

# KTI bu Dyah

*by* Dyah Widodo

---

**Submission date:** 30-Nov-2023 11:52AM (UTC+0700)

**Submission ID:** 2242749249

**File name:** POLKESMA\_B-ICON\_IJNP\_Manuscript\_template\_NEW\_VERSION\_2018.docx (65.75K)

**Word count:** 5186

**Character count:** 29789

# DETERMINANTS OF DEPRESSION LEVELS IN BREAST CANCER SURVIVORS

Dyah Widodo<sup>1\*</sup>, Ganif Djuwadi<sup>2</sup>, Farida Halis DK<sup>3</sup>, Bachtiar Budianto<sup>4</sup>

<sup>1</sup>Nursing Department, Health Polytechnic of Malang, Minister of Health, Indonesia

[\*Corresponding Author . ORCID ID 0000-0001-5044-5911]

<sup>2&3</sup>Health Promotion Department, Health Poyitechnic of Malang, Minister of Health, Indonesia

<sup>4</sup>dr. Saiful Anwar Malang Regional General Hospital, Indonesia

\*dyah\_widodo@poltekkes-malang.ac.id [\*Corresponding author's email]

## Abstract

Breast cancer is a malignancy in breast tissue which is one of the most common cancer types in Indonesia experienced by women worldwide. In East Java, the number of breast cancer is second ranks under the cervical cancer. The conditions and the process of cancer treatment can lead to psychological problems, including depression. The purpose of this study was to analyze the determinant factors that influence the depression levels in breast cancer survivors. This study utilized correlation method. The study was conducted in East Java. 158 respondent was selected by purposive sampling technique. The instrument used in this study was the HAM-D7 (the standard 7-item Hamilton Rating Scale for Depression) questionnaire. Data analysis was carried out using SPSS software, including cross tabulation and multivariate linear regression test with alpha 0.05. The results showed that there was a relationship between marital status and the level of depression ( $p=0.021$ ), there was a relationship between social support and the level of depression ( $p=0.002$ ), there was a relationship between physical condition and the level of depression ( $p=0.003$ ), but there was no correlation among age with the level of depression ( $p=0.281$ ), there was no relationship between the level of education and the level of depression ( $p=0.752$ ) and there was no relationship between the length of illness and the level of depression ( $p=0.265$ ) in breast cancer survivors. It is concluded that the determinants of factors that influence the level of depression are marital status, social support and physical condition in breast cancer survivors.

**Keywords:** Determinants, Depression Levels, Breast Cancer

## Abstrak

Kanker payudara merupakan suatu keganasan pada jaringan payudara yang merupakan salah satu jenis kanker paling umum di Indonesia yang dialami oleh wanita di seluruh dunia. Di Jawa Timur, jumlah penderita kanker payudara menduduki peringkat kedua setelah kanker serviks. Kondisi dan proses pengobatan kanker dapat menimbulkan masalah psikologis, termasuk depresi. Tujuan penelitian ini adalah untuk menganalisis faktor-faktor determinan yang mempengaruhi tingkat depresi pada penyintas kanker payudara. Penelitian ini menggunakan metode korelasi. Penelitian dilakukan di Jawa Timur, besar sampel 158 responden dipilih dengan teknik purposive sampling. Instrumen yang digunakan dalam penelitian ini adalah kuesioner standar Hamilton Rating Scale for Depression (HAM-D7) yang berjumlah 7 item. Analisis data dilakukan dengan menggunakan software SPSS, meliputi tabulasi silang dan uji regresi linier multivariat dengan alpha 0,05. Hasil penelitian menunjukkan terdapat hubungan status perkawinan dengan tingkat depresi ( $p=0,021$ ), terdapat hubungan dukungan sosial dengan tingkat depresi ( $p=0,002$ ), terdapat hubungan kondisi fisik dengan tingkat depresi ( $p=0.003$ ), namun tidak terdapat hubungan antara usia

dengan tingkat depresi ( $p=0.281$ ), tidak terdapat hubungan antara tingkat pendidikan dengan tingkat depresi ( $p=0.752$ ) dan tidak terdapat hubungan antara lama sakit dengan tingkat depresi ( $p=0.265$ ) pada penyintas kanker payudara. Disimpulkan bahwa faktor determinan yang mempengaruhi tingkat depresi adalah status perkawinan, dukungan sosial dan kondisi fisik pada penyintas kanker payudara.

