Effect of Nursing Counseling Guided by BETTER Model on Sexuality, Marital Satisfaction and Psychological Status among Breast Cancer Women

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Abstract:

Background: Breast cancer is one of the main problems related to women's health, and the various forms of treatment can lead to bodily changes and significantly alter women's sexuality and psychological status. Aim: The aim of this study was to evaluate the effect of nursing counseling guided by BETTER model on sexuality, marital Satisfaction and psychological status among breast cancer women. Design: A quasi-experimental research design. Setting: The study was conducted at an Outpatient clinic, Oncology Institute, Menoufia University - Egypt. Sampling: A purposive sample, composed of 87 women was recruited in the study. Tools: Six tools were used for data collection a) A Structured interviewing questionnaire b) Female sexual function index (FSFI) c) Body image scale d) ENRICH marital satisfaction scale E) Tylor anxiety scale (Arabic version) f) Perceived stress scale (PSS). The results: This study showed that there was a highly significant difference at study participants sexuality, marital satisfaction and psychological status pre and post application of nursing counseling guided by BETTER model. Conclusion: Application of nursing counseling guided by BETTER model had high significant impact on improving sexuality, marital satisfaction and psychological status of breast cancer women undergoing treatment. Recommendation: Adopt a BETTER sexual model of counseling for management of sexual dysfunction and psychological problems in breast cancer institutions. Ongoing education for maternity nurses on the impact of breast cancer treatment on women's sexuality and psychological status, as well as strategies to address women's sexual and psychological problems.

Key words: Nursing Intervention, Sexuality, Marital Satisfaction, Psychological status

Introduction

Breast cancer is the most common cancer diagnosed in women (24.2%). Around one in four cases of cancer diagnosed in women worldwide is breast cancer. Breast cancer is the most common in 154 of the 185 countries included in the most recent global cancer data for 2018. Moreover, breast cancer is the leading cause of cancer death among women (15.0%) (WHO, 2018). Breast cancer prevalence is high in Egypt and cases of breast cancer constitute 29% of cancer cases (Allam & Abed Elaziz, 2012).

The diagnosis and management of breast cancer can cause psychological and sexual problems. Sexual problems include vaginal lubrication problems, decreased nipple sensation, decreased sexual excitation and orgasm, and other
sexual dysfunctions (Arraras et al., 2016). An estimated prevalence of sexual problems in women with breast cancer was 85 per cent (Chang et al., 2018). Psychological problems, such as disturbance of self-image, low self-esteem and reduced marital intimacy, are also common in women with breast cancer. These problems can result in divorce and affect the quality of life of cancer patients and their spouses (Boquiren et al., 2016).

Female sexual function involves more than just arousal and orgasm; It's informed by numerous domains (Figure 1). These integrate desire, arousal, lubrication, orgasm, satisfaction and pain, body image, psychological health, and sensuality (Boswell and Dizon, 2015).


The psychosexual effect of breast cancer is impacted by a number of factors. These factors are categorized as medical factors, individual factors, and relationship factors. Medical factors include various aspects of the treatment process, including surgical and other medical treatments. Individual factors involve physical and psychological factors such as pain, fatigue, depression and anxiety. Finally, relationship factors include interpersonal aspects of a couple's relationship (Dye, 2018).

Nurse-led psychosexual counseling can significantly improve sexual function, reduce sexual problems and improve marital relations. Nurse among health care providers within the degree to whom women can easily clarify themselves and can be effective in removing their concerns related to sexual issues (Taylor and Davis, 2011). The nurse has an essential duty as a counselor and guide in identifying psychological problems experienced by breast cancer women and providing assistance to these individuals in order to overcome these problems (Dattilo and Brewer, 2015).

Sexual oncology is picking up appreciation as a serious area requiring consideration in nursing practice and research. Nurses need to have a high level of sensibility in taking care of women’s sexual health needs (Kotronoulas et al., 2015). One of the vital roles of nurses is to assess sexual problems in order to provide anticipatory guidance associated with treatment and the resumption of sexual activity. This is dimension of care has not been adequately addressed frequently by nurses, usually due to communication barriers between nurses and women.
Thus, the incorporation of appropriate questions within the evaluation by nurses gives the women the opportunity to address sexual wellbeing issues, favoring communication (Kotronoulas et al., 2015).

