

Original Research Article

The application of family stress management of the quality of life on breast cancer patients

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ABSTRACT

Background: Breast cancer is a malignant tumor that grows around the breast area and can metastasize to other organs of the body. The complaint that is often felt by patients is that it is very severe pain that reduces the patient's ability to carry out daily activities and will affect the patient's quality of life. The role of the family is important in improving the quality of life of patients, with the moral and material burdens of the family that can affect the family in caring for patients. This study aims to determine the quality of life in breast cancer patients after family stress management interventions.

Methods: This research method is a qualitative research design with one group pre-test to post-test with consecutive sampling technique on 22 samples. Data analysis methods used were univariate analysis and bivariate analysis with the non-parametric statistical test Wilcoxon signed rank test.

Results: The results showed that the *asym.sig* value was 0.004 so that it was smaller than 0.05 which showed that there were differences between stress management interventions before and after the interventions.

Conclusion: Family stress management interventions affect the quality of life of breast cancer patients.

Keywords: Quality of life, Breast cancer, Stress management

INTRODUCTION

Breast cancer according to the American Cancer Society is a malignant tumor whose growth begins in breast cells and can attack surrounding tissues and metastases to organs that are far from the original cell.¹ Clinical manifestations of breast cancer consist of several stages including the appearance of tumor mass, skin changes, breast papillae changes.⁴ Various treatments will be undertaken by patients suffering from breast cancer such as surgery, chemotherapy and radiation.

Cancer patients not only experience a variety of physical problems, but also experience psychosocial and spiritual disorders that affect the patient's quality of life. A study on the quality of life of cancer patients after chemotherapy there were 200 cancer patients, found as many as 22 (11%)

patients had good quality of life, 132 (66%) patients had moderate quality of life and 46 (23%) patients had level poor quality of life. Therefore, the needs of the patient are not only in physical treatment, but it is important to pay attention to the patient's biopsychoscopy.³

World Health Organization (WHO) defines Quality of life (QOL) as individuals' perceptions of their position in life in the cultural context and value system in which they live and breas in relation to their goals, hopes, standards and concerns. Which includes physical health, psychological conditions, personal beliefs, social relationships and their relationship with support from the environment. Quality of life can be seen as an emotional response experienced by breast cancer patients, in the form of feelings of sadness, happiness, satisfaction while on the move and socializing

with others and the suitability of the expectations and reality of the patient.

QOL is a major concern for patients with end-stage cancer where cancer patients experience various symptoms. Symptoms affect their quality of life. The management of therapy has an impact on the quality of life. The quality of life of the majority of patients is influenced by their symptoms. 82.3% of them have low QOL scores. There is a need to develop interventions for effective symptom management that will empower patients to have comfort in their disease and care and to improve patient quality of life.⁶

So, the quality of life must be a very important concern by health workers because it can be a guide in the success of a treatment. The success of treatment is also in accordance with existing health services. This shows the large role of nursing interventions in the treatment of cancer patients. These include family stress management interventions.

Family stress management is a part of family psychological education to help families overcome the problems of each individual in the family that arises because of treating patients with breast cancer. Stress can occur especially in caregivers who interact with patients at all times. The nurse's intervention in family stress management is to teach stress management methods to all family members, especially caregivers.¹² The thing that becomes the focus of family stress management is that between family members want to share experiences with other family members about the stress felt due to one member experiencing breast cancer, then the family gets information about how to cope with the stress experienced due to one member experiencing breast cancer, The family is able to demonstrate how to deal with stress, and finally the family can overcome obstacles in reducing stress.

Prolonged stress can have an impact on aspects and systems of a person's body. Stress has an emotional, cognitive, physiological and behavioral impact. Emotional effects include anxiety, depression, physical and psychological stress.⁸ Therefore, the patient's needs are not only in physical treatment, but it is important to pay attention to the patient's biopsychosocial. The family as a caregiver has a very important role in providing support to patients. By using family stress management interventions in family psychoeducation therapy an increase in the quality of life of breast cancer patients occurs. Seeing the above background, a study was conducted with the aim of knowing the quality of life in breast cancer patients after giving family stress management interventions.