**Kata Kunci:** Determinan, Tingkat Depresi, Kanker Payudara

## INTRODUCTION

In accordance with the organization of World Health (WHO) the amount of persons diagnosed with cancer in the last two decades increased from about 10 million in 2000 to 19.3 million in 2020 (Sumartiningtyas, 2021), with a mortality rate of 10 million. This number has increased considerably since 2018, when 18.1 million cases and 9.6 million deaths were recorded (Syarif, 2021). Cancer affects around one in five people worldwide. As a result of aging and population growth, and changes in the incidence and distribution of major risk factors of cancer, the worldwide cancer burden is rising rapidly.

Cancer of breast is a malignancy in tissue of breast that can originate from the ductal epithelium or its lobules, one of the main causes of death worldwide (Ministry of Health, Indonesia, 2018). Breast cancer is the most prevalent malignancy among women worldwide. In 2020, it is expected that 2,3 million new cases of female breast cancer would be diagnosed, representing 11.7% of all new cancer cases. (Sumartiningtyas, 2021 and Syarif, 2021). Breast cancer is one of the most common types of cancer among Indonesian women. According to Globocan 2020, there were 396,914 cancer cases with a death rate of 145 per 100,000 patients; breast cancer had the highest number of patients with 65,858 cases (Sumartiningtyas, 2021).

According to data issued by the East Java Provincial Health Office, the number of breast cancers reached 12,186 in 2019. According to the 2018 Basic Health Research, the cancer prevalence in East Java is 2.2 per 1,000 people. When adjusted to the East Java population, the number of cancer patients is 86,000, indicating an increase over 2013, when the rate was 1.6 per 1,000 people (Jatim, 2020).

The severity of the illness and the treatment regimen used by breast cancer patients may have an influence on the incidence of numerous medical problems, which can lead to a variety of psychological issues. Some of the most common side effects of chemotherapy, according to the American Cancer Society, are changes in appetite, constipation, diarrhea, mouth

tongue fatigue, loss of hair, bleeding and easy bruising, anemia, infections, vomiting and nausea, and problems of throat such as pain when swallowing and sores, neuropathy of peripheral or other problems of nerve such as lack of sensation, pain, and tingling, skin and changes of nail such as discoloration and dry skin, urine changes (Regnard and Kindlen, 2019).

Cancer patients who experience these physical problems really need social support. Research by Khanuun findings that family support has a positive impact on the lives of women with breast cancer. This support began to be felt since the patient was first diagnosed with breast cancer (Luthfiyyah Khanuun, 2021).

Indeed, not everyone has the same adverse effects after chemotherapy; in fact, some people have no side effects at all. The degree of chemotherapy side effects also varies widely across individuals (Regnard and Kindlen, 2019). This condition, however, may have an effect on the incidence of psychological disorders in patients. According to the findings of a research conducted by Salem and Daher (Salem and Daher-Nashif, 2020) breast cancer survivors suffer anxiety, humiliation, and poor self-esteem as a consequence of gender dynamics and a predisposition to fatalism. The depression prevalence in patients of cancer seems to be related to the severity of the illness and the extent of patient impairment. A considerable number of patients of cancer are likely to have an adjustment disorder with low mood, although only a small fraction acquire serious depressive illness (Cull2, 1999). Based on these issues, it is critical to explore the link among determining variables and depression levels in breast cancer survivors. The goal of the research was to investigate the relationship between age, education level, marital status, duration of illness, physical condition, and support of social and depression in breast cancer survivors.

## **METHODS**

The design of this study is correlational, which is to analyze the correlation between age, education level, marital status, length of illness, physical condition and social support with the degree of depression in breast cancer survivors. The research was carried out in 2022, at the Malang City Hospital, East Java.

The population of this study were all breast cancer patients who attended medical therapy at the Malang City Hospital, East Java. The sample is part of the population that meets the inclusion criteria. The sample size is determined based on the table with an alpha of 5% (Sugiyono, 2010), which is 158 people. Samples were taken by purposive sampling technique. The inclusion criteria are as follows: female gender with breast cancer patients



