

## Factors Affecting the Quality of Life of Breast Cancer Patients

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### ABSTRACT

**Background:** Breast cancer is the most frequently diagnosed cancer and the leading cause of cancer death among women worldwide in 2020. This systematic review aims to identify the factors that affect the quality of life of breast cancer patients so that the results of this systematic ventilation can help health professionals develop appropriate interventions. **Method:** This systematic review followed the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) guidelines. This study aims to identify the factors that affect the quality of life of breast cancer patients. A comprehensive search was performed across several databases, including PubMed, Embase, Scopus, and Web of Science. The search was limited to studies published between 2019 and 2022, which were written in English. **Results:** Factors that affect the quality of life of breast cancer patients include age, education level, social support, psychological stress and anxiety, economic status, depression, and physical symptoms. **Conclusion:** Several factors can affect the quality of life of breast cancer patients, so the patient needs support from the family and health policies from the government in their treatment.



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## Introduction

Breast cancer was the most frequently diagnosed cancer and the leading cause of cancer death among women worldwide in 2020. Worldwide, an estimated 19.3 million new cancer cases and nearly 10.0 million cancer deaths occurred in 2020. The global cancer burden is expected to reach 28.4 million cases by 2040, up 47% from 2020 [1]. One of the most common cancer-related deaths is related to breast cancer [2]. Randomly, about 50% of events and 60% of deaths occur in developing countries [3]. There are many risk factors associated with breast cancer, namely estrogen, early menarche, late menopause, etc [4]. Nonetheless, after cancer diagnosis and treatment, many breast cancer survivors still experience negative impacts, such as physical and mental health problems [5].

Quality of life (QoL) is an individual's perception of their life in terms of their goals, expectations, standards, and concerns. It is a complex concept that includes an individual's physical health, psychological health, personal beliefs, social interactions, and relationship with his environment. Several studies have shown that a better measure of QoL is associated with longer patient slaughter with various types of cancer [6]. Therefore, it is necessary to continuously and periodically assess QoL and its predictors from diagnosis to restored life to gain insight into patient management and care [7]. Various studies have shown that women are at higher risk of experiencing poor quality of life during the active treatment phase and survivors of cancer treatment [8].

This systematic review aims to identify the factors that affect the quality of life of breast cancer patients. A comprehensive search was conducted across multiple databases to retrieve relevant studies published between 2019-2022. After screening, a total of 10 papers were included in the

final analysis. The results showed that several factors were significantly related to the quality of life of breast cancer patients, including age, disease stage, type of treatment, and psychological stress. Other factors, such as social support, physical activity, and co-morbidities, also show a significant influence on the patient's quality of life. The findings suggest that healthcare professionals should consider these factors when providing care for breast cancer patients to improve their quality of life. Further research is needed to explore the complex interplay between these factors and their effect on the quality of life of breast cancer patients.

## Materials and Method

This systematic review follows the Preferred Reporting Items for Systematic Review and Meta-Analyses (PRISMA) guidelines. This study aims to identify the factors that affect the quality of life of breast cancer patients. A comprehensive search was performed across several databases, including PubMed, Embase, Scopus, and Web of Science. The search was limited to studies published between 2019-2022, which were written in English. The following keywords are used in different combinations: breast cancer, factors, patients, survivors, and quality of life. Studies were included if they met the following criteria: 1) These are original research articles published in 2019-2022; 2) Investigate factors related to the quality of life of breast cancer patients; 3) Articles are taken in English. The flow by PRISMA Analysis can be seen in [Figure 1](#).

