

## Research Article

# Low Self-efficacy in Breast Cancer Patients Undergoing Treatment During the COVID-19 Pandemic

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Self-efficacy is needed as a basis for action and is defined as a person's ability to take care of himself in order to achieve the expected results. Breast cancer patients need good self-efficacy to undergo treatment, especially during the COVID-19 pandemic. This study aims to describe the characteristics of breast cancer patients and their relationship with self-efficacy during treatment at the Dharmais Cancer Hospital. The study design used was cross-sectional, involving 107 cancer patients through consecutive sampling. Self-efficacy was assessed using the Cancer Behavior Inventory (CBI) instrument. Data were analyzed using the Chi-square test. The results showed that as many as 69 respondents (64%) had low self-efficacy during the COVID-19 pandemic. The results showed that age ( $p = 0.008$ ), employment status ( $p = 0.026$ ), monthly income ( $p = 0.000$ ), and ward ( $p = 0.031$ ) had significant relationship to self-efficacy. Self-efficacy describes the optimistic perception of cancer patients being able to overcome their cancer-related stressors. In probable or confirmed cases of COVID-19, most patients will fall into a state of psychological crisis, unstable emotions, rejection, anger, and non-compliance with treatment. Education and counseling regarding self-efficacy are needed in an effort to increase the self-efficacy of breast cancer patients undergoing treatment during the COVID-19 pandemic at Dharmais Cancer Hospital Jakarta.

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## 1. Introduction

Breast cancer is the highest cancer case in women in the world, including in Indonesia. In 2022, new cancer cases and cancer-causing deaths are increasing.<sup>(1)</sup> This could be due to the low self-efficacy of cancer patients, including breast cancer patients.

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Self-efficacy determines the patient's decision in carrying out the treatment to be carried out. Proper cancer treatment can inhibit the growth and spread of cancer cells. When cancer treatment is stopped during treatment, cancer will continue to grow and may metastasize.<sup>(2)</sup> Many factors affect self-efficacy. This factor is exacerbated by the COVID-19 pandemic, where there is a dilemma here. The patient wants to get treatment by going to the hospital, but with a low immune system, it is very possible to be at risk of getting a COVID-19 infection. High self-efficacy is needed to overcome this condition.

Corona Virus Disease 2019 (COVID-19) is an infectious disease caused by a new type of coronavirus. People infected with the coronavirus will experience moderate to severe respiratory problems. The elderly and people with a history of health diseases such as cardiovascular disease, diabetes, chronic lung disease, and cancer will have a more severe condition when exposed to the COVID-19 virus.<sup>(3)</sup>

Good self-efficacy will have a positive effect on health behavior. Good self-efficacy is needed by cancer patients in treatments such as chemotherapy, surgery, and radiation. If the level of self-efficacy is low, the readiness to face something difficult will also be low. Self-efficacy will affect the quality of life of cancer patients.<sup>(4)</sup>

## 2. Methods

This study's research design was descriptive correlation with a cross-sectional method. The sample used in this study was 107 respondents of breast cancer patients who underwent cancer treatment either through surgery, surgical chemotherapy, radiation, or other treatments such as immunotherapy. Data collection procedures were carried out using a cancer behavior inventory questionnaire designed by Merluzi in 2001; data processing and data analysis were carried out using SPSS by describing the characteristics of breast cancer respondents, self-efficacy, and looking for the relationship between breast cancer respondent characteristics and self-efficacy during the COVID-19 pandemic. When collecting data, the researcher pays attention to the ethical principles of research such as the principle of benefit, fairness, openness, the principle of being free from harm, inconvenience, freedom from data exploitation, the principle of autonomy and individual responsibility. Before the researcher collects data on the respondents, the researcher has conducted an ethical test in Dharmais Cancer Hospital and passed ethics with No. 036/KEPK/IV/2021.

### 3. Results

Please refer to Tables 1 to 3.

TABLE 1: Characteristics of Breast Cancer Respondents.

