

Influence of BRACA Usage on Self Improvement of Breast Cancer Patient by Post Mastectomy

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Abstract

Background: Breast cancer is an abnormal tissue, rapid growth and uncontrolled cells found in breast tissue. This body image disorder is thought to be related to the occurrence of post-mastectomy depression.

Objectives: To know the influence between the use of BRACA with self-image improvement in patients with post-mastectomy breast cancer in Dr. Soetomo General Hospital, Surabaya.

Method: The subject was a patient who has undergone a mastectomy on one side of the breast. The study design was a quasi experimental type of pre-post control design by sorting the sample and dividing it into 2 groups where 1 control group (not using BRACA) and another group in intervention using BRACA. Statistical analysis using t-test.

Result: There was an increase in the self-image of respondents who intervened with BRACA's use of pre and post use by showing a significant effect between BRACA use and self-improvement of post-mastectomy breast cancer subjects in Dr. Soetomo General Hospital, Surabaya ($p = 0.000$).

Conclusion: The major cases occur on the right side of the breast with the duration of surgery more than one month. BRACA can be used as an alternative to improve the patient's self image after mastectomy as it increases the self-image of the patients.

Keywords: BRACA, Self-image, Breast Cancer

Introduction

In Indonesia, breast cancer known as the most common cancer experienced by women that can lead to death^{1,2}, and can be evaluated through common sign such as menstrual disorders³. Breast cancer has a physical and psychological impact on the individual. Physically there is a change due to the disease process and treatment. Changes that occur due to disease processes include changes in shape, size, or texture of the breast due to an enlarged tumor mass. Changes that can occur in the form of partial or total loss of the breast and the scar due to surgery⁴.

Chemotherapy, Intraoperative radiotherapy, and oncoplastic are the techniques to treat early stage breast cancer^{5,6}. For further stage, partial or total loss of the breast or the effects of chemotherapy may result in negative psycho-social consequences including one of the problems in the woman's self-image^{7,8}. The study of 112 breast cancer patients showed 33.00% of women felt different from others after surgery, 12.00% felt others were aware they were undergoing treatment and made 25.00% of them worried and 50.00% of patients were disturbed by their body changes after surgery⁹. The distortion of self-image in the mastectomy patient is worse than that of the amputated patient¹⁰. Research on patients with mastectomy that acts to cover up the loss of self-image by wearing a wide headscarf, wearing a long jacket or wearing a loose shirt but the respondent declared reluctant to use a bra for reasons the wound is still not dry, uncomfortable or feeling asymmetrical on one of his limbs.

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The literature study of 45 research articles on breast cancer patient’s patient is proposed by various coping strategies used by women who have breast cancer to face both physical and psychological challenges ^{11,12}. Some types of coping strategies used are effective/adaptive coping (such as active problem solving, and acceptance of disease/diagnosis) to maladaptive coping (such as self-blame and denial). Psychological distress such as poor self-image becomes a predisposing factor to chronic depression, eating disorders, use of illicit substances and other attitude ¹³. Several studies have found an association between coping with the self-image of post-mastectomy patients ¹⁴. Based on the above phenomenon researchers interested in researching and creating a tool that we named “BRACA” which can reduce the self-image disturbance experienced by patients with breast cancer primarily post-mastectomy patients or after removal of breast.

Methods

The subjects were breast cancer patients who had performed radical mastectomy action in Dr. Soetomo General Hospital, Surabaya. The inclusion criteria were post-mastectomy patients either breasts (either right or left), age between 30-60 years old, minimum primary school (SD) to Bachelor (S1) education, the patient was confirmed for control again within a minimum of 1 week.

The study design used quasy-experimental type pre post control design by sorting samples on entry into the room, dividing it into 2 groups where 1 group as control (not using “BRACA”) and other group intervened using “BRACA”. The sampling technique used purposive sampling. The location of this research was conducted in Dr. Soetomo General Hospital, Surabaya in March to May 2017. This research has obtained the approval of ethical clearance from the ethics committee of Dr. Soetomo Teaching Hospital, Surabaya In- donesia.