proven by medical records, have and/or are currently undergoing medical therapy at the Hospital and willing to participate in research. The exclusion criteria are as follows: decreased awareness, in critical/emergency condition, have hearing and speech impairment. The independent variables of this study are 1) age; 2) education level, 3) marital status; 4) length of illness; 5) physical condition and; 6) social support. The dependent variable is the level of depression. The operational definition is as follows: 1) Age Age is the number of years an individual has lived; 2) Education level is an individual's graduation rate from formal education; 3) Marital status is the condition of an individual's marriage within the family; 4) Length of illness is the period from when individuals are diagnosed with breast cancer until the time this study takes place; 5) Physical condition is a physical problem or complaint experienced by breast cancer survivors during the assessment related to the disease and the effects of breast cancer therapy; 6) Social support is an action given by family or other close people that is beneficial for breast cancer survivors so that survivors realize that there are other people who care, appreciate, and love them; 7) The level of depression is a disorder of affect, behavior and emotion of survivors of breast cancer in the form of feelings of helplessness accompanied by decreased motivation in daily activities.

The research hypothesis is that there is a relationship between age, education level, marital status, length of illness, physical condition and social support with the level of depression in breast cancer survivors. The instrument used in this study was a questionnaire and the level of depression measured using the standard 7-item Hamilton Rating Scale for Depression (HAM-D7) questionnaire. Data analysis was carried out using SPSS software, including cross tabulation and multi-variate linear regression test with alpha 0.05 to test the research hypothesis. Prior to the research, this research protocol had did pass the health research ethics test at the Health Research Ethics Commission of Health Polytechnic of Malang with Reg.No.: 339/KEPK-POLKESMA/2022 and Health Research Ethics Commission of Regional Public Hospital dr. Saiful Anwar Malang No:400/088/K.3/102.7/2022. This study was done with consideration for the safety and wellbeing of the participants, in compliance with health research ethics..

## **RESULTS**

In this section, the results of the study will be presented in the form of correlations of each factor related to the **degree of depression in survivors of breast cancer**.

### **1. Relationship Between Age and Level of Depression in Breast Cancer Survivors**

Table 1. Age and Depression Levels Crosstabulation of Survivor Respondents Breast Cancer in East Java in 2022

		Depression Levels (n and %)			
		Full Remission	Mild	Moderate	Total
Age	31-40 Years Old	9 (12.9%)	7 (9.9%)	3 (17.6%)	19 (12.0%)
	41-50 Years Old	23 (32.9%)	26 (36.6%)	8 (47.1%)	57 (36.1%)
	51-60 Years Old	24 (34.3%)	24 (33.8%)	3 (17.6%)	51 (32.3%)
	61-70 Years Old	9 (12.9%)	10 (14.1%)	3 (17.6%)	22 (13.9%)
	71 Years or More	5 (7.1%)	4 (5.6%)	0 (0%)	9 (5.7%)
Total		70 (100%)	71(100%)	17(100%)	158(100%)

Based on table 1 it is known that most of the respondents were aged 41-50 years, there were 57 people (36.1%). At that age group most experienced mild depression (26 people or 36.6%). Followed by the 51-60 year age group, 24 people (33.8%) had mild depression and 24 people (34.3%) had full remission.

The results of the statistical regression analysis showed that the value of  $p = 0.281$  is greater than alpha 0.05 which means there was no correlation between age with the degree of depression in breast cancer survivors.

## 2. Relationship Between Level of Education and Depression Level in Survivors of Breast Cancer

Table 2. Level of Education and Depression Levels Crosstabulation of Survivor Respondents Breast Cancer in East Java in 2022

		Depression Levels (n and %)			
		Full Remission	Mild	Moderate	Total
Level of Education	Elementary School	19 (27.1%)	21 (29.6%)	6(35.3%)	46 (29.1%)
	First High School	11 (15.7%)	13 (18.3%)	1 (5.9%)	25 (15.8%)
	High School	22 (31.4%)	21 (29.6%)	7 (41.2%)	50 (31.6%)
	Bachelor	18 (25.7%)	16 (22.5%)	3 (17.6%)	37 (23.4%)
Total		70 (100%)	71(100%)	17(100%)	158(100%)

Based on table 2, it is known that most of the respondents have high school education, namely 50 people (31.6%). Most of the respondents with high school education have experienced full remission or did not experience depression (22 people or 21.4%) and were at a mild depression level of 21 people (29.6%). This is the same as respondents with elementary school education, which is at the level of mild depression 21 people (29.6%).

The upshot of the analysis of statistical regression showed that the gain of  $p = 0.752$  is greater than alpha 0.05 which means there was no correlation between the level of education with the degree of depression in breast cancer survivors.