Several models are accessible to discuss sexual health and they are an effective communication model that theoretically supports interventional approaches as PLISSIT model which composed of permission, limited information, specific suggestions, and intensive therapy. As well as, BETTER Counseling Model proposed by Mick et al (2004). BETTER model has been introduced as a structured approach for nurses to address sexual issues with oncology clients. Although this model was designed for a specific population and professions, the components of the model can be taken into consideration by all health professionals when addressing clients with varying disabilities. The model is made up of six stages: Bring up, Explain, Tell, Time, Educate and Record (Quinn, C. & Happell, B., 2012).

Significance of the study:

Breast cancer and its treatments like mastectomy, chemotherapy, radiotherapy, hormonal therapy cause many side effects such as scars, problems with body perception and sexual problems. In addition, it causes significant emotional distress as sadness and depression, issues associated with personal appearance, stigma, and the negative effect on personal relationships, intimacy, all of which reduce the quality of life (Olcem, 2019). Supportive health education and counseling were more successful in psychological problems, sexual dysfunction and cancer-related symptoms management (Badger et al., 2020).

According to the American Nurses Association, sexuality is an essential part of nursing care, and thus detecting human sexual needs and removing concerns related sexual health are part of the nursing role. Nurses play a vital role in identifying these needs and increase marital satisfaction by enhancing the quality of patients’ sexual lives (Can, 2014; Turgut and Golbası, 2010). Nurses, also have a crucial responsibility to help fulfill the needs of cancer patients for psychological support and care and help the patient build the strength to cope with the disease and resultant life problems (Can, 2014). So this research is conducted to evaluate the effect of nursing counseling guided by BETTER model on sexuality, marital Satisfaction and psychological status among breast cancer women.

Operational definition of BETTER counseling model: Sexual counseling model address sexual issues with oncology clients. This model is composed of six stages: Bring up, Explain, Tell, Time, Educate and Record.
Aim of the study:
the aim of this study was to evaluate the effect of nursing counseling guided by BETTER model on sexuality, marital Satisfaction and psychological status among breast cancer women.

Study Hypotheses:
- Breast cancer women who are subjected to nursing counseling guided by BETTER model will have an improvement in sexuality after the intervention than before.
- Breast cancer women who are subjected to nursing counseling guided by BETTER model will have an enhanced level of marital satisfaction after the intervention than before.
- Breast cancer women who are subjected to nursing counseling guided by BETTER model will have an improvement in psychological status after the intervention than before.

Subjects and Methods:
Study Design: A quasi-experimental research design.
Study Setting: The study was done at an outpatient clinic, Oncology Institute, Menoufia University - Egypt.
Sample: The study sample was selected purposively consisted of 87 women with the following inclusion criteria: married women diagnosed with breast cancer, at reproductive age (18-45), undergoing breast cancer treatment. Exclusion criteria: women diagnosed with other sorts of gynecological cancer e.g. cervical cancer and uterine cancer, women with psychiatric problems, underwent conservative breast surgery, whose spouses have sexual health problems.

Sample size Equation:
For calculating the sample size required to assess effectiveness of nursing counseling guided by BETTER model on sexuality, marital satisfaction and psychological status of women with breast cancer. Epic website (Open Source Statistics for Public Health)*, with the subsequent sample size equation was used:
Sample size $n = \frac{[\text{DEFF}\times Np(1-p)]}{[(d^2/Z^21-\alpha/2*(N-1)+p*(1-p)]}$

With the following assumptions:
Population size for finite population correction factor or fpc) $(N) = 1000$
Hypothesized % frequency of outcome factor in the population $(p) = 40\% +/- 5$
Confidence limits as % of 100 (absolute +/- %) $(d) = 5\%$
Design effect (for cluster surveys-DEFF) $= 1$
90% z confidence intervals
The calculated sample size equals 87 women diagnosed with breast cancer.

