MINH
MALAHAYATI INTERNATIONAL JOURNAL OF NURSING AND HEALTH SCIENCE
ISSN 2620-9152 (Print)
ISSN 2621-4083 (Online)
DOI: 10.33024
Nomor: 79/E/KPT/2023

ARTICLE INFORMATION
Received: February, 06, 2023
Revised: June, 22, 2023
Available online: June, 25, 2023
at : http://ejurnalmalahayati.ac.id/index.php/nursing/index

# Self-efficacy in patients with breast cancer: A health belief model approach

**Mutia Nadra Maulida*, Putri Widita Muharyani, Antarini Idriansari, Karolin Adhisty**

Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Sriwijaya
Corresponding author: *E-mail: mutianadra@fk.unsri.ac.id

## Abstract

**Background:** Breast cancer is a disturbance in the growth of normal breast cells characterized by abnormal cells arising from normal cells that can infiltrate lymphatic tissue and blood vessels. This will have a major impact on patients and their families, both physically, psychologically, economically and in other aspects of life which certainly affect the patient's self-efficacy about their own ability to carry out healthy behaviors that have an impact on their treatment. One of the support efforts that can be given is the intensification of activities through the Health Belief Model.
**Purpose:** To determine an effect of Self-efficacy in patients with breast cancer: A health belief model approach
**Method:** The design used in this study was a quasi-experimental design with one group pretest posttest. Determination of the sample by purposive sampling method as many as 60 participants. Data was collected using a self-efficacy questionnaire.
**Results:** The Marginal homogeneity test obtained a p-value = 0.001, which means that there is an effect of giving interventions with the Health Belief Model on self-efficacy in breast cancer patients.
**Conclusion:** Intervention with the Health Belief Model approach can increase the self-efficacy of breast cancer patients who are undergoing treatment.

**Keywords: Patient; Breast cancer; Health Belief Model; Self Efficacy.**

## INTRODUCTION

Cancer is one of the deadliest non-communicable diseases and chronic diseases in the world. According to United States statistics, cancer accounts for about 23% of the total number of deaths in the country and is the second deadliest disease after heart disease. Breast cancer is cancer that occurs in the mammary glands due to cell malignancy or uncontrolled cell growth from glandular cells and their ducts. Normally, cells will grow according to the body's needs, but it is different with breast cancer, new cells whose number exceeds the body's needs (Harmer, 2011; Miret, Pontillo, Zárate, de Pisarev, Cocca, & Randi, 2019; Ferraro, Piccolo, Misso, Maione, Montesarchio, Caraglia, & Irace, 2020).

Breast cancer is the most common cancer in women worldwide, accounting for 25.4% of the total number of new cases diagnosed in 2018 (World Cancer Research Fund International, 2019). There were 231,840 new cases of breast cancer (29%) and 40,290 deaths (15%) (American Cancer Society, 2015). Indonesia's 2017 health profile states that breast cancer and cervical cancer are the types of cancer with the highest prevalence in women in Indonesia, where until 2017 12,023 breast tumors and 3,079 suspected breast cancer had been found (Ministry of Health of the Republic of Indonesia, 2018). As many as 1,980 women in South Sumatra were

DOI: https://doi.org/10.33024/minh.v6i1.9232

detected with cervical and breast cancer (Saputra, 2018).

Patients with breast cancer need long-term care. This is not easy for cancer patients to live with, because they experience psychosocial impacts from the time they are diagnosed with cancer until the patient undergoes treatment. These impacts include changes in roles and responsibilities, namely patients must try to remain cooperative in undergoing treatment, trying to find information related to the disease they are suffering from, and trying to find emotional support related to the situation they are experiencing (Fallowfield, 2008; Lisnawati, Cadrana, & Yuanita, 2010; Gabriel & Mayers, 2019).

To go through all of these things, the patient must have self-efficacy or belief in his own abilities that he is able to do something or overcome a situation that he will be successful in doing so, in this case, the treatment he is undergoing. As Bandura argues that self-efficacy is people's beliefs about their ability to produce levels of performance and master situations that affect their lives, then self-efficacy will also determine how people feel, think, motivate themselves and behave (Liang, Wu, Kuo, & Lu, 2015).

Nurses as health workers who play a role in the process of breast cancer treatment can provide support to patients so that patients have positive confidence or self-efficacy to undergo treatment. Based on the results of the preliminary study, it was found that breast cancer patients who were hospitalized or who had undergone an outpatient treatment program still had low self-efficacy regarding their belief in recovery and undergoing a long-term treatment program, so an intervention was needed, namely the Health Belief Model. to patients and is expected to help patients to have a strong belief in recovery and remain cooperative in undergoing treatment. This health belief model is a model used to describe individual beliefs in healthy living behaviors, so that individuals will engage in healthy behaviors, these healthy behaviors can be in the form of preventive behavior or the use of health facilities. This health belief model is often used to predict preventive health behavior as well as behavioral responses to the treatment of patients with acute and chronic diseases (Khorsandi, Khakbazan, Mahmoodzadeh, Haghani, Farnam, & Damghanian, 2020).