Subjects will be retrieved data of anamnesis in the form of demographic data such as age, type of work,

education, marital status, religion, and insurance in health financing, while the collection of clinical data can be in the side of the mastectomy breast, postoperative length, and use of braces or not. BRACA or Bodyfit Range Cancer is a tool created by researchers based on cotton that can absorb sweat. Inside the BRACA there are 2 versatile pockets that can be filled with foam pads or can also be filled with jelly that can be used as a cold compress (Figure 1). Measurement of self-image on the subject can be done with self-image questionnaire as many as 15 questions with yes or no answer. Statistical analysis used the t-test with significance value $\alpha = 0.05$ with SPSS version 11.5 for Windows (SPSS, Inc., Chicago, IL). While to know the degree of the power relationship between variables measured by the correlation coefficient (r).

Result

Demographic and Clinical Data Subject Research

The majority of subjects aged was 35-50 years (53.20%), worked as private/entrepreneurs (61.70%), junior high school (76.61%), married (83.00%), Moslem (87.00%), followed more than 1 social (63.80%) and financing by using National Health Organization (BPJS) (83.00%). The majority of subjects in the right side of the breast mastectomy (80.90%) and duration of surgery for more than one month (100.00%).

Correlation Use of BRACA Pre and Post-Test with Self Image

The pre-test showed no subjects with high self-image in the treatment group by using BRACA and in the control group was obtained more than a half had high self-image (64.00%). In the post-test, there were no subjects with a low self-image in the treatment group using BRACA and in the control group, all had high self-image (100.00%). So there was a strong positive relationship between BRACA usage with self-image enhancement (p = 0.000).

Table 1. Correlation of BRACA Pre and Post-Test on Self Image

Self-image	Pre-Test		Post-Test		p-value
	With BRACA	Without BRACA	With BRACA	Without BRACA	
High	0.00	64.00	86.00	25.00	0.000
Medium	60.00	36.00	14.00	0.00	
Low	40.00	0.00	0.00	0.00	

BRACA=Bodyfit Range Cancer

Discussion

The result of the statistical test shows that there is a strong positive relationship between BRACA usage with self-image improvement in post-mastectomy breast cancer patient. In the result of the post-test questionnaire also showed that there were no subjects with a low self-image in the treatment group using BRACA whereas previously in pre-test was obtained 40.00% subjects had a low self-image.

Women who suffer from breast cancer usually experience physical and psychological changes that can affect the appearance and activity of women in their daily life, because of cancer associated with physical problems of pain, misery, death and moderate cost of psychosocial problems that are anxious, body image and loss¹⁵. Body image changes almost in all patients with breast cancer, especially in patients who do the mastectomy. If these changes are not integrated with a healthy self-concept then the quality of life will be decreased drastically even will threaten the patient's safety. In general, the factors that affect women have body image disorder according to the body image distortion and body image dissatisfaction. Some factors may affect one's self-concept including personal factors that include: age, sex, education, occupation, economic status, lifestyle, and personality.

Then, of the 22 people included in the treatment group, 3 respondents still had an elementary education. Education also affects the self-concept and emotional maturity of a person. A person with higher education will better understand and understand about the disease he suffered (12). The higher a person's education is expected to have better self-concept and high self-image.

From the characteristics of marital status was obtained data by 20 people in the treatment group with BRACA is has a married status and only 2 people are widow status. Family support (especially the role of husband) is very influential on the condition of one's self-image. Use of BRACA in patients can improve the self-image of the patient, especially in front of her husband (12). The use of BRACA makes the breasts will look prominent and symmetrical so that patients will feel more confident in front of her husband.

The majority of 61.70% subjects had a private job type, the occupation may affect patient satisfaction with health services, because the working patient is a productive patient, usually more sensitive to the

circumstances around, with the patient's activity more likely to interact with the surrounding environment. When associated with pre-test and post-test results that increase can be explained as follows that with the use of BRACA then the breasts will look like a normal woman so that other patients will become more confident and self-actualization will be increased.

Conclusion

The majority of subjects in the mastectomy of the right side of the breast and the duration of surgery more than one month. There is an increase in self-image after BRACA use in patients who have been in mastectomy. Support is needed in the form of post-operative guidance counseling and involvement of support groups and families in order not to experience post-mastectomy depression.

Ethical clearance

This research involves participants in the process using a questionnaire that was accordant with the ethical research principle based on the regulation of research ethic regulation. The present study was carried out in accordance with the research principles. This study implemented the basic principle ethics of respect, beneficence, non-maleficence, and justice.

