

Conference Paper

The Relationship Between Self-efficacy and Coping Mechanisms with Quality of Life in Breast Cancer Patients

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Abstract.

The exponential increase in incidence and mortality from breast cancer is of global concern. Breast cancer patients experience physical, psychological, social, and economic changes that reduce their quality of life. Several factors, such as self-efficacy and coping mechanisms, can affect the quality of life of breast cancer patients. This study aims to explain how self-efficacy and coping mechanisms affect the quality of life of breast cancer patients. This research is a correlational study with a cross sectional design. A sample of 320 respondents used total sampling as a sampling method. This tool measures the quality of life using the EORTC QLQ-C30, self-efficacy with the breast cancer survivor self-efficiency scale questionnaire, and coping mechanisms with the cancer management questionnaire (CCQ). The statistical analysis was based on multiple linear regression. The results showed that self-efficacy had a significant effect on quality of life ($p = 0.000$), coping mechanisms had a significant effect on quality of life ($p = 0.000$), and the joint effect of self-efficacy and coping mechanisms. For the quality of life of breast cancer patients (p -value 0.000). Self-efficacy and coping mechanisms have a partial or simultaneous positive impact on the quality of life of breast cancer patients. Therefore, follow-up interventions to improve self-efficacy and coping mechanisms in breast cancer patients are urgently needed.

Keywords: self-efficacy, coping mechanisms, quality of life of breast cancer patients

1. Introduction

Cancer is one of the primary causes of illness and mortality on a global scale, with cancer incidence and mortality increasing at a rapid rate. In 2018, the global incidence of cancer rose to 18,1 million new cases and was expected to be responsible for 9,6 million deaths (1).

Women are the main population diagnosed with breast cancer, with a breast cancer incidence rate of 24.2 percent or one in four global cases of cancer in women. Breast

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cancer is the leading cause of cancer-related death in women, accounting for 15.0% or 627,000 women per year, and affects 2.1 million women annually (1). The Global Cancer Observatory (GLOBOCAN) in 2018 stated that breast cancer is the most common type of cancer found in Indonesia. The incidence of breast cancer in women in Indonesia is 42.1 per 100,000 population with an average mortality rate of 17 per 100,000 people from the Indonesian Ministry of Health (2018).

Multiple dimensions can be affected by breast cancer, including physical dimensions such as pain, feeling helpless, fatigue, disturbed sleep, and impaired mobility. Sufferers experience feelings of uncertainty, anxiety, and depression on the psychological dimension. On the social dimension, sufferers incur financial burdens such as high medical expenses and experience feelings of isolation. Regarding accepting and rejecting the reality of illness, the spiritual dimension is marked by a sense of guilt and inner conflict. These problems contribute to the poor quality of life of breast cancer patients (2–5). Mental and emotional effects of illness, pain, social relationships, and treatment complications determine the quality of life of breast cancer patients (6–8).

The World Health Organization (WHO) defines quality of life (QOL) as a person's view of his or her existence in society in relation to their objectives, expectations, standards, and care throughout their lifetime. Regarding cancer, the patient's quality of life is considered as a multidimensional and multi-measurement metric that incorporates the consequences of breast cancer diagnosis, treatment, disease progression, and rehabilitation. According to an alternative viewpoint, the quality of life of breast cancer patients is a subjective assessment of physical, mental, and social health that represents the patient's impression of the impact of breast cancer diagnosis and treatment on daily life (9).

During the active treatment phase, quality of life has received considerable attention since the beginning of treatment, particularly with chemotherapy, radiation, and breast cancer surgery. These side effects have a significant impact on breast cancer patients' quality of life and are caused by this series of treatments. According to the literature, breast cancer patients undergoing treatment report a decline in physical, psychological, and social functioning and quality of life (10). Physical well-being, psychological well-being, social well-being, and spiritual well-being are components of changes in quality of life. These symptoms typically appear several months to years after a breast cancer diagnosis (11). Quality of life has components that include physical, social, family, emotional, and functional well-being (12)

Individuals diagnosed with breast cancer are prone to have emotional disorders even though they are still at an early stage (13). Several studies have looked at the factors that affect the quality of life of breast cancer patients. Among these studies revealed that women with breast cancer have a moderate quality of life. Several factors were negatively related to quality of life, namely age, lack of education, and single status, while sedentary work, adequate income, and high self-efficacy were positively related to quality of life (14). In addition, factors such as age, menopausal status, occupation, and previous therapy were assessed to significantly affect QOL in breast cancer patients despite the same therapeutic intervention (15–17).

Self-efficacy is another factor that affects quality of life. (16) It is argued that self-efficacy is an individual's belief in his ability to control and exercise influence over his own life. The patient's perception of self-efficacy can predict both the short- and long-term quality of life in breast cancer patients. Self-efficacy can influence motivation, cognitive ability, and behavior to achieve the desired condition. (19). The self-efficacy of cancer patients has a positive impact on the quality of life of cancer patients during chemotherapy. A number of studies on the quality of life of breast cancer patients have been conducted (20–22). In theory, self-efficacy is related to quality of life, but there is limited evidence linking self-efficacy and quality of life in breast cancer patients.