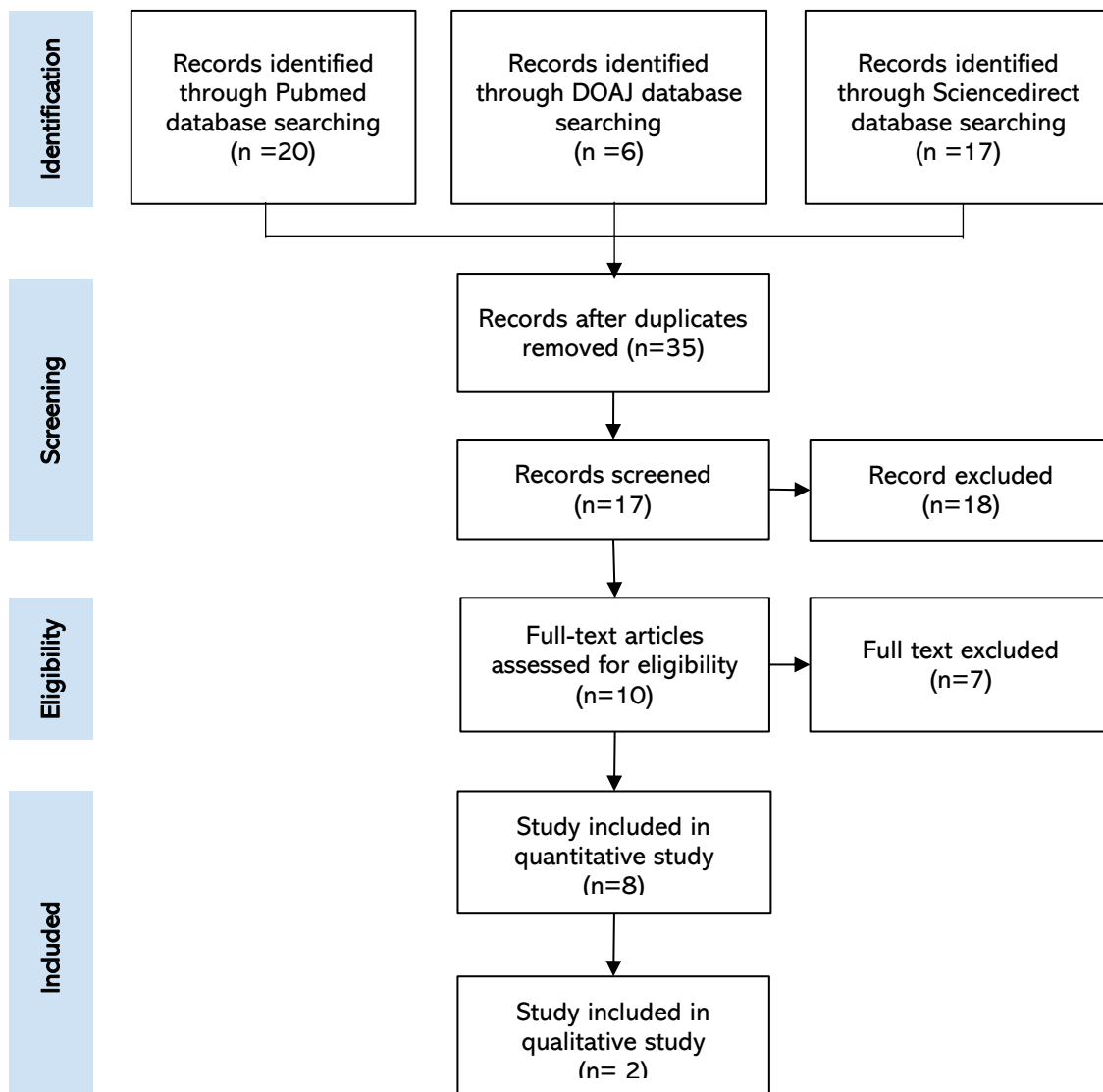


Figure 1. PRISMA Analysis

## Results and Discussion

### Results

The result of this study is 10 articles which are 2 qualitative articles and 8 quantitative articles. Details can be seen in [Table 1](#).

