

The Relationship Between Body Image Disorders And Stress Levels In Cancer Patients Undergoing Chemotherapy At Banjarmasin Hospital

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ABSTRACT

Cancer is a non-communicable disease which is a public health problem. One of the procedures often used in cancer treatment is chemotherapy. Chemotherapy has physical and psychological side effects. The results of a preliminary study at Banjarmasin Hospital on 9 respondents and found that 5 of them often felt restless, anxious, and experienced baldness due to the effects of chemotherapy. To find out the relationship between body image disturbance and stress levels in cancer patients at Banjarmasin Hospital in 2019. This study used a quantitative method, *cross sectional design*. The sample consisted of 28 cancer patients undergoing chemotherapy at Banjarmasin Hospital, who were taken by *purposive sampling method*. Data were analyzed using the Spearman rho test. The results showed that body image disturbance in cancer patients was moderate (64%) with a severe stress level category (43%). There is a significant correlation between body image disturbance and stress levels and the strength of the relationship is moderate.

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1. INTRODUCTION

Cancer is one of the non-communicable diseases which is a public health problem, both in the world and in Indonesia. Cancer is one of the main causes of death worldwide. The high number in the world and in Indonesia makes cancer the second killer after cardiovascular disease which causes 12% of deaths in the world (Ministry of Health, 2010). Cancer is a group of diseases characterized by uncontrolled cell division and the ability of these cells to invade other biological tissues, either by direct growth in adjacent tissues (invasion) or by migrating cells to distant places (metastasis) (Amalia, 2009).

The number of cancer patients worldwide continues to increase significantly. The latest report released by the International Agency for Research on Cancer, the World Health Organization (WHO) estimates that there will be 18.1 million new cancer cases and 9.6 million deaths this year (CNN Indonesia, 2018). Based on data in Indonesia, the 2018 Basic Health Research (Riskesdas) shows the prevalence of cancer has increased from 1.4 percent in 2013 to 1.8 percent in 2018 (RI Ministry of Health, 2018). And in South Kalimantan, based on the medical records of the Banjarmasin Hospital, South Kalimantan, the highest number of cases was 1,278 patients diagnosed with cancer and the latest was in December 2017. Then, based on report data from the Banjarmasin Hospital, it was found that in 2018 there were 3,376 cancer patients.

Cancer is a disease that people are very afraid of because it often causes death. Cancer is a disease caused by abnormal growth of body tissue cells which can then turn into cancer cells. Its development involves damage to the cells' DNA (Deoxyribonucleic Acid), and this damage accumulates over time. These cells can invade the surrounding cell tissue and spread to other organs so that it can cause death. This process is known as metastasis (Mutiah 2015).

One of the most frequently used procedures for the treatment of cancer is chemotherapy. According to (Fauziana, 2011, in the study of Satria Adipo et al, (2014)), chemotherapy is a process in which anti-cancer drugs are administered in the form of liquid pills or capsules or through an infusion aimed at killing cancer cells, but not only cancer cells, but also cells throughout the body.

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According to (Nisman, 2011 in a study by Satria Adipo et al, (2014)) Chemotherapy has physical and psychological side effects in cancer patients. Usually the side effects of chemotherapy are already visible from the first chemotherapy. Nearly 80% of patients who receive chemotherapy will experience nausea and vomiting, changes in the taste of soy sauce, hair loss (alopecia), mucositis, dermatitis, fatigue, skin becomes dry and even stiff and the skin can turn black, loss of appetite, and pain in the bones. Patients also experience a decrease in the number of red blood cells, white blood cells, and platelets. Hair loss, including eyelashes and eyebrows generally begins 2-3 weeks after treatment. Chemotherapy can also often cause mucositis (injury to the wall of the gastrointestinal tract / oral cavity) and peripheral nerve disorders such as numbness and tingling in the toes and hands. Meanwhile, these physical side effects also have an impact on the psychology of cancer patients, namely in the form of helplessness, anxiety, embarrassment, decreased self-esteem, changes in body image due to physical changes and stress.