METHODS

This research is a quantitative research with quasi-experimental design with one group pretest-posttest design. The location of the study was at Dr. Hardjolutito Hospital (RSPAU) Yogyakarta. The time for conducting the research began from obtaining a research permit,

submitting the implementation of research to the hospital ethics commission, handling ethical clearance, and data collection, from July to August 2018. The inclusion criteria in this study were to have family members with a medical diagnosis of breast cancer, a healthy patient's family, physically and mentally, the family who lives at home or is close to the client, is able to communicate well.

The sampling technique is by using consecutive sampling. The number of respondents who fit the study inclusion criteria was 22 respondents. The data collection instruments used in this study were the WHO QOL questionnaire and the family stress management workbook. The research was conducted after going through the ethical review procedure and getting a statement of passing the ethics test from the ethics institution. Then the research procedure was carried out by providing stress management interventions to families to improve the quality of life of cancer patients with pre and post-tests. Data analysis method used is univariate analysis was performed on the characteristics of age and stage of cancer, and the bivariate analysis used was the non-parametric statistical test Wilcoxon signed rank test. This comparative test uses significance level $\alpha=0.05$ so that it is known whether there is influence between the two variables. If $p<0.05$, H1 is accepted, meaning that there is quality of life for breast cancer patients before and after stress management interventions are given. Normality test is done to see the normality of the data and it is found that the data is not normal so it meets the requirements for non-parametric tests. Then the statistical test used is the Wilcoxon signed rank test.

RESULTS

The results of this research describe the quality of life in breast cancer patients after being given the stress management intervention of the patient's family.

Respondents characteristic

The results of Respondents Characteristic are as seen in Table 1.

Table 1: Characteristics of respondents (n=22).

Variables	Category	Frequency	%
Age	<50 years	12	54.54
	≥50 years	10	45.45
Work	Work	17	77.27 not
	Work	6	27.27
Education	SD	1	4,54
	SMP	6	27.27
	SMA	15	68.18
	PT	0	0

Source: Primer Data (2019)

Based on Table 1 respondent characteristics. It can be seen that the most age is <50 years, 12 people (54.54%), 15

people have high school education (68.18%), and 17 people are working (77.27%).

The following is the frequency distribution before the intervention can be seen in Table 2.

Table 2: Distribution of frequency of quality of life of respondents before family stress management intervention.

Quality of life	Frequency of	Percentage
Poor	10	45
Moderate	12	54

Source: Primer Data (2019)

Data from Table 2 shows that the quality of life of breast cancer patients is in two categories namely poor (45%) and good (54%).

The following is the frequency distribution after the intervention can be seen in Table 3.

Table 3: Distribution of the frequency of quality of life of respondents after family stress management intervention.

Quality of life	Frequency of	Percentage
Poor	3	13.6
Medium	13	59.1
Good	6	27.3

Source: Primer Data (2019)

Data from Table 3 shows that after the intervention there are 3 categories of patient quality of life namely: poor (13%), medium (59.1%) and good (27.3%).

Application of family stress management to improve the quality of life of cancer patients

The following family intervention management emphasizes improving the quality of life of breast cancer patients in Table 4.

From the Table 4 below it can be seen that the negative ranks or negative differences between the results of stress management interventions for pre and post-test are: 7 on the N value, thus showing that there are 7 people experiencing a decrease in value when pre and post-test. For a mean rank of 5.36 and a sum of 37.50 this indicates a decrease or reduction from the pre-test value to the post-test value. Positive ranks are the positive difference between stress management interventions for the pretest and post-test, here we see the number 15 on N which means that as many as 15 people experience an increase in quality of life from the pretest to the posttest value. Mean rank or average increase is 14.37 while the number of positive ranks or sum rank is 215.50. While ties is the similarity of pretest and post-test values, here the value of ties is 0 so in

other words there is no similar value between pretest and post-test.

Table 4: Intervention management family stress on improving the quality of life of breast cancer patients.

	N	Mean rank	Sum of ranks
Post-test Pre-test	Negative ranks	7a	5.36 37.50
	Positive ranks	15b	14.37 215.50
	Ties	0c	
	Total	22	

Source: Primer Data (2019)

Based on the Wilcoxon rank test it is known that the asymp. sig (2-tailed) value is 0.004 because the value of 0.004 is smaller than 0.05 so it can be said that the hypothesis is accepted meaning that there is a difference between stress management interventions before and after the intervention. So, it can be concluded that family stress management interventions affect the quality of life of breast cancer patients.