**Table 1.** Systematic Review Results

Author/Year/Title	Design Study/Result
Park, Jin Hee, Yong Sik Jung, Ji Young Kim, and Sun Hyoung Bae. 2021. Determinants of Quality of Life in Women Immediately Following the Completion of Primary Treatment of Breast Cancer	A cross-sectional study found that factors associated with higher quality of life were younger age, lower co-morbidities, higher social support, and higher levels of physical activity [9].
Dewi, Rizka Amalia, Ambar Mudigdo, Eti Poncorini Pamungkasari. 2020. Path Analysis on the Biopsychosocial Factors Affecting the Quality of Life in Patients with Breast Cancer	A cross-sectional study found that depression, social support, and physical functioning were significant predictors of quality of life for breast cancer patients [10].
Srivastava, Sanjiv, Alpana Srivastava, and Sandeep Tiwari. 2020. "Factors Affecting Quality of Life (QoL) in Breast Cancer Patients: A Case Study at King George's Medical University, Lucknow	A case study found that age, education, income, and treatment-related factors were significant predictors of quality of life in these patients [11].
Lavdaniti, Maria, Dimitra Owens, et al. 2019. Factors Influencing Quality of Life in Breast Cancer Patients Six Months after the Completion of Chemotherapy	A descriptive study found that emotional and social support, fatigue, and pain were significant predictors of quality of life in breast cancer patients [12].
Yusoff, Jamilah, Aniza Ismail, Mohd Rizal Abd Manaf, et al. 2022. Quality of Life of Women with Breast Cancer in a Tertiary Referral University Hospital.	A descriptive study found that factors associated with higher quality of life for women with breast cancer were younger age, higher education level, higher income level, and lower cancer stage [13].
Hassen, Anissa Mohammed, Girma taye, Muluken Gizaw, Foziya Mohammed Hussien. 2019. Quality of life and associated factors among patients with breast cancer under chemotherapy at Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia	A cross-sectional study found that social support, education level, economic status, and fatigue were related to the quality of life of breast cancer patients [14].
Socha, Malgorzata, Krzysztof A. Sobiech. 2021. Socio-Demographic and General Health Factors Associated with Quality of Life in Long-Term Breast Cancer Survivors from Southwestern Poland	A quantitative analytic study found that the average QoL of women with breast cancer was 60.7 ( $\pm 17.9$ ), Summary Mental Component 62.8 ( $\pm 19.8$ ), and Summary Physical Component 57.5 ( $\pm 18.8$ ) points. Health education, greater social support, specialist care in the treatment of comorbidities, and the spread of a physically active lifestyle are associated with quality of life in breast cancer survivors [15].
Polanska, beata Jankowska, Natalia Swiatoniowska Lonc, Edyta Osmialowska, Aneta Gałka, Mariusz Chabowski. 2020. The Association Between Illness Acceptance and Quality of Life in Women with Breast Cancer	A quantitative analytic study found that the overall QoL score is $62.67 \pm 17.11$ . Fatigue, economic status, and disease acceptance were related to the quality of life of breast cancer patients [16].
Oh, Pok-Ja RN, PhD; Cho, Jung-Ran RN. 2020. Changes in Fatigue, Psychological Distress, and Quality of Life After Chemotherapy in Women with Breast Cancer	A prospective study found that fatigue had a greater impact on QoL post-chemotherapy, but psychological distress had a greater impact on QoL pre-chemotherapy and at 6-month follow-up. There was a significant increase in fatigue ( $F = 41.95, P < 0.001$ ) and psychological distress ( $F = 26.55, P < 0.001$ ) from pre-chemotherapy to post-chemotherapy [17].
Firouzbakht, Mojgan, Karimollah Hajian-Tilaki, Dariush Moslemi. 2020. Analysis of quality of life in breast cancer survivors using structural equation modeling: the role of spirituality, social support, and psychological well-being	A cross-sectional study found that psychological factors indicated by anxiety, depression, and FSS had a significant negative direct effect on QoL ( $\beta = -0.62$ ). Spirituality has a positive direct effect ( $\beta = 0.089$ ) but a negligible indirect effect ( $\beta = 0.020$ ) on QoL, whereas the direct relationship with social support is almost negligible [18].

## Discussion

Breast cancer is one of the most common types of cancer among women worldwide. While treatment for breast cancer has improved in recent years, it often causes a variety of physical, psychological, and social problems, which affect patients' quality of life (QoL). Several studies have been conducted to explore the factors that affect the quality of life in women with breast cancer. This systematic review will analyze five studies investigating the determinants of quality of life in women immediately after completion of primary treatment for breast cancer, six months after chemotherapy, and in tertiary referral university hospitals.

Based on research, younger patients with breast cancer have higher QoL. Someone older tends to have a poor quality of life compared to someone younger. This is related to the limitations of the patient's physical function which is triggered by aging and decreased physical abilities due to the illness [9]. This is in line with a study that stated that older breast cancer patients have a worse quality of life due to pain/discomfort compared to patients in other age groups, which will significantly interfere with their daily activities and affect their anxiety/depression domain. These patients experience more reduced mobility with age [13]. In terms of age, especially in women, breast cancer incidence increases with age, this thing related to risk factors genetics, and exposure to free radicals, where the older the exposure to free radicals will certainly be higher compared to younger age [19].

The level of education will affect the quality of life of a person. This is in line with research conducted that someone who has low education will also have low knowledge. When a person's knowledge is low, then the lifestyle tends to be bad which ultimately affects the quality of life. Someone who has a higher education is generally able to respond well to things and can think rationally for the future to gain benefits, including improving lifestyle and carrying out health checks [14]. This is also in line with research conducted which states that women after breast cancer treatment with secondary education (12 years of education) or higher education (more than 12 years of education) display better QoL assessments in the physical function area. Several studies have shown a correlation between higher levels of education and health awareness, healthier lifestyles, and lower propensity to develop addictions. In addition, higher education is correlated with higher income [15].

