half of the sample were currently on chemotherapy. In addition, almost of the sample had no previous health education. no significant difference present between the intervention and the control group in all dimensions of the baseline data. These results could be related to higher incidence of cancerous diseases because of unhealthy eating habits, obesity, and hormones present in almost foods. Also low

educational levels make people not aware of suitable life style and healthy habits that decrease level of cancer incidence. Difficulties with return to work as a result of cancer and mastectomy in addition to use of chemotherapy or radiotherapy may require extra support and financial issues related to loss of income and additional expenses as a result of illness and/or treatment. Moreover, health education for patients need follow up from the health care facilities and patients motivation.

In a study by (20) titled improving quality of life for women with arm lymphedema post mastectomy in Zagazig city; the socio-demographic characteristics of the studied sample shows that the majority of the premenopausal group their age less than 45 years old with mean age 39.6 ± 3.6 . Also less than half of the studied women had secondary school, the majority of premenopausal were married and all of the studied sample were house wives and not employed. Also, more than two thirds of women had insufficient monthly income, most of them haven't health insurance, and paid the fees for their treatment with themselves,

A study titled breast reconstruction post mastectomy which explores both the quality-of-life benefits of reconstruction and the factors that influence patients' decisions of whether or not to undergo reconstruction by (11) in Australia; found that patient demographics and cancer variables of the 2 groups (control and intervention) were matched with the exception of age as the mean age of the studied sample was 54.5 ± 12.9 years.

The results of the current study inconsistent with a study implemented by (10) which discussed patient satisfaction and health-related quality of life after autologous tissue breast reconstruction, found that the studied sample age ranged between 28-77 years with mean 48 years old, the majority of the sample were college educated, employed either full or part time, slightly less than two thirds take previous chemotherapy and have invasive breast cancer, in addition to less than half of the studied sample take previous radiation therapy.

The results of the current study are in the same line with a study by (9) addressed effect of an educational-supportive program based on Roy adaptation model on marital satisfaction in mastectomy patients receiving chemotherapy, and found that age of the participants ranged between 30 and 39 years, less than half of the sample had diploma education, The majority of the patients sustained metastatic breast cancer, the majority had no income, no significant differences between the two groups in baseline data and disease history. Also, (21) who studied post-mastectomy radiation for n2/n3 breast cancer: factors associated with low compliance rate, stated that breast cancer patients who undergo a mastectomy should receive subsequent radiation treatment if their cancer has spread to four or more nearby lymph nodes, however, according to a new study, only 65 percent of these women are getting the recommended post-mastectomy radiation therapy (PMRT).

Other study results that somewhat didn't state results consistent with the current study by (22), titled effect of counseling intervention post mastectomy for women undergoing adjuvant chemotherapy on their quality of life , stated that more than half of the patients their age range 20-40 years old, more than one-third of the studied sample obtained secondary school and university education, around two-thirds of the study subjects were working.

According to patients' satisfaction throughout the study phases, and effect of the educational supportive program on mastectomy patients' satisfaction, the present study shows high statistical significance difference in the intervention group satisfaction after implementation of the educational program with breast, medical staff, physical wellbeing, sexual wellbeing, and psychosocial wellbeing. But no significance within the same group in their satisfaction about surgeon and the office staff. While for the control group, no significance difference in all items of the BREAST-QTM-Mastectomy module through all phases of the study. From the researchers' point of view, these results could be related to the fact that patients feel exhausted physically and spirituality with chemotherapy and radiotherapy as patients experience a variety of physical changes that in turn trigger the patients emotional reactions, also the friendly sessions, open and simple explanation and, giving the patients the chance to ask questions, listening to their feelings and complains, relieved their fear and anxiety. In addition, the group counseling and availability of the other spouses during sessions give a chance to patients to express their internal feelings as they can talk without shame about their sexual issues, body image, and self-esteem in a more relaxed environment.

In the same line a study by (9) stated that there was a significant improvement after implementation of the educational program in sexual satisfaction in the intervention group, and no significant differences were observed in the control group. Also, a study by (22) stated that there was a statistically significant difference between pre, post, and follow-up counseling interventions regards physical impairment, psychosocial function, and sexual enjoyment.