Variable	Frequency	Percentage
<b>Age</b> Adolescent Early Adulthood (26-35 years old) Late Adulthood (36-45 years old) Early Elderly (46-55 years old) Late Elderly (56-65 years old) Elderly (above 65 years old)	1 20 30 30 17 9	0.9% 18.7% 28% 28% 15.9% 8.4%
<b>Level of Education</b> Higher Education (Academy, Diploma, Bachelor, Master, Doctoral) High Education (High School, Islamic High School, Vocational High School, Vocational Islamic High School) Lower Education (Elementary School, Islamic Elementary School, Junior High School, Islamic Junior High School)	41 47 19	38.3% 43.9% 17.8%
<b>Marital Status</b> Married Not married	98 9	91.6% 8.4%
<b>Job Status</b> Employed Unemployed	32 75	29.9% 70.1%
<b>Monthly Income</b> Less than Minimum Wage in Jakarta (Rp4,416,186.00) Above Minimum Wage (Rp4,416,186.00)	79 28	73.8% 26.2%
<b>Diagnostic Duration</b> Less than 1 year 1-3 years More than 3 years	43 45 19	40.2% 42.1% 17.8%
<b>Type of Treatment</b> Surgery Chemotherapy Radiation Other Therapy	26 64 5 12	24.3% 59.8% 4.7% 11.2%
<b>Cancer Stage</b> Stage I Stage II Stage III Stage IV	4 33 49 21	3.8% 30.8% 45.8% 19.6%
<b>Social Support</b> There is social support There is no social support	106 1	99.1% 0.9%
<b>Health Insurance</b> Social Security Organizing Agency (Health) or <i>Badan Penyelenggara Jaminan Sosial (BPJS Kesehatan)</i> iPrivate Insurance Personal	100 4 3	93.5% 3.7% 2.8%
<b>Ward</b> Inpatient Outpatient	60 47	56.1% 43.9%

TABLE 2: Self-efficacy of breast cancer patients undergoing treatment during the COVID-19 pandemic.

Efficacy Category	Frequency (n)	Percentage (%)
High	38	36%
Low	69	64%

### 4. Discussion

The characteristics of breast cancer respondents showed that all respondents were female, with a total of 107 people (100%). This is because only about 1000 men suffer from breast cancer.<sup>(5)</sup> In Indonesia, women have the characteristic of needing support from their families to overcome their problems, especially problems that they cannot

TABLE 3: The relationship between respondent characteristics and self-efficacy.

Age	Self-Efficacy				Total		P value (α: 0,05)
	Low		High		n	%	
	N	%	N	%			
Late Adolescent	1	100	0	0%	1	100	0.008*
Early Adulthood	17	85	3	15	20	100	
Late Adulthood	22	73.3	8	26.7	30	100	
Early Elderly	11	36.7	19	63.3	30	100	
Late Elderly	12	70.6	5	29.4	17	100	
Elderly	6	66.7	3	33.3	9	100	
<b>Total</b>	69		38		107		
<b>Level of Education</b>							
Higher Education (Academy, Diploma, Bachelor, Master, Doctoral)	25	61	16	39	41	100	0.139
High Education (High School, Islamic High School, Vocational High School, Vocational Islamic High School)	28	59.6	19	40.4	47	100	
Lower Education (Elementary School, Islamic Elementary School, Junior High School, Islamic Junior High School)	16	84	3	16	19	100	
<b>Total</b>	69		38		107		
<b>Stadium</b>							
Stage 1	1	25	3	75	4	100	0.080
Stage 2	23	69.7	10	30.3	33	100	
Stage 3	28	57.1	21	42.9	49	100	
Stage 4	17	80.9	4	19.1	21	100	
<b>Total</b>	69		38		107		
<b>Type of Treatment</b>							
Surgery	20	80	5	20	25	100	0.104
Chemotherapy	37	57.8	27	42.2	64	100	
Radiation	2	40	3	60	5	100	
Other Therapy	10	89.2	2	10.8	12	100	
<b>Total</b>	69		37		107		
<b>Health Insurance</b>							
Social Security Organizing Agency (Health) or <i>Badan Penyelenggara Jaminan Sosial (BPJS Kesehatan)</i>	64	64	36	36	100	100	0.363
Private Insurance	2	50	2	50	4	100	
There is no Insurance	3	100	0	0	3	100	
<b>Total</b>	69		38		107		
<b>Diagnostic Duration</b>							
<1 year	26	60.5	17	39.5	43	100	0.605
1-3 years	29	64	16	36	45	100	
>3 year	14	73.6	5	26.4	19	100	
<b>Total</b>	69		38		107		