According to (Sriwahyuningsih, et al 2012, in Tria Fitri Deswinda wati's research, et al (2018)), one of the physical changes as a result of chemotherapy administration is a disturbance of body image. According to Cash (in Rosianan Putri's research, 2012) Disturbed body image is a form of dissatisfaction with the physical appearance of the body that does not meet the expected standards. Disturbed body image caused by physical changes in cancer patients which shows a decrease in one's self-image which will ultimately affect self-esteem. Threats to body image and also self-esteem make patients feel ashamed and dissatisfied with the structure, shape and function of the body because it does not match what is desired.

According to Cash (in Rosiana Putri's research, 2012) cancer patients who experience changes in body image can lead to increased stress due to the influence of body image. Cancer and cancer therapy often result in major psychological and physiological body image changes. Skin changes and hair loss due to chemotherapy or radiation therapy, body disfigurement (eg lymphedema of the upper and lower extremities) can have a major effect on an individual's self-image, especially increased stress. The longer the time of stress experienced by cancer patients, the more the treatment process will be hampered due to the lack of emotional support. The stress that often arises due to the side effects of chemotherapy will have a negative impact on the individual's immune system, due to a decrease in the immune system which causes a decrease in health. Stress is a form of mental response that often arises in cancer patients. Stress is a condition produced by changes in the environment that are accepted as something that is detrimental to a person's balance.

Stress includes events or facts in the environment that are perceived by the individual as a threat and the individual's reaction to the stressor. According to (Wulandari, 2016) cancer patients who experience increased stress as a result of the changes they are experiencing which they perceive as a threat to their physical and psychological well-being and cause uncertainty about their ability to deal with these events.

In patients who have experienced body image disturbances as a result of the perceived side effects of chemotherapy, it is not uncommon for patients to experience problems in carrying out their usual activities, namely self dissatisfaction and also having negative thoughts. Therefore, it is not surprising that every individual experiences a severe increase in stress so that attention is needed from family and those closest to them to provide more motivation so that patients can have a positive body image. One that can be given by family and closest people is to teach patients how to always think positively. By practicing their thinking skills, they can add confidence to the conditions experienced and can also help give positive suggestions to patients (in Akhmad Mukhlis' research, 2013).

The results of a preliminary study at Banjarmasin Hospital on 9 respondents found that 5 of them said they often felt restless, anxious, and experienced baldness due to the chemotherapy they were undergoing. In general, respondents complained of feeling insecure and often experienced sleep pattern disturbances, nausea and even vomiting, and their legs felt heavy to move, especially after chemotherapy.

And it was found that not least in cancer patients who experience stress levels due to physical changes that have occurred after chemotherapy treatment.

Based on the background stated above, researchers are interested in examining the relationship between body image disturbance and stress levels in cancer patients undergoing chemotherapy treatment at Banjarmasin Hospital. Given the incidence of cancer which is expected to increase and the side effects of the chemotherapy being undertaken.

2. METHODS

2.1 Research design

The type of research used in this research is cross sectional.

2.2 Operational definition

- a. Disturbed body image is dissatisfaction with the physical appearance of the body that does not meet the expected standards.
- b. Is a disorder of the body and mind caused by changes and demands of life that are influenced by the environment and individual appearance in the environment.

2.3 Population, Sample, and Sampling

The population in this study were all cancer patients undergoing chemotherapy at Banjarmasin Hospital with a total population from May 2019 - June 2019 of 232 cancer patients and a sample of 28 people. Sampling was carried out using a *non-probability technique* with purposive sampling method.

2.4 Place and time of research

This research was conducted at the Banjarmasin Hospital in May - June 2019 .

2.5 Data Collection Techniques and Tools

Instruments and data collection tools used in this study using a questionnaire to collect data formally to the subject to answer questions in writing.

2.6 Data analysis technique

Data analysis used in this study was univariate and bivariate analysis using the Spearman-Rho test .

3. RESULTS AND DISCUSSION

Overview of Research Sites

This research was conducted in the chemotherapy room of Banjarmasin Hospital. This chemotherapy room has another name, which is commonly known as the edelweiss room. The chemotherapy room is located on the 4th floor of Banjarmasin Hospital.