### 3. Relationship Between Marital Status and Level of Depression in Breast Cancer Survivors

Table 3. Marital Status and Depression Levels Crosstabulation of Survivor Respondents Breast Cancer in East Java in 2022

		Depression Levels (n and %)			
		Full Remission	Mild	Moderate	Total
Marital Status	Marry	68 (97.1%)	67(94.4%)	14 (82.4%)	149 (94.3%)
	Not Married	2 (2.9%)	3 (4.2%)	1 (5.9%)	6 (3.8%)
	Divorce	0 (0%)	1 (1.4%)	2 (11.8%)	3 (1.9%)
Total		70 (100%)	71(100%)	17(100%)	158(100%)

Based on table 3 it is known that most of the respondents were married 149 people (94.3%), and more than half of the respondents experienced full remission or did not experience depression (68 people or 97.1%) and were at the level of mild depression 67 people (94.4%).

The results of the statistical regression analysis showed that the value of  $p = 0.021$  is smaller than alpha 0.05 which means there was a correlation between marital status with the level of depression in breast cancer survivors.

### 4. Relationship Between Length of Illness and Level of Depression in Breast Cancer Survivors

Table 4. Length of Illness and Depression Levels Crosstabulation of Survivor Respondents Breast Cancer in East Java in 2022

		Depression Levels (n and %)			
		Full Remission	Mild	Moderate	Total
Length of Illness	1-12 Months	47 (67.1%)	49(69.0%)	5(29.4%)	101(63.9%)
	13-24 Months	9 (12.9%)	13(18.3%)	4(23.5%)	26(16.5%)
	25-36 Months	3(4.3%)	5(7.0%)	3(17.8%)	11(7.0%)
	37-48 Months	4(5.7%)	2(2.8%)	2(11.8%)	8(5.1%)
	49-60 Months	1(1.4%)	1(1.4%)	2(11.8%)	4(2.5%)
	61 Months & Over	6(8.6%)	1(1.4%)	1(5.9%)	8(5.1%)
Total		70(100%)	71(100%)	17(100%)	158(100%)

Based on table 4, it is known that most of the respondents experienced pain for 1 month to 1 year. Almost half of the

respondents experienced full remission or did not experience depression (47 people or 67.1%) and were at the level of mild depression 49 people (69.0%).

The upshot of the statistical regression analysis showed that the value of  $p = 0.265$  is greater than alpha 0.05 which means there was no correlation between the length of illness with the degree of depression in breast cancer survivors.

## 5. Relationship Between Physical Condition and Level of Depression in Breast Cancer Survivors

Table 5. Physical Condition and Depression Levels Crosstabulation of Survivor Respondents Breast Cancer in East Java in 2022

		Depression Levels (n and %)			
		Full Remission	Mild	Moderate	Total
Physical Condition	No Complaints	3 (4.3%)	1(1.4%)	0(0%)	4(2.5%)
	Few Complaints	39(55.7%)	21(29.5%)	5(29.4%)	65(41.1%)
	Moderate Complaints	28(40.0%)	45(63.4%)	10(58.8%)	83(52.5%)
	Serious Complaints	0(0%)	4(5.6%)	2(11.8%)	6(3.8%)
<b>Total</b>		<b>70(100 %)</b>	<b>71(100%)</b>	<b>17(100%)</b>	<b>158(100%)</b>

Based on table 5 it can be seen that most of the respondents had quite a lot of complaints (52.5%) and most of the respondents who had these complaints were at the level of mild depression (63.4%). It should be stated here that the medical therapy process undertaken by most of the respondents (150 people or 94.6%) was chemotherapy, and most of them had undergone mastectomy surgery (124 people or 78.5%).

The upshot of the statistical regression analysis showed that the value of  $p = 0.003$  is smaller than alpha 0.05 which means there was a correlation between physical condition with the degree of depression in survivors of breast cancer.

## 6. Relationship Between Social Support and Degree of Depression in Breast Cancer Survivors

Table 6. Social Support and Depression Levels Crosstabulation of Survivor Respondents Breast Cancer in East Java in 2022

		Depression Levels (n and %)			
		Full Remission	Mild	Moderate	Total
Social Support	A Little	1 (1.4%)	1 (1.4%)	0 (0%)	2 (1.3%)
	Enough	4 (5.7%)	19 (26.8%)	8 (47.1%)	31 (19.6%)
	Good	65 (82.9%)	51(71.8)	9 (52.9%)	125(79.1%)



<b>Total</b>	<b>70 (100%)</b>	<b>71(100%)</b>	<b>17(100%)</b>	<b>158(100%)</b>
--------------	------------------	-----------------	-----------------	------------------

Based on table 6 it can be seen that most of the respondents have good social support (79.1%) and most of the respondents who have good social support are at the level of not depression or full remission (82.9%).