DISCUSSION

Characteristics of respondents

Breast cancer most often occurs at the age of <50 years (54.54%). This is in accordance with the Republic of Indonesia Ministry of Health which shows that the age group of less than 50 years has a fairly high risk of breast cancer, due to behavioral factors and unhealthy eating patterns. There are five risk factors for behavior and eating patterns namely body mass index, lack of fruit and vegetable consumption, lack of physical activity, smoking, and excessive alcohol consumption. Most breast cancer sufferers work (77.27%).

The type of work they have is very influential on their ability to treat cancer. Respondents with high incomes will seek cancer treatment with the best quality, while respondents who have moderate and even low income will undergo standard treatment.³ Characteristics of breast cancer respondents most of the high school education (68.18%). This is in accordance with the statement which states that complete adherence to breast cancer treatment is greatly influenced by factors such as education.²

The level of education greatly affects one's adherence, the higher the education the more adherent to the treatment program, because it affects the acceptance of one's cognitive absorption in receiving health information. The higher the level of education, a person will have the ability to absorb and receive information. Respondents who have higher education have extensive knowledge so that it is possible to be able to control themselves against the problem being faced, easy to understand what is conveyed by health workers, so they can make the right decision.¹³

Description of quality of life before and after family stress management therapy

The QOL of the majority of patients is affected by the symptoms of cancer experienced by patients. 82.3% thus saw the need to develop interventions for effective management to empower patients to have a greater sense of control over their disease and care and to improve QOL.⁶ The QOL has a domain that is interconnected and influencing, when a person is diagnosed with cancer, the patient and family will only look at the physical dimension consisting of daily activities, dependence on drugs, energy and fatigue, mobility, pain and discomfort, sleep and rest, as well as changing work capacities, whereas other things affect the quality of life that is not recommended by patients and families.³

Meanwhile after family stress management intervention was given, it showed that there were 3 categories of QOL of patients, namely: poor (13%), moderate (59.1%) and good (27.3%). This is appropriate considering the QOL is an evaluation of satisfaction and happiness in physical health aspects such as pain and discomfort due to illness, fitness and energy, quality of sleep, and drug dependence. This means that the more satisfied a person is with his psychological health aspects affecting his physical health, the better the quality of his life. The value of satisfaction is subjective and varies for each person, of course influenced also by other factors outside of health.¹¹

Family stress management application for improving the quality of life of cancer patients

Data from negative ranks shows that there are 7 people who have decreased the value of pretest to posttest scores, this is happening considering the quality of life. There is a physical dimension that greatly affects the condition of breast cancer patients shows that women with cancer breasts have low physical health where there are symptoms that arise due to breast cancer they suffer. So that the decline in quality of life is vulnerable.²

Positive ranks data shows that as many as 15 people experienced an increase in QOL from the pretest to the posttest score. With an average increase of 14.37 this shows that the QOL in a psychological dimension consists of body image and appearance, negative feelings, positive feelings, self-esteem, spiritual / religious / personal beliefs, thinking, learning, memory and concentration⁶ has a major role in improving the QOL for cancer patients. The aspect of family stress management interventions becomes part of the psychological management of cancer patients.¹²

The p value result shows that 0.004 is smaller than 0.05, so the hypothesis is accepted, meaning that there is a difference between stress management interventions before and after the intervention. So, it can be concluded that family stress management interventions affect the QOL of breast cancer patients. The family stress

intervention becomes part of the management of psychological dimensions of quality of life of patients, the role of the intervention is very significant in determining the QOL of patients. Respondents with a low value of psychosocial problems will present a threat to their QOL, namely serious emotional stress, which is mostly in the form of depression and anxiety, thus requiring family intervention as the caregiver closest to the patient.¹²

Based on the results of a qualitative study using a mixed methodology design, it was found that the psychological effects of breast cancer patients felt could be emotional disturbances such as crying (68%), experiencing anxiety. in the form of anxiety thinking about the effects of treatment (84.0%), n did not feel any other psychological effects.⁷ So, it shows that family stress management interventions in caring for patients can be used as part of managing breast cancer patient stress.