TABLE 4

Marital Status	Self-Efficacy				Total		OR (95% CI)	P value (α: 0,05)
	Low		High		n	%		
	N	%	N	%				
Married	62	63	36	37	98	100	0.492 0.97 – 2.497	0.384
Unmarried	7	77.8	2	22.2	9	100		
<b>Total</b>	<b>69</b>		<b>38</b>		<b>107</b>			
Job Status								
Employed	21	65.6	11	34.4	32	100	1.074 0.451- 2.560	0.026*
Unemployed	48	64	27	36	75	100		
<b>Total</b>	<b>69</b>		<b>38</b>		<b>107</b>			
Monthly Income								
Less than Minimum Wage (Rp 4,416,186.00)	59	74.7	20	25.3	79	100	5.310 2.107- 13.285	0.000*
Above UMR Jakarta (Rp4,416,186.00)	10	35.7	18	64.3	28	100		
<b>Total</b>	<b>69</b>		<b>38</b>		<b>107</b>			
Ward								
Inpatient	44	73.3	16	26.7	60	100	0.413	0.031*
Outpatient	25	53.2	22	77.8	47	100	0.184-0.929	
<b>Total</b>	<b>69</b>		<b>38</b>		<b>107</b>			

solve on their own. The condition of breast cancer will affect the future life of a woman. If you are not married, it may be difficult to find a life partner. If you are married, it will affect the harmony of your family. Breasts are a valuable asset for women, especially for fulfilling sexual needs, both for themselves and for their life partners. Health workers must pay attention to the sexual needs of breast cancer patients.<sup>(6)</sup>

Based on age, most of the respondents were in late adulthood (36–45 years) and early elderly (46–55 years) each (28%). This shows that the age of cancer has begun to shift to an earlier or younger stage. At this younger age, self-efficacy, which will better affect the self-management of breast cancer patients.<sup>(7)</sup> Good self-management is very much needed by breast cancer patients. A young age is a productive age, whereby at this age, they become a mainstay for the family to meet family needs.

In the condition of illness, the family can not get what is expected. Breast cancer patients really need help and support from their families. At that time, the family is expected to understand and provide support. Breast cancer patients experience stress and anxiety. It's not only patients who experience stress and anxiety; this also happens

to their families and caregivers who take care of them.<sup>(8)</sup> Therefore, interventions are also carried out on families and caregivers.

Strengths in Indonesia: the nature of kinship, mutual care, and mutual help are traits that have been instilled since childhood. However, many also recommend traditional treatments, which, of course, can influence the patient's decision to seek proper treatment. Here, the role of health workers as patient advocates is to provide proper and appropriate explanations in determining attitudes towards the treatment to be carried out. Today, with the sophistication of technology, young people have the advantage of finding the right information. The use of technology is proven to affect the self-efficacy of cancer patients.<sup>(8,9)</sup>

Based on level of education, some respondents have secondary education (high school, Islamic high school, vocational high school, vocational Islamic high school), that is 47 people (43.9%). Higher education will certainly affect the cognitive abilities and attitudes of cancer patients towards the treatment that will be carried out. This high school education is a basic education that should be able to determine the right treatment. However, education from health workers must still be given so as not to act wrongly. The results of the study prove that education plays an important role in the prognosis and self-efficacy of breast cancer patients.<sup>(10)</sup>