A study by (23) who studied the quality of life in breast cancer survivors: 2 years post self-management intervention, stated that breast cancer survivors without any intervention showed poorer scores in the physical, emotional, and social functioning scales and provide evidence on the potential benefits of educational and supportive intervention for relieving psychological distress and improving QOL for breast cancer survivors.

The emotional distress in patients with cancer is arising from fear of disease recurrence, changes in body image, returning to work, anxiety, depression, interpersonal problems, fatigue, physical complains, and sexuality concerns which need attention. Alteration of cognitive functioning in women treated with chemotherapy and radiotherapy requires strategies of management such as maintaining written notes or a diary, and repetition of information. potential isolation from normal support networks, particularly for rural women who are staying away from home for treatment, and financial issues related to loss of income and additional expenses as a result of the disease and/or treatment may need support. These issues are consistent with findings of the current study (24).

In the same line a study named patient-reported satisfaction following oncoplastic breast conserving therapy by (25) stated that the diagnosis and management of breast cancer has a profound impact on women's psychosocial well-being. Not only are patients fears linked to concerns of their health and survival, oncologic resection of their disease has been proven to negatively affect their perception of their body image, sexuality, and self-esteem which consequently impacts their marriage, family and social life at large. So, optimizing the patients' experience is essential in the management of these patients

A systematic review study of women's satisfaction and regret following the risk-reducing mastectomy that includes patient education and counseling by (26), stated that dissatisfaction and regret often relate to emotional distress and many complications, psychological support may enhance patients' satisfaction and reduce regret. Factors associated with both patients' regret and satisfaction include changes in body image, psychological distress, post-operative complications, and inadequate perceived information. Also, (27) who studied satisfaction of women after mastectomy for nursing care, reported that patients evaluated best nurses' professional tasks provided during therapy, and worst those referring to rehabilitation tasks

Decreased satisfaction was seen in sexual wellbeing, physical wellbeing (of abdomen) and satisfaction with nipples, while high satisfaction scores were evident in domains of satisfaction with surgeon, medical staff, and the office staff in a study by (28), who studied patient-reported outcomes following breast reconstruction surgery in public hospital, which in turn go in the same line with results of the current study

According to the difference between the intervention and the control group in the level of satisfaction, the present study shows high statistical significant difference in patients' satisfaction with breast, physical well-being, sexual wellbeing, and psychosocial wellbeing. But no significance within the two groups in their satisfaction about the surgeon, medical staff, and the office staff. From the researchers' point of view, these results could be related to effect of education on personal awareness with positive points and good events that by sequent improve psychological status and reduce fear and anxiety which lead to decreased complications and improvement in physical condition that give empowerment to patients and help them live in a balanced matter with good marital life and sexual relationship with their spouses.

In the same line (29), who studied indications and contraindications of physiotherapy in breast cancer patients, stated that physical activity is mainly associated with an improved quality of life at both physical and functional levels. A combination of physical activity and cognitive-behavioral therapy can determine a significant improvement in the patient's quality of life. Also, (30) who studied patient care and decisions satisfaction with surgery outcomes and the decision process in a population- based sample of women with breast cancer, stated that patients with mastectomy without reconstruction were at higher risk for dissatisfaction and decision regret should not be interpreted to mean that mastectomy is an inferior treatment choice, or that more women should be receiving breast cancer surgeries. Mastectomy with or without reconstruction is a viable surgical option for breast cancer patients, Women who received a mastectomy were also less likely to report that concerns about body image influenced their surgical treatment decision, although significantly different, the prevalence of low satisfaction with the surgery received was low among both women receiving mastectomy without reconstruction and those receiving breast cancer surgeries.

VII. Conclusion

In the light of the results, the present study concluded that mastectomy patients who participated in the educational supportive program had a higher level of satisfaction more than who didn't receive the program in their breast, physical well-being, sexual wellbeing, and psychosocial wellbeing. But no significance within the two groups in their satisfaction about the surgeon, medical staff, and the office staff.

VIII. Recommendations

the current study recommends that self-management program and different educational programs should be available at the hospital to be taught to the patients to increase their satisfaction with care presented to them, and improve their quality of life, which in turn decrease treatment burden on the hospital through preventing or reducing complications.

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