## RESEARCH METHOD

The research design used in this study was a quasi-experimental study with a one group pretest – posttest design approach. The study population was breast cancer patients, amounting to 261 participants. Determination of the sample by purposive sampling method obtained as many as 60 participants. The intervention provided is the Health Belief Model approach which consists of 6 dimensions, namely Perceived susceptibility, Perceived severity, Perceived benefits, Perceived barriers, Health motivation and Cues to action (Creswell & Creswell, 2017).

Data collection was carried out using a questionnaire to obtain primary data directly from breast cancer patients using a self-efficacy questionnaire consisting of 8 questions. Bivariate analysis was carried out using the Marginal Homogeneity test to determine whether there is an effect of giving interventions using the Health Belief Model approach to the self-efficacy of breast cancer patients (Polit & Beck, 2012).

This research has received ethical Approval from the medical and health research ethics committee of the Faculty of Medicine, Sriwijaya University with number: 036-2023.

**Mutia Nadra Maulida*, Putri Widita Muharyani, Antarini Idriansari, Karolin Adhisty**

Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Sriwijaya
Corresponding author: *E-mail: mutianadra@fk.unsri.ac.id

DOI: https://doi.org/10.33024/minh.v6i1.9232

## RESEARCH RESULTS

**Table 1. Demographic Characteristic of Participants (N=60)**

| Variables | Results |
|---|---|
| **Age (n/%)(Mean±SD)(Range)(Year)** | (45.08±8.954)(20-57) |
| 19-44 Years | 24/40 |
| 45-59 Years | 36/60 |
| **Education Levels (n/%)** | |
| Basic | 4/6.7 |
| Intermediate | 48/80 |
| High | 8/13.3 |
| **Employment (n/%)** | |
| Employed | 38/63.3 |
| Unemployed | 22/36.7 |
| **Cancer Diagnosis (n/%)** | |
| < 1 Years | 8/13.3 |
| 1-5 Years | 42/70 |
| > 5 Years | 10/16.7 |
| **Cancer Stage (n/%)** | |
| Stage 1 | 15/25 |
| Stage 2 | 32/53.3 |
| Stage 3 | 13/21.7 |
| Stage 4 | 0/0 |
| **Treatment History (n/%)** | |
| Chemotherapy | 52/86.7 |
| Hormonal therapy | 3/5 |
| Target therapy | 5/8.3 |
| **History of Mastectomy (n/%)** | |
| Yes | 56/93.3 |
| No | 4/6.7 |
| **Length of Treatment (n/%)** | |
| < 1 Years | 8/13.3 |
| 1-5 Years | 42/70 |
| > 5 Years | 10/16.7 |
| **Self-Efficacy Pre-Intervention (n/%)** | 32/53.3 |

**Mutia Nadra Maulida*, Putri Widita Muharyani, Antarini Idriansari, Karolin Adhisty**

Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Sriwijaya
Corresponding author: *E-mail: mutianadra@fk.unsri.ac.id

DOI: https://doi.org/10.33024/minh.v6i1.9232

| | |
|---|---|
| Low | 28/46.7 |
| Fair | 0/0 |
| High | |
| **Self Efficacy Post-Intervention (n/%)** | |
| Low | 3/5 |
| Fair | 12/20 |
| High | 45/75 |

Based on the table above, it can be seen that the mean and standard deviation of the participants' ages were (45.08 ± 8.954) with an age range between 20 to 57 years, the majority with secondary education were 80%, employed 63.3%, 70% had cancer 1-5 years, stage 2 cancer was 53.3%, history of chemotherapy treatment was 86.7%, history of mastectomy was 93.3%, and treatment duration of 1-5 years was 70%.

And before the intervention was given to 60 participants, data were obtained from 32 participants (53.3%) having low self-efficacy and 28 participants (46.7%) having moderate self-efficacy. After the intervention was given, it turned out that of the 60 participants, 3 participants (5%) had low self-efficacy, 12 (20%) participants had moderate self-efficacy and 45 participants (75%) had high self-efficacy.