The chemotherapy room has 33 patient beds, namely 22 beds for chemotherapy patients, 9 beds for patients who need treatment and 2 beds for patients who are being isolated from leukemia.

Table 1 The number of workers holding positions in the 2019 Banjarmasin Hospital Chemotherapy room is as follows:

No.	Position	umber of people
1.	Surgical Oncology Specialist	3
2.	Oncoletion gynecology specialist	2
3.	Pulmonary oncologist	1
4.	Digestive surgery specialist	2
5.	Nurse S1 Nurses	2
6.	Nurse S2	1
7.	Nurse S1	1
8.	Nurse D3	10

Characteristics of Respondents

Age

Table 4.2 Characteristics of respondents based on age in the chemotherapy room at Banjarmasin Hospital in 2019

Age (Years)	Frequency	Percentage
> 40	13	46%
< 40	15	54%
Amount	28	100%

Table 2 shows that most of the respondents are aged <40 years, totaling 15 people with a percentage of 54%.

Gender of Respondents

Table 3 Characteristics of respondents based on gender in the chemotherapy room at Banjarmasin Hospital in 2019

Gender	Frequency	Percentage
Woman	17	61 %
Man	11	39%
Amount	28	100 %

Table 3 shows that the majority of respondents are female, totaling 17 people with a percentage of 61%.

Respondent Education

Table 4.4 Characteristics of respondents based on education in the chemotherapy room at Banjarmasin Hospital in 2019.

Education	Frequency	Percentage
SD	11	39 %
JUNIOR HIGH SCHOOL	3	11 %
SENIOR HIGH SCHOOL	11	39 %
S1	3	11 %
Amount		100 %

Table 4 shows that most of the respondents had elementary and high school education, each numbering 11 people with a percentage of 39%.

Univariate analysis

Body Image

Table 5 Distribution of the frequency of body image categories in cancer patients undergoing chemotherapy treatment at Banjarmasin Hospital in 2019

No.	Body image disturbance	Frequency	Percentage
1.	Very low	0	0%
2.	Low	0	0%
3.	Currently	18	64%
4.	Tall	10	36%
5.	Very high	0	0%
	Amount	28	100 %

Based on table 5, it can be seen that most of the respondents experienced moderate body image, namely 18 people (64%).

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stress level

Table 6 Frequency distribution of stress level categories in cancer patients undergoing chemotherapy treatment at Banjarmasin Hospital in 2019

No.	Stress level	Frequency	Percentage
1.	There isn't any	1	4%
2.	Light	6	21%
3.	Currently	9	32%
4.	Heavy	12	43%
5.	so heavy	0	0%
Amount		28	100%

From table 6 it can be seen that most of the respondents have a tendency to experience severe stress levels, namely as many as 12 people (43%)

Bivariate Analysis

Table 4.7 The relationship between body image disturbance and stress levels in cancer patients undergoing chemotherapy treatment at Banjarmasin Hospital.

Body Image	Stress level										Total	%
	There isn't any		Light		Currentl y		Heavy		So heavy			
	f	%	F	%	f	%	f	%	f	%		
Very low	0	0%	0	0%	0	00%	0	0%	0	0%	0	0%
Low	0	0%	0	0%	0	00%	0	0%	0	0%	0	0%
Currently	0	0%	1	5.6%	6	33.3%	11	61.1%	0	0%	18	100%
Tall	1	10%	5	50%	3	30%	1	10%	0	0%	10	100%
Very high	0	0%	0	0%	0	00%	0	0%	0	0%	0	0%
Amount	1	3.6%	6	21.4%	9	32.1%	12	42.9%	0	0%	28	100%

Spearman-Rho test results = 0.000 ; r = -0.625

Description: f = frequency

Based on table 4.7, it can be seen that the respondents who had moderate body image, namely 18 people (64%) had a tendency for severe stress levels of 11 people (61%) while high body image, namely 10 people with mostly light levels of stress, namely 5 people (50%) in cancer patients undergoing chemotherapy treatment.