Based on marital status, most of the respondents were married, namely 98 people (91.6%), compared to respondents who were unmarried and widowed. Support from the husband or life partner is needed. A good husband, of course, will accept anything from his wife's condition. To improve the self-efficacy and psychological condition of breast cancer patients, education is given not only to cancer patients but also to their husbands or life partners.<sup>(10)</sup>

Based on job status, most of the respondents were unemployed, namely 75 people (70.1%). At the time of data collection at Dharmais Cancer Hospital, respondents said that most of them did not work due to illness and chose to become housewives. The reason for being sick with breast cancer is what makes respondents who originally had jobs choose to quit their jobs and focus on the treatment they are undergoing. Breast cancer requires high treatment costs. Financial difficulties are significant stressors that can impair the efficacy of breast cancer patients.<sup>(11)</sup>

Based on the average monthly income, most respondents earn below the minimum wage (Rp4,416,186.00), as many as 79 people (73.8%), while those with income above the minimum wage (Rp4,416,186.00) are 28 people (26.2%). This shows a fairly low income for breast cancer patients. Financial difficulties are a special concern for breast

cancer patients. Financial difficulties resulted in patients not being able to get proper treatment or the right treatment. <sup>(12)</sup>

When viewed from the perspective of the cancer stage, the majority of breast cancer respondents are in stage III or advanced stages. Breast cancer can be treated well if found as early as possible. The advanced stage condition found in the majority shows that the low rate of early detection of breast cancer patients is still lacking, so the public must be frequently educated to carry out early detection to prevent the severity of breast cancer.<sup>(13)</sup> Death in breast cancer patients also often occurs in low-income women with breast cancer.<sup>(14)</sup> This is due to delays in early detection and immediate inspection by respondents. In addition, there were several respondents who said that they had felt a lump in their breast but were ignored and considered it an itch that would disappear by itself.

Based on health insurance, most respondents use BPJS insurance for 100 people (93.5%). With 2.2 million cases recorded in 2018, BPJS is Indonesia's largest insurance, and cancer treatment is the third most expensive after heart disease and stroke (17%).

Based on the place where breast cancer treatment was carried out, 60 respondents (56.1%) carried out treatment in inpatient care. Patients treated at Dharmais Cancer Hospital had a high efficacy rate of 38 (36%). As many as 64% of respondents have low efficacy.

#### 4.1. Self-Efficacy

Self-efficacy plays an important role in the management of chronic diseases, such as cancer. Cancer-related self-efficacy is a belief in one's ability to perform the behaviors needed to manage the consequences of cancer and treatment. Self-efficacy will determine the quality of life of breast cancer patients. <sup>(4)</sup>

Self-efficacy describes the optimistic perception of cancer patients as being able to cope with stressors related to cancer. Women with breast cancer will have to deal with the psychological impact they experience. The psychological impact includes the emotional state of the sufferer, such as shock, fear, anxiety, blame, loneliness, uncertainty, depression, fatigue, denial, and vulnerability. COVID-19 has become a new stressor for breast cancer patients; this has an impact on the continuity of the treatment being undertaken. Several studies have found that when patients are diagnosed as probable or confirmed cases of COVID-19, most patients will fall into a state of psychological crisis, emotional instability, rejection, anger, and non-adherence to treatment. <sup>(15)</sup>

Good self-efficacy requires effective coping when dealing with unstable emotions. Effective coping is related to self-efficacy.<sup>(16)</sup> Interventions that focus on being a patient, interpersonal relationships, the journey of recovery, and planning the future have been proven to be effective in improving coping and self-efficacy in breast cancer patients.<sup>(17)</sup> Self-efficacy is an important factor for breast cancer patients. High self-efficacy in breast cancer patients is related to the adjustment of the patient's psychological condition. Expressive writing is also recommended as an effective coping tool for breast cancer patients.<sup>(18)</sup> In addition, self-care is also a good mediator for self-efficacy and quality of life for breast cancer patients.<sup>(19)</sup>