The patient's biopsychological condition is interrelated holistically when the patient suffers from physical pain and other disorders will appear. One psychological disorder is stress. Stress and physical health can influence each other. Stress can reduce physical conditions, and vice versa. Not only patients, families will experience stress in treating patients. This Consider will affect the integrity of the patient and family. Internal and external threats are stressors that can cause a person to become stressed, so someone will try to stay in a balanced condition. The inability of a person to maintain self-integrity is what causes physical disorders and anxiety. This is in accordance with Stuart and Laraia who revealed the effects of the stress response most influential on the psychological aspects, so that a person will become anxious, depressed, helpless to despair.¹³ The same is made clear in the statement that the most common cause of anxiety is physical health related to chronic illness or physical disorders.¹³ So that stress management interventions can be used to improve the QOL of patients. The limitations of this study can be seen from the small number of samples obtained, because of the attachment to the inclusion criteria set by the researcher.

large number of participants answered 14 injections 46 (31.9%) followed by 7 injections 22 (15.2%), 5 injections 28 (19.4%).

CONCLUSION

There are differences between stress management interventions before and after the interventions. So, it can be concluded that family stress management interventions affect the QOL of breast cancer patients with a smaller p value of 0.004 from 0.05. meanwhile the limitation of the study is the low number of samples, because the conditions and situation of breast cancer patients do not allow for further interventions, so as a suggestion further research is carried out with a larger sample of this type of cancer at an early stage.

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REFERENCES

1. American Cancer Society. What Is Cancer?. <https://www.cancer.org/cancer/cancer-basics/what-is-cancer.html>. Last accessed on March 14, 2020.
2. Avis, EN, Crawford S, Manuel, J. Quality of life among younger women with breast cancer. *Journal of Clinical Science*. 2004;23(15).
3. Dehkordi.A, Heydarnajed MS, Fatehi D. Quality Of Life in Cancer Patients Undergoing Chemotherapy. *Oman Med J*. 2009;3:201-207.
4. Itano JK and Taoka KN. *Nursing Patients With Cancer; Principles and Practice*. Philadelphia: Elsevier sounder. 2005.
5. Ministry of Health of the Republic of Indonesia. Indonesian Ministry of Health Data and Information Center: Stop Cancer. 2015. Available at: www.depkes.go.id. Accessed on 2 August 2020.
6. Nayak MG, George A, Vidyasagar MS, Mathew S, Nayak S, Nayak BS, Shashidhara YN, Kamath. A Quality of Life among Cancer Patients. *Indian J Palliative Care*. 2017;23(4):445.
7. Oetami, F. Analysis of the psychological impact of breast cancer treatment at RS DR. Wahidin Sudirohusodo, Makassar city. 2014. Available at: <http://repository.unhas.ac.id/bitstream/handle/123456789/10727/FRATIWI%20OETAMI%20K11110330.pdf?sequence>. Accessed on May 12, 2020.
8. Potter PA and Perry AG. *Nursing Fundamentals*. Vol.2. Ed.7. Jakarta: Salemba Medika. 2010.
9. Rapley M. *Quality of life research: a critical introduction*. London: Sage Publications. 2003.
10. Sarafino P. *Health Psychycgy interactions*. 7th edition. Jhon Wiley & Sons Inc. 2011.
11. Sari, Novita Kurnia. Nutritional status of chronic diseases and drug consumption on quality of life dimensions of the physical health of the elderly. *Journal of Health Research, Department of Nutrition*. Faculty of Medicine at Diponegoro University. 2013.
12. Septilia F, Karim D, Huda N. Relationship between Stress Levels and Quality of Life of Breast Cancer Patients at Various Stage Levels. *JOM FKp*. 2018;5 (2):597-605.
13. Stuart GW and Laraia, MT. *Principles and Practice of psychiatric nursing*. 7th edition. St. Louis: Mosby. 2009.
14. World Health Organization Quality of Life Group. Study protocol for the World Health Organization project to develop a Quality of Life assessment instrument (WHOQOL). 2010. <http://www.who.int/mentalhealth/media/68.pdf>. Last accessed on March 14, 2020.
15. Word Health Organization. WHOQOL: Measuring Quality of Life., 2020. Available at: <https://www.who.int/healthinfo/survey/whoqol-qualityoflife/en/>. Last accessed on May, 20.2020.

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