Social support can be interpreted as a form of communication in the form of physical or psychological assistance to someone who is going through a difficult time to increase self-control in that person. Support can consist of emotional support, appreciation, instrumental, informational, and social interaction. Support can come from various parties involved, such as family, work environment, relatives, friends, and the social environment. Social support can significantly affect a person's quality of life, thus it is important for an individual to get motivation/encouragement to be able to carry out the treatment effectively. The existence of strong and sustainable social support can shape individual perceptions to assume that the disease they are undergoing is not a life-threatening situation and their survival. Breast cancer patients need to get social support to minimize the physical and psychological impacts that occur in life which can directly impact the decrease in the patient's quality of life. These physical and psychological impacts can worsen the patient's condition and cause a low success rate of the treatment being undertaken by the patient. With social support, it is hoped that breast cancer patients will have higher motivation and enthusiasm and think positively in responding to their lives and the treatment they are undergoing to achieve recovery [20]. Social support brings people with labor to give more meaning to life and encourage behavior that is beneficial to themselves and others [21].

Families with high incomes tend to have good economic resilience. Someone who has good economic resilience will tend to be able to access health services properly so that the quality of life can be improved. Economic status can't be underestimated in shaping the quality of life of a cancer patient, this is because the state of the disease requires a lot of costs which directly change the economy of families with cancer. Cancer treatment is relatively expensive and lasts a long time, causing anxiety for cancer sufferers [22]. This is in line with research conducted which states that income has a significant effect on the quality of life of breast cancer patients. The cost of cancer treatment is related to the burden on the quality of life of breast cancer patients. Financial pressure

related to the cost of medical care for breast cancer patients [23]. In addition, financial strain also affects bad emotional changes in the breasts. This is also in line with research conducted which states that high household income is associated with better QOL. Higher socioeconomic status has been associated with many aspects of better patient care such as not worrying about financial difficulties and being absent from work. Likewise, patients experiencing economic difficulties are at risk of experiencing difficulties. This study found that patients experiencing financial difficulties had poor QOL [14].

Psychological distress from anxiety and depression directly affects QOL in breast cancer survivors and may be strongly associated with long-term survival in these patients. This is in line with research conducted which states that psychological pressure affects a person's quality of life. Patients with breast cancer may experience anxiety for fear of recurrence. A psychosocial support system should be developed that helps breast cancer patients who have completed treatment to regain psychological stability [24]. As a result, they become more able to accept conditions and take treatment according to medical recommendations [25].

Diagnosed with cancer is a big stressor experienced by someone and can result in distress with either visible manifestation is *dimpom* depression [26]. Depression is the number one factor affecting the functional status of breast cancer patients. The presence of depressive symptoms in breast cancer sufferers has a negative impact on their well-being, social roles, emotional status, and decreased quality of life [27]. Depression in breast cancer patients if not managed properly can be an obstacle for breast cancer patients to return to their original state [28]. The depression experienced by breast cancer patients changes over time. After that, breast cancer patients will recover from depression and can continue further medical treatment to improve their quality of life [29]. Breast cancer sufferers with good coping strategies have a 1.65 times greater chance of getting a good quality of life than those with bad coping strategies [10].

Physical symptoms caused by treatment and cancer diminish over time, and cognitive impairment, sleep disturbances, sexual dysfunction, fever, pain, and fatigue may persist in breast cancer patients who complete treatment. These symptoms can cause the patient to develop negative emotions during recovery and negatively affect psychological stability. Persistent physical symptoms can increase fatigue and hinder patients' return to normal life, thereby reducing their quality of life. Therefore, continuous and systematic symptom management is necessary for breast cancer patients to adapt to normal life [30].

## Conclusion

Based on the result, several factors affect the quality of life of breast cancer patients, including age, educational level, social support, psychological stress and anxiety, economic status, depression, and physical symptoms. To provide enthusiasm and motivation for breast cancer patients, the government may be able to create a program to provide education and space for deep talk between breast cancer patients to foster enthusiasm within them in dealing with their illness. The government can also provide material assistance to underprivileged breast cancer patients so that breast cancer patients can still get the treatment they need. In addition, support from the family and the surrounding environment is also very much needed to foster enthusiasm for undergoing the treatment that must be carried out. A breast cancer patient needs support from the family and health policies from the government in its treatment.

## Declaration

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