Tools of data collection:
Tool I. Structured questionnaire designed by researchers and containing the following socio-demographic data: age, education, occupation, residency, income and duration of marriage. Menstrual history as age of menarche, duration, amount of blood loss, frequency and regularity of menstruation. Obstetric history,
including gravidity, parity and complications during past pregnancies. Current medical history regarding breast cancer, including onset of disease, breast cancer stages, breast cancer treatment, side effect of treatment.

**Tool II. Female Sexual Function Index (FSFI) (Anis et al., 2011).**

Female sexual function index (FSFI): This tool was adopted by Rosen et al., (2000) It assesses six sexual aspects; sexual desire, arousal, lubrication, orgasm, satisfaction and pain during the sexual intercourse. It consists of 19 questions. Modifications were administrated on FSFI scale to be relevant with Egyptian culture to include 12 questions cover all the aspects of the sexual function which are used to assess the extent of women's sexual function. Total scoring system of the female sexual function index: It is depending on the woman's response to 12 items on a 3 point Likert scale. The total score of female sexual function index was 36. The score was classified as the following: Sexually active: ≥75 %, which equals 27 - 36 from the total score, Average sexual function: 50 % -74 %, which equals 18-26 from the total score, Sexual dysfunction: less than 50% which equal 17 or less from the total score.

**Tool III. Body Image Scale (Hopwood et al., 2001).** This is a self-reporting tool of the female body image. The 10-element tool has been developed by the European Organization for Cancer Research and Treatment (EORTC). It has revealed high reliability (Cronbach alpha 0.93) and good clinical validity. Total scores range from 9 to 36; 9 to 17 was good, 18 to 26 was a considerable level and 27 to 36 was a poor level.

**Tool IV: ENRICH Marital Satisfaction Scale (Blaine J. and David H,1993):** A valid tool to measure the marital satisfaction level. It includes 15 items on a five point Likert scale (1 –strongly disagree, 2-moderately disagree, 3-Neither Agree or disagree, 4 –moderately agree, 5-strongly agree). The total scores of answering the questions was 15-75 which classified into three categories: Total satisfaction (57-75) (over 75%), partial satisfaction (37-56) (between 50-75%) and low satisfaction (score less than 37) (less than 50%).

**Tool V: Tylor anxiety scale (Arabic version) (Taylor, 1953):** It had been developed by Tylor and translated & validated by Mostafa Fahmi &Mohamed Ahmed, 2010. It consists of fifty items within the sort of two points Likert scale ranging as 1= yes, 0= No . The total score is 0-50 which classified into five categories; 0-16 indicated no anxiety, 17-20 indicated mild anxiety, 21-26 indicated moderate anxiety, 27-29 indicated severe anxiety and 30-50 indicated very severe anxiety.

**Tool VI: Perceived Stress Scale (PSS) (State of New Hampshire Employee Assistance Program, 2019):** It is a classic stress assessment tool. It included 10 questions and interviewee
answered by 0 - never 1 - almost never 2 - sometimes 3 fairly often 4 - very often. Total score on the PSS ranged from 0 to 40 with a higher scores indicate higher perceived stress and lower scores indicate lower perceived stress. Scores ranging from 0-13 would be considered low stress, scores ranging from 14-26 would be considered moderate stress and scores ranging from 27-40 would be considered high perceived stress.

Validity of the tools:

The validity of the tools was ensured by a group of subject experts, medical and nursing staff, who reviewed the tools for accuracy. Furthermore, they were asked to judge the comprehensiveness and clarity of the items. Consideration was given to suggestions and adjustments.

Reliability of the tools:

Test–retest reliability was done by the researchers for testing the internal consistency of the tools by administering the same tools to the same subjects under similar conditions on two or more occasions. Scores from repeated testing have been compared. Study tools revealed reliable at 0.81 for Tool (I), at 0.75 for Tool (II), at 0.93 for Tool (III), at 0.727 for Tool (IV), at 0.739 for Tool (V), at 0.862 for Tool (VI).