The results of this study indicate that the self-efficacy levels of breast cancer respondents at Dharmais Cancer Hospital, the majority have low self-efficacy (64%), and the rest are high levels (36%). This can be related to the COVID-19 pandemic, where COVID-19 is a new stressor that breast cancer respondents must face to get complete treatment, including surgery, chemotherapy, radiation, and immunotherapy. Health has improved as the COVID-19 crisis continues. A total of 79% of patients experienced treatment delays, including 17% of patients on active treatment who reported delaying their cancer therapy (such as chemotherapy, radiation, or returning to therapy). Improving self-efficacy can be done with multidisciplinary cooperation among health workers.<sup>(20)</sup>

Delays were also common in patients not currently on active treatment, 78% of whom reported their health care (including cancer-related care and return or preventive care and treatment for other ongoing health problems) had been delayed. One-fifth of all cancer patients and survivors surveyed reported concerns that their cancer could grow or come back because of the challenges they face in obtaining health care.<sup>(2)</sup> Nearly half of respondents (48%) reported that their experience as a cancer survivor during the COVID-19 pandemic affected their mental and/or emotional health. Physical distancing in many areas creates an additional two-thirds of stress and anxiety (67%).<sup>(2,15)</sup>

According to the findings of a study conducted at the Dharmais Cancer Hospital, age ( $p = 0.008$ ), employment status ( $p = 0.026$ ), monthly income ( $p = 0.000$ ), and ward ( $p = 0.031$ ) had a significant relationship with self-efficacy. The first factor is age. The results showed that the majority of those with high self-efficacy were in the late elderly age category, namely 19 respondents (17.5%), while those with low self-efficacy were mostly in the late adult age category, which had 22 respondents (20.5%). The results of the study found a relationship between age and self-efficacy with ( $p = 0.008$ ), which is related to Bandura's self-efficacy theory, which states that older people are better at overcoming problems that occur in their lives than younger individuals.<sup>(21)</sup> This is because self-efficacy is obtained through cognitive, affective, motivational, and selection



processes.<sup>(21)</sup> Self-efficacy and treatment management are the keys to success in the treatment of adult patients with breast cancer patients.<sup>(22)</sup>

The second factor is employment status. The research results conducted at the Dharmais Cancer Hospital showed that respondents with high self-efficacy were mostly respondents who did not work; as many as 27 respondents (25.3%) in this study showed there was a significant relationship between job status and self-efficacy ( $p = 0.026$ ). This can happen because respondents who originally had jobs decide to stop working due to illness and choose to become housewives because they choose to focus on the treatment they undergo.

The fourth factor is the ward. The results showed that there was a relationship between the ward where the treatment was carried out and the level of self-efficacy of breast cancer patients undergoing treatment during the pandemic ( $p = 0.031$ ). This is because chemotherapy treatment causes a significant increase in physical symptoms and psychological distress in cancer patients compared to other treatments, thus negatively affecting self-efficacy. The COVID-19 pandemic has also become a new stressor for outpatients, where the requirements that must be followed, such as taking a swab before the action, make breast cancer respondents stressed. This is consistent with the source of self-efficacy, which states that a person's self-efficacy can be developed through four factors, one of which is the person's physical and affective state; crowded visitors and the many requirements that must be completed prior to treatment result in the emergence of somatic symptoms such as feelings of pain, abdominal pain, headaches, and emotional responses such as stress, all of which reduce self-efficacy.

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## 5. Conclusion

Low self-efficacy in breast cancer patients undergoing treatment during the COVID-19 pandemic at Dharmais Cancer Hospital. Education and counseling regarding self-efficacy are needed in an effort to increase the self-efficacy of breast cancer patients undergoing treatment during the COVID-19 pandemic at Dharmais Cancer Hospital Jakarta.

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