The results of the statistical regression analysis showed that the value of  $p = 0.002$  is smaller than alpha 0.05 which means there was a correlation between social support with the level of depression in breast cancer survivors.

## DISCUSSIONS

Breast cancer is the most frequent malignancy among women globally (Parisa Mokhtari-Hessari1, 2020). Cancer of breast is a tumor in tissue of breast that may start from the ductal epithelium or its lobules (Panigroro, Hernowo and Purwanto, 2019). Some individuals find the term cancer to be terrifying. Many people assume that if you acquire cancer it would be tough to treat and will die. When a person is diagnosed with breast cancer at first he will be stunned, unbelieving and maybe rejecting the diagnosis. Many breast cancer patients report severe distress shortly after the conclusion of initial treatment (Park *et al.*, 2021). Depression is one of the most prevalent symptoms of psychological among patients of breast cancer (Pilevarzadeh *et al.*, 2019).

Depression often accompanies chronic medical disease and is linked to higher morbidity, hospital length of stay, and total impairment (Cull2, 1999). Depression in patients with breast cancer imposes substantial costs to patients, families, and healthcare systems (Pilevarzadeh *et al.*, 2019).

One of the risk factors that is directly associated to the increasing incidence of breast cancer is the gender of women aged > 50 years (Panigroro, Hernowo and Purwanto, 2019). According to table 1, the majority of respondents (57, or 36.1%) were aged 41 to 50 years, followed by those aged 51 to 60 years (32.3%). This indicates that more than half of the respondents are in the age bracket at risk for cancer of breast, yet according to the discovery of this research, there is no correlation between age and depression levels among breast cancer survivors (0.28). Therefore, breast cancer survivors' sadness is unrelated to their age. Due to their condition, breast cancer survivors of any age might develop sadness. This study's findings also indicate that there was no correlation between the amount of education and the prevalence of depression among breast cancer survivors (0.752).

Incidence of depression or anxiety, and suicide among individuals who have recovered from cancer have also been identified in a number of research. According to the statistics, the anxiety levels of cancer patients in lengthy remission are comparable to those of individuals with active illness. This research suggests that anxiety in cancer survivors may need ongoing treatment, since there was no correlation **between** the duration of sickness and the amount of depression in breast cancer survivors (0.265). 27% of cancer survivors surveyed by Loge et al. had symptoms of despair and/or anxiety. The severity of the event Depression has also been observed to be more prevalent among cancer patients in remission than among those with terminal disease. This study reveals that depression is not only prevalent among cancer patients, but also among those recuperating from cancer, which makes suicide a possibility (Cull2, 1999).

The **depression prevalence** in **patients of the cancer** seems to be proportional to the severity of the illness and the patient's degree of impairment. Lansky et al. analyzed 190 breast cancer patients out of 500 cancer patients and discovered that Karnofsky's performance status and depression history were the most often linked variables with comorbid depression (Cull2, 1999). This research demonstrated that there was an association **between** physical health and the amount of depression in breast cancer survivors (0.003). (0.003). There are a variety of therapies used by cancer survivors. 124 respondents (78.5%) had the surgical procedure known as mastectomy. According to the findings of the interviews, the majority of respondents had their whole breasts removed along with the cancerous tissue. Breasts are a highly significant component of a woman's body. The choice to have mastectomy surgery may be a challenging one for breast cancer patients to make. Loss of a portion or all of the breast may result in psychological issues in patients, including embarrassment, reduced self-image, low self-esteem, and even despair. The majority of responders in this research (94.6%) also got chemotherapy as a systemic treatment.

Chemotherapy is used to suppress or halt the proliferation of oncogene (cancer) cells in the body of the patient. Chemotherapy is the use of cytostatic medications containing chemicals to treat cancer. The working premise of chemotherapy medications is to target particular stages or all phases of mitotic division in fast replicating or developing cells, which are thought to be oncogene cells that multiply. Chemotherapy medications sometimes damage hair cells and other rapidly dividing cells when their mitotic cycle falls within the target range of the chemotherapy drugs, but have essentially little effect on resting (non-dividing) cells (RI, 2022). According to Regnard and Kinden (2019), cancer cells tend to proliferate rapidly, and chemotherapeutic agents eliminate these cells.