Ethical Considerations:

A required approval from study setting was obtained after issuing an official letter from the Dean of college of Nursing, Menoufia University. An informed consent was obtained from the women to take part in the study after the aim of the study was clearly stated to them. All women's rights have been guaranteed; the study is free from physical, social and psychological risks to the women. The confidentiality of obtaining personal data in addition to the privacy of the women was totally guaranteed. A summary of the intervention was provided to each woman before she volunteered to take part in the study and women were informed that they can withdraw from the study at any time.

Pilot Study

A pilot study was conducted prior to data collection; it was conducted on 10% of the total sample (8 women). It was conducted to calculate the time required to complete the tools and also to verify the clarity, applicability and appropriateness of the tools. According to the findings of the pilot study, the necessary adjustments were made.

Field work

The field work was carried out in the period from the beginning of September 2019 to the end of February 2020. The researchers collected the data during the morning and 2 days per week. The researchers introduced themselves to the medical and nursing staff members in the previously mentioned setting. The nature and the aim of the study were clearly explained. The implementation of the study passed into four phases (interviewing and data collection phase, planning
phase, intervention phase: Application of nursing counseling guided by BETTER model, and evaluation phase.

Interviewing and data collection phase: Women attending the outpatient clinic, the oncology institute, Menoufia University meet the inclusion criteria are recruited by researchers to collect data following informed consent. According to the data collected, women experienced sexual and psychological problems associated with the diagnosis and treatment of breast cancer were identified.

Planning Phase:

General objective: improvement of women’s sexuality, marital satisfaction and psychological status of women after application of nursing counseling guided by BETTER model.

At this phase the researchers determine learning contents of the nursing intervention. Appropriate teaching methods were selected such as discussion, role-playing, demonstration and use of simple Arabic language. Educational media such as laptops, videos, pictures and written materials (booklet) are prepared and provided as a mechanism for providing information and facilitating discussion. The researchers also scheduled the hours and frequency of counseling sessions for all selected women to ensure compliance with the selected interventions.

The intervention phase: It included “Application of Nursing Counseling guided by BETTER Model.

The counseling sessions were conducted at study setting. During this phase, the individual counseling session was given to women. The researchers ensured that the meeting environment was comfortable. A Four counseling sessions were done following BETTER counseling model stages. One session per week and the session lasting 2 hrs. (Quinn and Happell, 2012).

Stage One: Bring up

During this stage, the researchers bring up the topic of sexuality. While some women may feel uncomfortable discussing this topic, bringing the topic up ensures the women knows the researchers is willing to discuss this area, if they ever do want to express their concerns.

Stage Two: Explain

The researchers inform and explain to women that sexuality is a crucial and meaningful aspect of their lives through open discussion with the women. This helps the women to feel less embarrassed and also informs her that sexual problems may have an impact on woman psychological status and marital satisfaction.

Stage Three: Tell

During this stage, The researchers inform women that if intervention was not effective in resolving her problem, then a referral will be made to another professional who can address the problem.
Stage Four: Time

The researchers assure that previously selected scheduled time is suitable for women. If not, the session can bring it up at a later point.

Stage Five: Educate

At this stage the researchers provide education to the women consistent with her needs about the followings:

- Female reproductive system and the components of the sexual response cycle.
- Breast cancer treatment, its potential side effects on the performance of sexual activity.
- Measures to enhance sexuality as exercises for improving sexual fitness (such as Kegel exercise, sensation focus exercise) and various technical positions during sexual intercourse and using lubricants.
- Measures for managing bad body image perception as wearing attractive clothes, reconstruction of breast makeup and special lingerie.
- Measures for managing and reducing anxiety and stress as using relaxation techniques including breathing exercise, guided imagery and recreation. Also, provide education regarding regular exercise/walking for at least 30 minutes / day and diet therapy as high fruit diet.
- Measures for management of breast cancer treatment side effects as nausea, vomiting, diarrhea, dyspnea, gingivitis including the following: physical activity; performing body range of motion exercise, breathing exercise, diet therapy (high fiber diet, low-fat diet, high vegetables/fruit diet) and mouth care.

Stage Six: Record

At the end of each session the researchers record data obtained and intervention giving to each woman.