**Table 2. The Effect of The Health Belief Model on The Self-Efficacy of Breast Cancer Patients (N=60)**

| Variabel | Self-Efficacy (Post Intervention) | | | p-value |
|---|---|---|---|---|
| | Low (n=3) | Fair (n=12) | High (45) | |
| **Self-Efficacy (Pre Intervention) (n/%)** | | | | |
| Low | 2/66.7 | 10/83.3 | 20/44.4 | 0,001 |
| Fair | 1/33.3 | 2/16.7 | 25/55.6 | |
| High | 0/0 | 0/0 | 0/0 | |

Data were obtained from 60 participants who had low self-efficacy before and after being given the intervention by 2 participants (66.7%), low self-efficacy became the medium category of 10 participants (83.3%) and low self-efficacy became high as many as 20 participants (44.4%). Participants who had moderate self-efficacy before being given the intervention but after being given the intervention became low by 1 participant (33.3%), who remained in the moderate category there were 2 participants (16.7%) and from the medium to high category there were 25 participants (55.6%).

Analysis with the Marginal Homogeneity test obtained p value (0.001) < α (α= 0.05) then H0 was rejected and H1 was accepted. It can be concluded that there is an influence of the health belief model approach to the self-efficacy of breast cancer patients.

## DISCUSSION

Self-efficacy influences individual motivation to believe in their abilities in carrying out a task to achieve certain goals and to be able to overcome

obstacles in the process of achieving these goals. Self-confidence in breast cancer patients in their abilities can help individuals to be better prepared in managing symptoms and problems that arise while undergoing treatment. Efforts to increase self-efficacy in patients are needed so that it will have a positive effect on health behavior, symptom control, cancer treatment adherence, as well as the physical and psychological conditions of breast cancer patients (Khorsandi et al, 2020). This study is in line with research in Iran which states that there is an influence of the health belief model approach on the self-efficacy of breast cancer

**Mutia Nadra Maulida*, Putri Widita Muharyani, Antarini Idriansari, Karolin Adhisty**

Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Sriwijaya
Corresponding author: *E-mail: mutianadra@fk.unsri.ac.id

DOI: https://doi.org/10.33024/minh.v6i1.9232

patients with a p value (0.001) (Tavafian, Hasani, Aghamolaei, Zare, & Gregory, 2009).

The results of research at Dr. Hasan Sadikin General Hospital, Bandung showed that 55.3% of a total of 85 breast cancer patients undergoing chemotherapy in the study had a low level of self-efficacy in managing symptoms and problems related to breast cancer treatment. These conditions can affect the patient's readiness to face difficulties when carrying out daily activities. A low level of self-efficacy will have an impact on individual responses in making decisions, beliefs and the desire to know one's ability to achieve goals as expected. In addition, a low level of self-efficacy can cause individuals to lose motivation in carrying out their activities and lose interest in breast cancer treatment, such as when undergoing chemotherapy (Kurniasih & Rahayu, 2020; Hefferon, Murphy, McLeod, Mutrie, & Campbell, 2013; Husebø, Karlsen, Allan, Søreide, & Bru, 2015).

Women who suffer from breast cancer will show high awareness in solving the problem. In dealing with stress, sufferers need every effort to deal with stress due to the conditions they experience. Self-efficacy is very important for solving problems, adapting to changes and responding to threatening situations. Problems that arise in breast cancer patients include psychosocial problems, body image, decreased self-esteem, impaired relationships with partners which can reduce the quality of life of women with breast cancer so that intervention is needed with a trust approach or the Health Bealief Model (Cal, Bahar, & Gorken, 2020; Nurhikmah, Wakhid, & Rosalina, 2018; Bloom, Stewart, Chang, & Banks, 2004).

## CONCLUSION

There is an influence of the Health Belief Model on the self-efficacy of Breast Cancer Patients with a p-value of 0.001 > 0.05.

## SUGGESTION

Nurses as health workers who play a role in the breast cancer treatment process are expected to be able to improve services in managing the Health Belief Model Intervention in treatment plans and can provide support to patients so that patients have self-efficacy to undergo treatment.

## REFERENCES

American Cancer Society. (2015). Cancer Facts & Figures 2015. Accessed from: https://www.cancer.org/research/cancer-facts-statistics/all-cancer-facts-figures/cancer-facts-figures-2015.html.

Bloom, J. R., Stewart, S. L., Chang, S., & Banks, P. J. (2004). Then and now: quality of life of young breast cancer survivors. *Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer*, *13*(3), 147-160.

Cal, A., Bahar, Z., & Gorken, I. (2020). Effects of Health Belief Model based nursing interventions offered at home visits on lymphedema prevention in women with breast cancer: a randomised controlled trial. *Journal of Clinical Nursing*, *29*(13-14), 2521-2534.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Fallowfield, L. J. (2008). Treatment decision-making in breast cancer: the patient–doctor relationship. *Breast cancer research and treatment*, *112*(Suppl 1), 5-13.