Coping mechanism are closely related to quality of life. The use of certain coping mechanism can influence patients' perceptions about the disease and influence their decisions regarding treatment, which can have a long-term impact on their treatment journey and ultimately the final outcome of their lives. Thus, understanding the relationship between patient coping mechanism and quality of life will enable us to support patients better (23–26). The results of research conducted by (25) and (26) According to studies, advanced breast cancer patients' coping mechanism have a significant impact on their quality of life (27,28). While some previous research has demonstrated a link between coping mechanism and quality of life (29–31), where coping mechanisms maintain a substantial relationship. Based on the literature review, it is evident that few studies have examined the coping mechanism and quality of life of breast cancer patients. And there have not been many studies evaluating the relationship between coping and quality of life in breast cancer patients.

The aims of this study is to investigate the relationship between of self-efficacy and coping mechanisms with quality of life in breast cancer patients in Sukabumi.

2. Method

2.1. Study design

This study uses a correlational design with a cross sectional approach.

2.2. Sample

The sample in this study is breast cancer patients treated at government hospitals in Sukabumi City and Sukabumi Regency with a sample size of 320 individuals using total sampling. The inclusion criteria for this study are patients with a confirmed diagnosis of breast cancer who are at least 18 years old. Patients will provide their informed consent in writing. To ensure the authenticity of the patient's information, socio-demographic information, a diagnosis, and the stage of the disease will be extracted from the case report form.

Instrument

The quality of life of breast cancer patients in this study was assessed using the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire–Core 30 item (EORTC QLQ-C30) instrument, while the researcher used the Breast Cancer Survivor Self-Efficacy Scale to assess self-efficacy. developed by (30). This questionnaire consists of 11 items that are self-reported, unidimensional, and is designed to assess perceived ability to manage quality of life as a result of therapy. To assess the patient's coping mechanism, the researcher used The Cancer Coping Questionnaire (CCQ) from Moorey et al (2003) (33). The CCQ consist of Individual Scale (Items 1–14) and Interpersonal scale (Items 15–21).

2.3. Data collection procedure

The researcher met with participants who will serve as samples in order to obtain their permission to participate. Beginning with the provision of a questionnaire to participants consisting of respondent characteristics including disease stage, quality of life, self-efficacy, and coping mechanism.

2.4. Data analysis

This study uses inferential statistics for data analysis presented in the form of socio-demographic data, each category of respondent characteristics, as well as causality. The technique for presenting data is based on a frequency distribution with a percentage interpretation. Univariate analysis of research variables, such as self-efficacy, coping mechanism and quality of life variables, is also conducted using descriptive analysis. Using the size of the central symptom and the size of the data distribution, or the mean and standard deviation, a descriptive analysis was conducted. Multiple linear regression analysis was utilized for inferential statistical analysis to test the research hypothesis.

3. Research Result

The majority of the 320 respondents (51,2 percent) were between the ages of 46 and 60, had a junior high school education (50,3 percent), were married (72,8 percent), did not work (76,3 percent), and had breast cancer for more than one year (80.6 percent).

The results of the univariate analysis of the variables indicated that the average value of the self-efficacy variable was 11.92 with a standard deviation of 1.697, that the average value of the coping mechanism variable was 21.43 with a standard deviation of 4.194, and that the average value of the Quality of Life variable was 36.04 with a standard deviation of 4.669.

The results of the regression coefficient analysis showed a significance value of 0.000 (p-value (Sig.) 0.05), which means H_0 is rejected. In other words, self-efficacy (X_1) significantly affects the quality of life of breast cancer patients (Y). The results of the regression coefficient analysis showed a significance value of 0.000 (p-value (Sig.) 0.05), which means that H_0 is rejected. In other words, the coping mechanism (X_2) significantly affects the quality of life of breast cancer patients (Y).

According to the results of the analysis, both self-efficacy and coping mechanisms have a significant impact on the quality of life of breast cancer patients. This is indicated by each 0.000 p-value (sig). As an illustration of the simultaneous influence of variables X_1 and X_2 on Y , the following equation model is constructed: $Y = 12.354 + 1.305X_1 + 0.380X_2 + \epsilon$. The equation indicates that a one-unit increase in X_1 will result in a 1.305-unit increase in Y , while a one-unit increase in X_2 will result in a 0.380-unit increase in Y .

TABLE 1: Summary of the Characteristics of Respondents.

Respondent Characteristics	n	%
Age 17-25 26-35 36-45 46-60	18 46 92 164	5.6 14.4 28.7 51.2
Education No school Elementary school Junior high school Senior high school College	25 92 161 34 8	7.8 28.7 50.3 10.6 2.5
Marital Status Not Married Married Widow	42 233 45	13.1 72.8 14.1
Job Work Doesn't Work	76 244	23.8 76.3
Duration of the Disease <1 year >1 year	62 258	19.4 80.6

TABLE 2: Univariate Analysis of Variables.

Variable	Minimum Value	Maximum Value	Average	Standard Deviation
Self-Efficacy	7	15	11.92	1.697
Coping Mechanisms	8	30	21.43	4.194
Quality of Life	23	52	36.04	4.669

TABLE 3: Simple Linear Regression.