![Figure](image-url) Mick, J., Hughes, M. & Cohen, M. (2004). Using the BETTER model to assess sexuality. Clinical Journal of Oncology Nursing, 8(1), 84–86
The evaluation phase: Post-intervention data collection occurred at the end of the study period. All five tools (female sexual function index (FSDI), body image scale, marital satisfaction scale, Tylor anxiety scale and perceived Stress Scale) were measured after application of nursing counseling guided by BETTER model.

Statistical Analysis

The collected data were organized, tabulated and statistically analyzed using SPSS software, version 22. For quantitative data, comparison between pre and post intervention was done using Chi-square test ($\chi^2$) and Fisher's Exact Test. Significance was adopted at $p \leq 0.05$.

Results

Table (1) Displayed Sociodemographic Data of study participants. The table showed that, the higher percent of study participants, their age ranged from 30 – 34 years. Nearly half of study participants (43.7%) had a secondary level of education, 57.5% of total study participants were house wife and more than half of the study participants (59.8%) hadn't enough income.

Table (2) shows that a high percent of study participants (44.8%) were in stage 2 of breast cancer. Regarding breast cancer treatment, the high percent (34.5%) of study participants were treated with mastectomy combined with chemotherapy plus hormonal therapy, meanwhile the lower percent of study participants (5.7%) treated with mastectomy combined with radiotherapy.

Figure (3) displays that 51.72% of study participants undergone partial mastectomy meanwhile 48.27% of study participants undergone total mastectomy.

Table (3) shows the sexual dysfunction among the study participants pre and post application of nursing counseling guided by BETTER model. As evident from the table, there was a statistically signification improvement in all domain of sexual function except orgasm as 36.8%, 39.1%,44.8%,57.5% and 55.2% respectively of study participants had decrease desire , decrease arousal ,decrease lubrication , sexual dissatisfaction and dyspareunia post intervention compared to 57.5% , 56.3% , 65.5%,60.9%,74.7% and 82.75% respectively of study participants pre intervention.

Table (4) Displayed sexual functioning pre and post application of nursing counseling guided by BETTER model among study participants. It showed statistically significant improvement in sexual functioning post intervention as 23.0% of study participants become sexually active post intervention compared to only 12.6% of study participants pre intervention mean while 31% of study participants has sexual dysfunction post.
intervention compared to 57.5% of study participants pre intervention.

Table (5) shows psychological status among study participants pre and post application of nursing counseling guided by BETTER model. It revealed a statistically significant difference and improvement in study participants' psychological status as 46.0% of study participants had mild level of anxiety post intervention compared to 24.2% of them pre intervention also 51.7% of study participants had low level of stress after intervention compared to 26.4% of them pre intervention.

Figure (4) showed the effect of application of nursing counseling guided by BETTER model on study participants' marital satisfaction. It showed that there was an improvement in the degree of study participant’s marital satisfaction after intervention as 25.30% of the study participants reported low level of marital satisfaction post intervention compared to 48.30% of the study participants pre intervention.

Table (6) revealed body image scores pre and post intervention among the study participant. It illustrated a statistically significant difference between body image scale level before and after application of nursing counseling guided by BETTER model. The higher percentage of body image was bad (44.8%) before the intervention and improved to good (50.6%) after the intervention.

Table 1: Sociodemographic Data of study participants(N=87)

<table>
<thead>
<tr>
<th>Variables</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
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<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 – 29</td>
<td>19</td>
<td>21.8</td>
</tr>
<tr>
<td>30 – 34</td>
<td>31</td>
<td>35.6</td>
</tr>
<tr>
<td>35 – 39</td>
<td>27</td>
<td>31.0</td>
</tr>
<tr>
<td>40 – 45</td>
<td>10</td>
<td>11.5</td>
</tr>
<tr>
<td>Residence</td>
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<tr>
<td>Urban</td>
<td>28</td>
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<tr>
<td>Rural</td>
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<td>67.8</td>
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<td>Educational level</td>
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<td>Read and write</td>
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<td>Bachelor degree</td>
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<td>4.6</td>
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<tr>
<td>Working</td>
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<td>Housewife</td>
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</tr>
<tr>
<td>Income</td>
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<td>Enough</td>
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<tr>
<td>Not enough</td>
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Table 2: Stages and treatment of breast cancer among study participants (N=87)