Ferraro, M. G., Piccolo, M., Misso, G., Maione, F., Montesarchio, D., Caraglia, M., & Irace, C. (2020). Breast Cancer Chemotherapeutic Options: A General Overview on the Preclinical Validation of a Multi-Target Ruthenium (III) Complex Lodged in Nucleolipid Nanosystems. *Cells*, *9*(6), 1412.

Gabriel, I. O., & Mayers, P. M. (2019). Effects of a psychosocial intervention on the quality of life of primary caregivers of women with breast cancer. *European journal of oncology nursing*, *38*, 85-91.

Harmer, V. (2011). *Breast cancer nursing care and management*. John Wiley & Sons.

**Mutia Nadra Maulida*, Putri Widita Muharyani, Antarini Idriansari, Karolin Adhisty**

Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Sriwijaya
Corresponding author: *E-mail: mutianadra@fk.unsri.ac.id

DOI: https://doi.org/10.33024/minh.v6i1.9232

Hefferon, K., Murphy, H., McLeod, J., Mutrie, N., & Campbell, A. (2013). Understanding barriers to exercise implementation 5-year post-breast cancer diagnosis: a large-scale qualitative study. *Health education research*, *28*(5), 843-856.

Husebø, A. M. L., Karlsen, B., Allan, H., Søreide, J. A., & Bru, E. (2015). Factors perceived to influence exercise adherence in women with breast cancer participating in an exercise programme during adjuvant chemotherapy: a focus group study. *Journal of Clinical Nursing*, *24*(3-4), 500-510.

Khorsandi, B., Khakbazan, Z., Mahmoodzadeh, H. A., Haghani, H., Farnam, F., & Damghanian, M. (2020). Self-efficacy of the first-degree relatives of patients with breast cancer in the prevention of cancer: using the health belief model. *Journal of Cancer Education*, *35*, 977-982. doi: 10.1007/s13187-019-01551-0. PMID: 31168742.

Kurniasih, N., & Rahayu, S. Y. (2020). Hubungan Efikasi Diri dengan Kualitas Hidup Usia Pertengahan dengan Kanker Payudara yang Menjalani Kemoterapi di Ruang Asnawati RSUP dr Hasan Sadikin Bandung. *Jurnal Sehat Masada*, *14*(1), 122-131.

Liang, S. Y., Wu, W. W., Kuo, C. Y., & Lu, Y. Y. (2015). Development and preliminary evaluation of psychometric properties of symptom-management self-efficacy scale for breast cancer related to chemotherapy. *Asian nursing research*, *9*(4), 312-317.

Lisnawati, L., Cadrana, B. P., & Yuanita, I. (2010). Gambaran wanita post mastektomi yang mengalami depresi di rumah sakit kanker Dharmais Jakarta Barat. UIN Syarif Hidayatullah Jakarta: Fakultas Kedokteran Dan Ilmu Kesehatan.

Ministry of Health of the Republic of Indonesia. (2018). Profil Kesehatan Indonesia tahun 2017. Accecsed from: https://www.kemkes.go.id/downloads/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-Indonesia-tahun-2017.pdf.

Miret, N. V., Pontillo, C. A., Zárate, L. V., de Pisarev, D. K., Cocca, C., & Randi, A. S. (2019). Impact of endocrine disruptor hexachlorobenzene on the mammary gland and breast cancer: The story thus far. *Environmental research*, *173*, 330-341.

Nurhikmah, W., Wakhid, A., & Rosalina, R. (2018). Hubungan mekanisme koping dengan kualitas hidup pada pasien kanker payudara. *Jurnal Ilmu Keperawatan Jiwa*, *1*(1), 38-47.

Polit, D. F., & Beck, C. T. (2012). *Nursing research: Generating and assessing evidence for nursing practice*. *9th Ed*. Philadelphia: Lippincott Williams & Wilkins.

Saputra, O.A.(2018). 1870 Wanita Sumsel Mengidap Kanker Serviks dan Payudara. Sripoku.com. Diakses dari: https://palembang.tribunnews.com/2017/10/03/breaking-news-1870-wanita-sumsel-mengidap-kanker-serviks-dan-payudara

Tavafian, S. S., Hasani, L., Aghamolaei, T., Zare, S., & Gregory, D. (2009). Prediction of breast self-examination in a sample of Iranian women: an application of the Health Belief Model. *BMC women's health*, *9*, 1-7.

World Cancer Research Fund International. (2019). Cervical cancer statistik. Accessed from: https://www.wcrf.org/cancer-trends/cervical-cancer-statistics/.

**Mutia Nadra Maulida*, Putri Widita Muharyani, Antarini Idriansari, Karolin Adhisty**

Program Studi Ilmu Keperawatan Fakultas Kedokteran Universitas Sriwijaya
Corresponding author: *E-mail: mutianadra@fk.unsri.ac.id

DOI: https://doi.org/10.33024/minh.v6i1.9232