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References

1. Agrippina WRG, Widiyanti P, Yusuf H. Synthesis and Characterization of Bacterial Cellulose - *Garcinia mangostana* Extract as Anti Breast Cancer Biofilm Candidate. *J Biomimetics, Biomater Biomed Eng* [Internet]. 2017 Jan;30:76–85. Available from: <https://www.scientific.net/JBBBE.30.76>
2. Azza A, Susilo C, Efendi F. Supportive group therapy as a prediction of psychological adaptation of breast cancer patients undergoing chemotherapy. *Indian J Public Heal Res Dev* [Internet]. 2018;9(10):441. Available from: <http://www.indianjournals.com/ijor.aspx?target=ijor:ijphrd & volume=9 & issue=10 & article=084>

3. Harsetianingrum RA, Martiana T, Widjajati N. The risk factors analysis of menstrual disorders in women workers of shoes industry, Sidoarjo. *Malaysian J Med Heal Sci* [Internet]. 2019;15:26–9. Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074535564&partnerID=40&md5=59f1b0d95a7b65035d6573059b28c2c7>
4. Brunner S, Suddarth D. *Surgical medical nursing textbooks*. Jakarta: EGC; 2002.
5. Kolacinska A, Hodorowicz-Zaniewska D, Bocian A, Michalik D, Matkowski R, Kurylcio A, et al. Landscape of oncoplastic breast surgery across Poland. *Polish J Surg* [Internet]. 2017 Dec 30;89(6):14–9. Available from: <https://ppch.pl/gicid/01.3001.0010.6735>
6. Harris EER, Small W. Intraoperative Radiotherapy for Breast Cancer. *Front Oncol* [Internet]. 2017 Dec 22;7. Available from: <http://journal.frontiersin.org/article/10.3389/fonc.2017.00317/full>
7. Barcalow K. Oppositional defiant disorder: information for school nurses. *J Sch Nurs* [Internet]. 2006 Feb;22(1):9–16. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/16435925>
8. Helms RL, O’Hea EL, Corso M. Body image issues in women with breast cancer. *Psychol Health Med* [Internet]. 2008 May;13(3):313–25. Available from: <http://www.tandfonline.com/doi/abs/10.1080/13548500701405509>
9. Alicikus ZA, Gorken IB, Sen RC, Kentli S, Kinay M, Alanyali H, et al. Psychosexual and body image aspects of quality of life in Turkish breast cancer patients: a comparison of breast conserving treatment and mastectomy. *Tumori* [Internet]. 95(2):212–8. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/19579868>
10. Akkaya N, Atalay NŞ, Selcuk ST, Akkaya S, Ardiç F. Impact of body image on quality of life and mood in mastectomized patients and amputees in Turkey. *Asian Pac J Cancer Prev* [Internet]. 2011;12(10):2669–73. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/22320972>
11. Al-Azri M, Al-Awisi H, Al-Moundhri M. Coping With a Diagnosis of Breast Cancer-Literature Review and Implications for Developing Countries. *Breast J* [Internet]. 2009 Nov;15(6):615–22. Available from: <http://doi.wiley.com/10.1111/j.1524-4741.2009.00812.x>
12. Afiyati Y, Keliat B, Ruwaida I, Rachmawati I, Agustini N. Improvement the Quality of Life of Cancer Patients With the Implementation of Psychosexual Health Care. *JNERS* [Internet]. 2016 Apr 1;11(1):7. Available from: <http://e-journal.unair.ac.id/index.php/JNERS/article/view/1904>
13. Iturbe J, Zwenger A, Leone JP, Verdera PP, Vallejo C, Romero A, et al. Treatment of Early Breast Cancer, a Long-term Follow-up Study: The GOCS Experience. *Breast J* [Internet]. 2011 Nov 1;17(6):630–7. Available from: <http://cebp.aacrjournals.org/cgi/doi/10.1158/1055-9965.EPI-13-0141>
14. Tasripiyah A. Correlation Relationship And Social Support With Body Image Post Mastektomic Breast Cancer Patients In Oncological Surgical Policy Of RSHS Bandung. *Students e-Journal* [Internet]. 2016;1(2). Available from: <http://journal.unpad.ac.id/ejournal/article/view/767>
15. Rosnani R. Coping Mechanism Of Career Women With Breast Cancer. *J Ners* [Internet]. 2017 Jun 5;12(1):81. Available from: <http://e-journal.unair.ac.id/index.php/JNERS/article/view/3698>