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<tr>
<td>Stage 1</td>
<td>36</td>
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<td>Stage 2</td>
<td>39</td>
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<td>Stage 3</td>
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<td>13.8</td>
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<td>Treatment of breast cancer</td>
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<tr>
<td>Mastectomy Alone</td>
<td>6</td>
<td>6.9</td>
</tr>
<tr>
<td>Mastectomy + radio therapy</td>
<td>5</td>
<td>5.7</td>
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<tr>
<td>Mastectomy + chemotherapy</td>
<td>24</td>
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<tr>
<td>Mastectomy + hormonal therapy</td>
<td>7</td>
<td>8.0</td>
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<tr>
<td>Mastectomy + chemotherapy+ hormonal therapy</td>
<td>30</td>
<td>34.5</td>
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<tr>
<td>Mastectomy +chemotherapy +radiotherapy+ hormonal therapy</td>
<td>15</td>
<td>17.2</td>
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Figure 3: Types of mastectomy that study participants undergone (N=87)

Table 3: Sexual Dysfunction Items pre and post intervention among study participants (N=87)

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<tr>
<th>Variable</th>
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<th>Post intervention</th>
<th>Fisher's Exact Test</th>
<th>P –value</th>
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<tr>
<td></td>
<td>No</td>
<td>%</td>
<td>No</td>
<td>%</td>
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<tr>
<td>Decrease desire</td>
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<td>57.5%</td>
<td>32</td>
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<tr>
<td>Decrease arousal</td>
<td>49</td>
<td>56.3%</td>
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<td>39.1%</td>
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<td>Decrease lubrication</td>
<td>57</td>
<td>65.5%</td>
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<td>44.8%</td>
</tr>
<tr>
<td>Orgasm failure</td>
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<td>60.9%</td>
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<tr>
<td>Sexual dissatisfaction</td>
<td>65</td>
<td>74.7%</td>
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<tr>
<td>Dyspareunia</td>
<td>72</td>
<td>82.75%</td>
<td>48</td>
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Table 4: Sexual Functioning Score pre and post intervention among study participants (N=87)

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<td></td>
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<td>%</td>
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<tr>
<td>Sexually active</td>
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<td>12.6%</td>
<td>20</td>
<td>23.0%</td>
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<tr>
<td>Average sexual function</td>
<td>26</td>
<td>29.9%</td>
<td>40</td>
<td>46.0%</td>
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<tr>
<td>Sexual dysfunction</td>
<td>50</td>
<td>57.5%</td>
<td>27</td>
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Table 5: Psychological status pre and post intervention among study participants (N=87)

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<tr>
<td></td>
<td>No</td>
<td>%</td>
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<td>%</td>
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<td>Mild</td>
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<td>24.2%</td>
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<tr>
<td>Moderate</td>
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<td>Severe</td>
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<td>55.2%</td>
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<tr>
<td>High stress</td>
<td>16</td>
<td>18.4%</td>
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Figure 4: Marital satisfaction among study participants pre and post intervention (N=87)
Table 6: View of study participants regarding their body image pre and post intervention (N=87)

<table>
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<th>P –value</th>
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<td>%</td>
<td>No</td>
<td>%</td>
</tr>
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<td>Bad</td>
<td>39</td>
<td>44.8%</td>
<td>18</td>
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<td>Considerable</td>
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<td>27.6%</td>
<td>25</td>
<td>28.7%</td>
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<tr>
<td>Good</td>
<td>24</td>
<td>27.6%</td>
<td>44</td>
<td>50.6%</td>
</tr>
</tbody>
</table>

Discussion

Breast cancer and its treatments such as mastectomy, chemotherapy, radiotherapy, hormonal therapy cause many side effects such as scar, problems with body perception and sexual problems. It also, lead to significant emotional distress as sadness or depression, issues related to personal appearance, stigma, and negative effect on personal relationships, intimacy, all of which reduce the quality of life (Olcer, 2019). So, this study aimed at evaluating the effect of nursing counseling guided by BETTER model on sexuality, marital satisfaction and psychological status of breast cancer women.