Variables	P-Value	Unstandardized Coefficients B		R	R ²
		Constant	Variables		
Self-Efficacy	0.000	14.135	1.839	.668 ^a	.447
Coping Mechanisms	0.000	21.470	.680	.611 ^a	.373

TABLE 4: Multiple Linear Regression.

Variables	P-Value	Unstandardized Coefficients B	R	R ²	P-Value Anova
(Constant)		12.354	.725 ^a	.526	0.000
Self-Efficacy	0.000	1.305			
Coping Mechanisms	0.000	.380			

4. Discussion

This study's findings indicate that self-efficacy influences the quality of life of breast cancer patients. This study's findings are consistent with previous research (32), which demonstrates that self-efficacy has an effect on quality of life. Increasing the patient's self-efficacy can result in an improved quality of life. Patients with low self-efficacy may experience a decline in quality of life (34).

Moorey stated that quality of life and self-efficacy are closely related in the healing process of the patient (33). Patients who cannot adapt to their illness will experience a decline in quality of life. Self-efficacy plays a crucial role in self-management and the maintenance of health behavior; therefore, increasing self-efficacy in health behavior will encourage increased problem-solving skills, thereby enhancing the quality of life of patients (35).

According to Bandura (1997), the self-efficacy of patients undergoing the healing process will enhance their quality of life. With high self-efficacy, patients will be routine and obedient throughout the treatment process, thereby assisting in the resolution of health problems arising from physical, psychological, social, and environmental factors. Patients with a high sense of self-efficacy tend to do everything for the healing process and will always be grateful for what has occurred rather than continuing to complain. But if self-efficacy is low, patients will have a poor quality of life because they lack confidence in their ability to recover. The patient feels perpetually burdened by his illness and is unable to accept his current condition. Patients will withdraw from social life despite their ability to do so physically (36).

Quality of life scores of patients undergoing treatment increased in patients with good self-efficacy. It is known that high self-efficacy will proactively mobilize personal to maintain and improve efforts to improve quality of life (37). Patients with strong self-efficacy have a greater likelihood of engaging in successful coping to attain the intended medical outcome than those with low self-efficacy. Patients with a high quality of life have a strong belief that they have control over their health and are responsible for it (38).

The results also indicate that coping mechanisms have a significant impact on the quality of life of breast cancer patients. This study's findings are consistent with previous research (37) which indicates that coping mechanisms have an effect on cancer patients. The better the patient's coping mechanism, the higher the cancer patient's quality of life (39).

According to Chung (2008), if coping mechanisms are utilized appropriately, they will have an effect on the emotions or thoughts of individuals, allowing them to reduce their exposure to stressors. Positive behavior will result from the use of effective coping mechanisms that enhance one's quality of life. In contrast, if your coping mechanisms are ineffective, your quality of life will suffer and you will experience severe psychological distress (30).

Anxiety is a constructive coping mechanism when it is viewed as a warning sign and the individual accepts it as a challenge to solve the problem. Improving coping mechanisms requires positive thinking. Individuals will be able to overcome prolonged stress with the aid of efficient coping mechanisms. As a result of suffering from a chronic disease, each individual utilizes a unique set of coping mechanism to deal with problems involving changes in their personal and social lives.

Individuals with breast cancer will have a high level of awareness regarding the problem's resolution. They are making every effort to deal with the stress caused by their circumstances. Critical to problem-solving, adjusting to change, and responding to threatening situations are coping mechanisms. Psychosocial problems, body image, decreased self-esteem, and impaired relationships with partners are among the issues that arise in breast cancer patients and can reduce their quality of life (30).

Health-related quality of life is the emotional reaction of individuals to social, emotional, occupational, and family activities. Patients with breast cancer must have a high quality of life in order to achieve the best possible health status and maintain their physical function or abilities. To accomplish this, an effective coping mechanism is required.

Patients who experience a decrease in coping mechanisms will attempt to elicit sympathy from others and their surroundings, as well as assume that the problems they face have benefits for themselves and improve their conditions. The more worship there is, the greater the obedience and trust in God, which will reduce stress levels, which can affect the development of cancer. However, if you decline, rejection will only exacerbate your problems. Denial or denial of the facts can lead to more serious problems that complicate treatment and worsen the disease, thereby impeding the patient's quality of life improvement (40).

In addition, the results showed that self-efficacy and coping mechanisms affect the quality of life of breast cancer patients. Patients with high self-efficacy have more potential to carry out effective coping mechanisms, so that efforts to improve quality of life will be more easily formed.

5. Conclusion

Self-efficacy affects the quality of life of breast cancer patients. There is an influence of coping mechanisms on the quality of life of breast cancer patients, both self-efficacy and

coping mechanisms have a good impact on the quality of life of breast cancer patients. It is hoped that the City and Sukabumi Regional Hospitals will pay more attention to and provide education about self-efficacy and coping mechanisms for breast cancer patients to be able to help themselves.

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Conflict of Interest

The authors have no conflict of interest to declare.

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