DISCUSSION

Body image disturbance in cancer patients at Banjarmasin Hospital in 2019

Based on the data collection results from the research that has been done, it was found that body image in cancer patients undergoing chemotherapy treatment in the edelweiss room at Banjarmasin Hospital showed that the majority of respondents with body image disturbances were in the moderate category, namely 18 people (64%) and body image disturbances in the high category. as many as 10 people (36%). This shows that the majority of cancer patients undergoing chemotherapy treatment experience moderate body image disturbance because when the patient is undergoing chemotherapy treatment side effects of treatment are already visible from the first frequency of chemotherapy.

Based on the results of the research conducted, most of the respondents were still classified as late adults, namely aged <40 years (54%). This is because late adulthood is an age that is still very productive compared to those aged > 40 years who are no longer productive in maintaining their physical appearance. It was proven during the research that there were individuals who had dissatisfaction with the changes in physical appearance experienced after chemotherapy. Then also in cancer patients who are < 40 years old will experience bigger body image problems than those aged > 40 years because at the age of < 40 years is an age that is still very concerned about appearance and

how to dress. The younger a person's age, the higher the number of ways to look, and vice versa. This is in line with research conducted by Tria and Syarifah (2018), where at the age of those who have entered late adulthood, namely <40 years, an imbalance begins to occur in the levels of the hormones estrogen and progesterone in the body thereby activating the growth of cancer cells.

The research results obtained on the characteristics of the last respondent's education that the education level of the respondents, namely elementary and high school respectively, was 11 people (39%). Where in individual education can affect the process and also the side effects of the treatment of the disease itself. Because the higher the education, the better mindset will be created and will be more anticipatory so that the quality of life of individuals is higher compared to people with low education because they have broader knowledge and insight both from the social and spiritual fields, and have more self-confidence. tall. This is in line with the theory according to Oxtavia, Jumani, & Lestari, 2013 (In Tria and Syarifah's research, 2018) Someone who has a higher education will be able to control himself in overcoming the problems he faces and can also overcome anxiety so that he can help individuals in making decisions. decision and think positively about the problem at hand.

In addition, most of the patients who were respondents were 17 women (61%) and 11 men (39%). This was proven at the time of the study that there were many female patients compared to men undergoing chemotherapy treatment. So it is not uncommon for negative body image to be experienced by female patients. This is because many women think that the more fulfilled their physical appearance is, the higher their body image will be. Based on the results of the study, the researchers assumed that with negative body image results it would cause problems and limitations in carrying out daily activities and also cause feelings of dissatisfaction with physical appearance which causes disturbance of one's body image to increase. This is also supported by the research of Tria and Syarifah (2018) which says that after chemotherapy, patients will experience physical changes in appearance, social dysfunction, and decreased body health. Physical changes experienced will cause various problems, especially in women. Physical changes that are very often encountered are hair loss and changes in physical appearance such as weight loss that is no longer appropriate. According to Emslie (in Larsen, 2009) states that even though both men and women actually pay attention to the norms of beauty, women are reported to pay more attention to matters relating to their physical beauty than men.

Disturbed body image is a form of dissatisfaction with the physical appearance of the body that does not meet the expected standards. This means that the degree of satisfaction with body image is lower than expected. Dissatisfaction with body image can occur in all body shapes and sizes. (According to Cash (in Rosiana Putri's research, 2012)) Disturbed body image occurs due to negative perceptions, where a person has an exaggerated view of his body. Cancer and cancer therapy often result in changes in body image both psychologically and physiologically.

Stress level in cancer patients at Banjarmasin Hospital in 2019

Based on the data collection results from the research that has been done, it was found that the level of stress in cancer patients undergoing chemotherapy treatment in the edelweiss room at Banjarmasin Hospital showed that the majority of respondents had a level of stress in the severe category with 12 people (43%). After the researchers observed the results of this study, it was found that the tendency for cancer patients to experience severe stress was that the majority of respondents were female as many as 17 people (61%). From the age more at the age of <40 years (54%). It was seen at the time of the study that many female patients complained of physical changes and also felt anxiety. This is because women who are at that age are still very concerned about their physical appearance compared to men. Because women are more concerned with physical appearance than men, this is what causes female patients who are undergoing chemotherapy treatment to experience a severe increase in stress due to their inability to cope with anxiety from the physical changes they are experiencing.