Regarding demographic data of study participants, the current study results showed that the age of study participants ranged from 18-45 years, more than half of study participants were housewives and only 23% of them had university education. This finding agreed with Erdogan, (2019), who studied "analysis of sexual life quality and marital satisfaction in women with breast cancer" reported that women selected for participating in the study were older than 18 years of age, nearly half 46% of them were housewives and only 29% had university education.

Regarding breast cancer treatment, the high percent of study participants were treated with mastectomy combined with chemotherapy plus hormonal therapy, while the lower percent of study participants treated with mastectomy combined with radiotherapy. This finding agreed with Rock, et al., (2014), who studied "Dyadic influence of hope and optimism on patient marital satisfaction among couples with advanced breast cancer". The study revealed that the majority of patients (95 %) were receiving both hormonal therapy and chemotherapy. The other 5 % were receiving either hormonal therapy, chemotherapy, or radiation therapy.

Regarding sexual dysfunction pre and post intervention, the current study findings showed that the majority of study participants had decrease desire, decrease arousal, decrease lubrication,
sexual dissatisfaction and dyspareunia pre intervention. This finding agreed with Shankar, et al., (2017), who studied "Sexual dysfunction in females after cancer treatment: an unresolved Issue" and reported that up to 50% of women treated for cancer have sexual dysfunction. Similar findings were reported by the following studies. The first; a study by Kowalczyk et al., (2016) about "Predictors of sexual function in women after treatment for breast cancer" concluded that patients who had undergone breast surgery, has a negative impact on female sexual function. The second; a study by Champion, et al., (2014), who conducted a comparative study on "Younger and older breast cancer survivors and age-matched controls on the specific and overall quality of life domains". The study revealed that that women with breast cancer often experience sexual problems and that breast cancer has an adverse effect on sexual life. They added that women with breast cancer had apoorer sexual function than healthy women. This agreement assures that breast cancer treatment has actual side effects concerning sexuality of breast cancer women so, it is of great importance to draw attention to this issue.

The current study findings showed significant improvement in sexual functioning post counseling, which indicated the effectiveness of the intervention. This current study findings were matched with Fatehi, et al. (2019), who studied, a randomized controlled trial named "The effects of psychosexual counseling on sexual quality of life and function in Iranian breast cancer survivors" and revealed improvement in all areas of sexual function after psychosexual counseling. These findings also agreed with Faghami and Ghaffari (2016), who studied " Effects of sexual rehabilitation using the PLISSIT model on quality of sexual life and sexual functioning in post-mastectomy breast cancer survivors" and reported that the scores of sexual function showed increasing in all dimensions of female sexual function index (FSFI) after the intervention.

Similar findings were reported by Karakas and Aslan, (2019), who studied " Sexual counseling in women with sexual dysfunction: use of the BETTER model" and reported that the sexual counseling given in accordance with the BETTER model was found to be effective in improvement of sexual function and sexual satisfaction. Another study, conducted by Young, et al., (2011), who studied, "The effect of a sexual life reframing program on marital intimacy, body image, and sexual function among breast cancer survivors (BCS)" showed that improvement in sexual satisfaction after 6 weeks of counseling intervention. This agreement indicates the positive effect of nursing counseling using better model on sexual functioning.

Regarding marital satisfaction pre and post intervention. The current study findings showed that nearly half of the study participants reported low
level of marital satisfaction before the intervention as the dynamics of spousal relationships can be strained and changed with a cancer diagnosis and therapy. This result was supported by Erdogan, (2019), who studied "analysis of sexual life quality and marital satisfaction in women with breast cancer" revealed low mean score for the breast cancer patients’ marital satisfaction. They added that this may have resulted from adverse changes in the patients’ quality of life due to breast cancer; thus, breast cancer patients need to receive support. In addition, Favez, et al., (2016), reported that lower couple satisfaction were observed by women because the psychological distress reported in the post-surgery period in a study named "Distress and body image disturbances in women with breast cancer in the immediate postsurgical period: The influence of attachment insecurity".