These medications disperse throughout the body, therefore affecting healthy, normal cells that are also proliferating rapidly. Destruct to healthy cells creates negative consequence. The normal cells most likely to be harmed by chemo include blood-forming cells in the bone marrow, hair follicles, cells in the reproductive system, digestive tract, and mouth. Certain chemotherapy medications may harm the heart, kidneys, bladder, lungs, and neurological system (Regnard and Kindlen, 2019). Several of the usual adverse effects of chemotherapy were also seen in the participants of this research. Complaints that are felt, particularly hair loss, even to the point where the head becomes bald, and feelings of weakness or fatigue. It was shown that more than half of the respondents suffered moderate physical issues (52,3%) and almost half had mild/few physical complaints (41,1%).

This degree of depression was tested using the standard 7-item Hamilton Depression Rating Scale (HAM-D7) questionnaire, which covered the following factors: 1). Depressed sentiments; 2). Guilt; 3). Attention, enjoyment, activity level; 4). Tense, restless (anxious); 5). Physical indicators of worry; 6). Energy level; 7). Suicide (Khullar and McIntyre, 2004). The findings revealed that the majority of respondents had moderate depression (mild), comprising 44.9%, and not depressed/full remission, comprising 44.3%, with a mean depression score of 4.88 indicating that respondents were at a mild depression level (mild). This study's findings are almost identical to those of Widiyono et al. (2017), in which 25.71% of cancer patients suffered mild depression, 45.71 % had moderate depression, and 28.58% had severe depression (Widiyono, Setiyani and Effendi, 2017). The initial recurrence of breast cancer is very challenging for patients and is often accompanied with psychological stress, including elevated rates of depressive and anxiety disorders (more than 40 percent). The depression incidence in cancer of breast is estimated approximately 52.65% by Zabora et al.in huge samples patients of cancer (n=4,496) (Reich, Lesur and Perdrizet-Chevallier, 2008).

Due to the absence of social support for cancer survivors, cancer patients may have psychosocial issues. Social support is the most often researched psychosocial variable, according to Culbertson's (2000) study of the scientific literature (Culbertson et al., 2020). The family is the smallest unit (Friedman and Vicky R. Bowden, 2010) therefore the patient's immediate surroundings is crucial. The healing process of ailing family members need the help of their families. A strong family unit will boost the health of its members (Husni, Romadoni and Rukiyati, 2012). Anxiety and depression-afflicted patients have a strong demand for family support. This familial social support is anticipated to minimize the depressive symptoms of breast cancer survivors. The presence of a spouse (husband) becomes a vital component of the clients' support system. This research revealed that there

was a correlation **among** breast cancer survivors' marital status and their degree of depression (0.021). Therefore, having a support system is essential for cancer survivors.

Motivation and passion to heal is really crucial. This research revealed a correlation **between** social support and the degree of depression among breast cancer survivors (0.002). It is consistent with the findings of Yuliati et al (Yuliati, Fitriani and Maliya, 2020) that there is a strong association **among depression and** family support in patients of breast cancer, with the degree of depression decreasing as family support increases.

Cancer patients sometimes also need non-pharmacological therapy to treat anxiety or depression. The most popular interventions were education, relaxation, psychological intervention, naturopathy, yoga, dietary, consultation, physical activity, and entertainment activities (Preechawong, 2023).

According to (WHOQOL)-BREF-The World Health Organization 2004 one of the domains for assessing quality of life is the social connections dimension (Group, 1998). Social assistance is an integral element of the domain. With strong social support, living quality will improve. On the other hand, with excellent social support, it is predicted to lessen the degree of depression. Survivors of breast cancer report experiencing physical pain, but with excellent social support from family and the will to recover, they may lower their degree of sadness throughout treatment. The findings of this research reveal that there is a link **between** social support and the amount of depression. This is in accordance with the findings of study by Yuliana et al.(Yuliana, Mustikasari and Fernandes, 2020) also shown a correlation **among** social support and depression among breast cancer patients ( $p=0.000$ ).

The limitation of this research is that sampling did not use random techniques because it is difficult to do this on patients who are undergoing therapy in hospital.

## **CONCLUSIONS**

The conclusion from the results of this study are:

1. There was no relationship between age with the level of depression in breast cancer survivors (0.28).
2. There was no relationship between the level of education with the level of depression in breast cancer survivors (0.752).
3. There was a relationship between marital status with the level of depression in breast cancer survivors (0.021).



4. There was no relationship between the length of illness with the level of depression in breast cancer survivors (0.265)
5. There was a relationship between physical condition with the level of depression in breast cancer survivors (0.003).
6. There was a relationship between social support with the level of depression in breast cancer survivors (0.002).
7. The determinants of factors that influence the level of depression are marital status, social support and physical condition in breast cancer survivors

#### Recommendation

1. Breast cancer survivors are expected to maintain the spirit to recover, not to despair and remain grateful for the conditions experienced so that they do not fall into a state of depression that can reduce their health levels.
2. For families, it is necessary to continue to provide social support, especially those who experience physical problems due to illness and the process of cancer therapy so that the level of depression in breast cancer survivors is low.
3. Future researchers are expected to conduct further research on efforts to increase motivation to recover and reduce depression levels for breast cancer survivors.

#### **ACKNOWLEDGEMENT**

Thanks to:

1. Director of Health Polytechnic of Malang, Ministry of Health, Indonesia who has supported financial support this research
2. The research center of the Health Polytechnic of Malang, Ministry of Health, Indonesia which has facilitated this research activity
3. Hospitals where the research was conducted in Malang Raya (Saiful Anwar Malang Regional General Hospital, Panti Waluyo Sawahan Hospital Malang, Lavallete Hospital Malang. Level II Hospital dr. Soepraoen Malang), as well as those who are willing to provide information about cancer patient data breast: Blitar City Health Office, Ngudi Waluyo Wlingi Hospital Blitar, Ponorogo District Health Office, Trenggalek District Health Office.
4. The research team and enumerators who have worked hard to collect research data.

#### **REFERENCES**

Cull2, M. A. & A. (1999) 'Depression in breast cancer patients: The need for treatment',



*Annals of Oncology*. Kluwer Academic Publishers. Primed in the Netherlands, 10, pp. 627–636. doi: 10.1023/A.

Depkes RI (2018) 'Pusat Data Dan', *Kementerian Kesehatan RI*, p. 1. Available at: <https://www.depkes.go.id/article/view/18030500005/waspada-peningkatan-penyakit-menular.html%0Ahttp://www.depkes.go.id/article/view/17070700004/program-indonesia-sehat-dengan-pendekatan-keluarga.html>.

Friedman, M. M. and Vicky R. Bowden, E. O. J. (2010) 'Buku Ajar Keperawatan Keluarga: Riset, Teori, & Praktik= Family Nursing: Research, Theory and practice'. Jakarta: EGC.

Group, T. H. E. W. (1998) 'Development of the World Health Organization WHOQOL-BREF Quality of Life Assessment', *Psychological Medicine*, 1998. Printed in the United Kingdom # 1998 Cambridge University Press, 28, pp. 551–558.

Husni, M., Romadoni, S. and Rukiyati, D. (2012) 'HUBUNGAN DUKUNGAN KELUARGA DENGAN KUALITAS HIDUP PASIEN KANKER PAYUDARA DI INSTALASI RAWAT INAP BEDAH RSUP Dr. MOHAMMAD HOESIN PALEMBANG TAHUN 2012'. Available at: [https://ejournal.unsri.ac.id/index.php/jk\\_sriwijaya/article/view/2334/1197](https://ejournal.unsri.ac.id/index.php/jk_sriwijaya/article/view/2334/1197) 1.

Jatim, D. P., Dinas, K. and Jawa, K. (2020) 'Serviks dan Payudara , Dominasi Kanker di Jawa Timur'. Available at: <https://kominfo.jatimprov.go.id/read/umum/serviks-dan-payudara-dominasi-kanker-di-jawa-timur->.

Luthfiyyah Khanuun(1\*), S. N. N. M. (2021) 'Social Support To Women With Breast Cancer Undergoing Treatment', *Media Keperawatan Indonesia*, 4(3). Available at: <https://jurnal.unimus.ac.id/index.php/MKI/article/view/7804>.

Panigroro, S., Hernowo, B. S. and Purwanto, H. (2019) 'Panduan Penatalaksanaan Kanker Payudara (Breast Cancer Treatment Guideline)', *Jurnal Kesehatan Masyarakat*. Jakarta: Kemenkes RI, pp. 1–50. Available at: <http://kanker.kemkes.go.id/guidelines/PPKPayudara.pdf>.