Enhancement in marital satisfaction after application of nursing counseling guided by BETTER model was observed in the current study. The improvement may be due to the psychological support and information gained through counseling. In the same line a study conducted by Favez, et al., (2017), who studied "Attachment and couple satisfaction as predictors of expressed emotion in women facing breast cancer and their partners in the immediate post surgery period" and reported that practitioners should pay attention to the couple relationship in breast cancer in order to improve couple satisfaction.

Regarding psychological status of women pre and post intervention, The results of the current study showed that most women had a moderate level of anxiety and stress before intervention as the diagnosis of breast cancer is a distressing event affecting psychological functioning of a study participant. This finding agreed with Paterson, et al., (2016), who studied "Body image in younger breast cancer survivors", reported that survivors of breast cancer can experience negative psychological status. They added that it is important to identify protective factors that may lower the risk of this distress. This is ascertained by a study about "Psychological resilience of women after breast cancer surgery: a cross-sectional study of associated influencing factors" by Huang, et al., (2019), which showed that psychological resilience of women after breast cancer surgery is relatively low.

Enhancement of psychological status (Anxiety – stress) after application of nursing counseling guided by BETTER model was observed in the current study. These findings were similar to findings of a study conducted by Todorov, et al., (2019), who reported that psychosocial interventions positively address psychological distress concerns of women with breast cancer in their study about "Self compassion and hope in the context of body image disturbance and distress in breast cancer survivors". This agreement indicates the positive effect of nursing
counseling using better model on marital satisfaction.

The results of the current study showed that most women had a bad view regarding their body image before intervention. This may be because psychological distress is a predisposing factor for body image disturbance perception. In the same line a study about "Body image of women with breast cancer after mastectomy: a qualitative research" suggested that mastectomy as a surgical treatment for breast cancer may negatively affect a woman’s body image and her self-image. In addition to Brandao, et al. (2017), who studied "Psychological adjustment after breast cancer: a systematic review of longitudinal studies" and concluded that body image disturbance is commonly experienced at some time during the cancer trajectory by the majority of women diagnosed with breast cancer. (Lam WWT, et al., 2009).

The current study results showed statistically significant difference between body image scale level before and after application of nursing counseling guided by BETTER model. This is ascertained by a study conducted by Todorov et al., (2019), who reported that psychosocial interventions positively address body image concerns of women with breast cancer in their study about "Self compassion and hope in the context of body image disturbance and distress in breast cancer survivors". Also, Begovic-Juhant et al. (2012), studied "Impact of body image on depression and quality of life among women with breast cancer" and reported that multidisciplinary health care services relevant to physical attractiveness and femininity of survivors of breast cancer may foster the positive body image perception and reduce women depression ". This agreement indicates the positive effect of nursing counseling using better model on body image.

Finally; The results of the current study showed that women who are subjected to nursing counseling guided by BETTER model had an improvement in sexuality, marital satisfaction and psychological state after the intervention than before. This improvement in sexual function, marital satisfaction and psychological state may be due to information, support and guidance gained through nursing intervention guided by BETTER counseling model.

Conclusion

The study concluded that applying nursing intervention guided by BETTER counseling model to women with breast cancer was effective in improving sexual functioning, enhancement of marital satisfaction and improvement of the psychological status of the women which indicated that the study results support the three research hypotheses. No (1) which was: Breast cancer women who are subjected to nursing counseling guided by BETTER model will have an improvement in sexuality after the intervention than before. No
which was: Breast cancer women who are subjected to nursing counseling guided by BETTER model will have an enhanced level of marital satisfaction after the intervention than before. No (3) which was: Breast cancer women who are subjected to nursing counseling guided by BETTER model will have an improvement in psychological status after the intervention than before.

**Recommendation:**

- Adopt BETTER sexual model of counseling for management of sexual dysfunction and psychological problems in breast cancer institutions.
- Ongoing education for maternity nurses on the impact of breast cancer treatment on women's sexuality and psychological status, as well as strategies to address women's sexual and psychological problems.
- Implementing in-service counseling programs for breast cancer women to manage their sexual and psychological problems.
- Replication of the study with large sample size to further settings.

**References**


survivors. Psycho-oncology, 28(10), 2025-2032.