Parisa Mokhtari-Hessari1, 2 and Ali Montazeri (2020) 'Health-related quality of life in breast cancer patients: review of reviews from 2008 to 2018', *Health and Quality of Life Outcomes*, 18(1), pp. 1–25. doi: 10.1186/s12955-020-01591-x.

Park, J. H. *et al.* (2021) 'Determinants of quality of life in women immediately following the completion of primary treatment of breast cancer: A cross-sectional study', *PLoS ONE*, 16(10 October), pp. 1–13. doi: 10.1371/journal.pone.0258447.

Pilevarzadeh, M. *et al.* (2019) 'Global prevalence of depression among breast cancer patients: a systematic review and meta-analysis', *Breast Cancer Research and Treatment*. Springer US, 176(3), pp. 519–533. doi: 10.1007/s10549-019-05271-3.

Preehawong, T. T. H. H. C. J. S. (2023) 'NON PHARMACOLOGICAL INTERVENTION ON ANXIETY AMONG COLORECTAL CANCER: A SYSTEMATIC REVIEW'. <https://proceeding.poltekkesbengkulu.ac.id/index.php/biconhealth/issue/view/3>, pp. 170–181. Available at: <https://proceeding.poltekkesbengkulu.ac.id/index.php/biconhealth/article/view/31>.

Regnard, C. and Kindlen, M. (2019) 'Chemotherapy: side effects', *Supportive and Palliative Care in Cancer*, pp. 39–41. doi: 10.1201/9781315378596-13.

Reich, M., Lesur, A. and Perdrizet-Chevallier, C. (2008) 'Depression, quality of life and breast cancer: A review of the literature', *Breast Cancer Research and Treatment*, 110(1), pp. 9–17. doi: 10.1007/s10549-007-9706-5.

RI, D. Y. K. (2022) 'Mitos seputar kemoterapi'. Jakarta: Direktorat Jendral Pelayanan Kesehatan Kemenkes RI. Available at: [https://yankes.kemkes.go.id/view\\_artikel/1366/mitos-seputar-kemoterapi](https://yankes.kemkes.go.id/view_artikel/1366/mitos-seputar-kemoterapi).

Salem, H. and Daher-Nashif, S. (2020) 'Psychosocial aspects of female breast cancer in the middle east and North Africa', *International Journal of Environmental Research and Public Health*, 17(18), pp. 1–16. doi: 10.3390/ijerph17186802.

Sugiyono (2010) 'Statistika untuk Penelitian'. Bandung: Alfabeta.

Sumartiningtyas, H. K. (2021) 'Kanker Payudara Paling Banyak Didiagnosis di Dunia'. Jakarta: Kompas.com, pp. 2020–2021.

Syarief, I. S. (2021) '19 , 3 Juta Orang di Dunia Menderita Kanker , Paling Banyak Kanker Payudara'. Surabaya: suarasurabaya, pp. 4–8. Available at: <https://www.suarasurabaya.net/kelanakota/2021/193-juta-orang-di-dunia-menderita-kanker-paling-banyak-kanker-payudara/>.

Widiyono, Setiyani, S. and Effendi, C. (2017) 'Tingkat Depresi pada Pasien Kanker di RSUP Dr. Sardjito, Yogyakarta, dan RSUD Prof. Dr. Margono Soekarjo, Purwokerto', *Journal of Cancer*, 11(4), pp. 171–177.

Yuliana, Y., Mustikasari, M. and Fernandes, F. (2020) 'Hubungan Dukungan Sosial dengan Kecemasan dan Depresi pada Pasien Kanker Payudara di RSU Raden Mattaher Jambi', *Jurnal Ilmiah Universitas Batanghari Jambi*, 20(1), p. 1. doi: 10.33087/jiubj.v20i1.786.

Yuliati, L. D., Fitriani, R. D. and Maliya, A. (2020) 'Hubungan Dukungan Keluarga dengan Depresi pada Pasien Kanker Payudara', *Prosiding Seminar Nasioanal Keperawatan Universitas Muhammadiyah Surakarta*, pp. 56–61.

ORIGINALITY REPORT

---

7%

SIMILARITY INDEX

4%

INTERNET SOURCES

4%

PUBLICATIONS

3%

STUDENT PAPERS

---

MATCH ALL SOURCES (ONLY SELECTED SOURCE PRINTED)

---

< 1%

★ Submitted to Submitted on 1693246197003

Student Paper

---

Exclude quotes Off

Exclude matches Off

Exclude bibliography Off