Changes in stress levels experienced by cancer patients who are undergoing chemotherapy treatment are a form of psychological side effects of chemotherapy, where during chemotherapy

treatment patients will always experience anxiety, shame, decreased self-esteem, and also a change in body image due to physical changes. This is in line with research conducted by ((Wang, Bai, Lu & Zhang, 2017) in Tria Fitri research Deswindawati, et al, 2018) which explains that most patients with breast cancer feel embarrassed by changes in their physical form and try to find ways to hide their imperfect physical shape, because breasts are a symbol of identity as a woman.

Stress is a form of mental response that often arises in cancer patients. Stress is a condition that is produced by environmental changes that are accepted as something that is detrimental to a person's balance that is influenced by the environment and individual appearance in the environment (Titik Lestari, 2015). So that the coping mechanism that can be given to patients with body image disorders is to provide motivation so that individuals can always think positively to create good assumptions and add spiritual knowledge so that individuals can accept the conditions that have been experienced so that they can reduce stress levels due to changes in their physical appearance.

The relationship between body image disturbance and stress levels in cancer patients undergoing chemotherapy.

The results of the research conducted by the researchers found that most of the respondents experienced moderate body image disturbances, namely 18 people (64%), with a high level of stress in the severe category, as many as 11 people (43%). Based on the results of the Spearman-Rho statistical test, it showed a p value of 0.000, this value was statistically significant ($p < 0.05$) in this case indicating that there was a relationship between body image disturbance and stress levels in cancer patients undergoing chemotherapy treatment at Banjarmasin Hospital.

According to Arthur and Emily (in Wiranatha & Supriasi's research, 2015) Body image is how individuals perceive their bodies, both consciously and unconsciously, which include body size, function, appearance and potential. In other words, body image is a person's subjective imagination of his physique. If an individual has experienced a decrease in body image, then he can be said to have a body image disorder. Disturbed body image is a form of dissatisfaction with body image. Disturbed body image occurs due to the emergence of negative perceptions, where a person has an exaggerated view of his body.

Cancer and cancer therapy often result in major psychological and physiological body image changes in individuals, especially those that are often experienced such as loss of limbs (amputations), skin changes, hair loss and limited movement to perform daily activities. The thin, tired and malodorous appearance that occurs when cancer spreads through the skin is another important etiology of disturbed body image. This condition can increase the fear of rejection which can have a major influence on stress levels in individuals.

According to Titik Lestari (2015) Stress is a part of life that has positive and negative effects caused by environmental changes. In simple terms, stress is a condition where there is a body's response to changes to achieve a normal state. Increased stress is a form of individual inability to accept the conditions that have been experienced, namely body image disturbance. This body image disturbance has a very negative effect on individual psychological responses, namely an increase in stress levels. So in situations like this it is necessary for individuals to be given health education as well as input from family and those closest to them in order to improve body image and individual quality of life.

In this study, the most respondents were female cancer patients undergoing chemotherapy treatment aged <40 years, this is because women are very concerned about their body image. It is not uncommon that many women have a perception of physical appearance that is the first thing seen when someone interacts with other people, attention to physical appearance is usually more dominant by women because in the early and late adulthood there are many demands of the task of their developmental period, namely managing the household. good, looking for a life partner and also get a job. It is not uncommon for women of this age to be very concerned about how they dress and how they look physically. So that when individuals undergo chemotherapy treatment, individuals will feel that changes in the physical form of the treatment have had a negative impact on their lives, especially

on appearance which then has an impact on individual stress levels and anxiety levels. High stress levels on negative body image are more dominant in women. This is in line with Emslie's theory (in Larsen, 2009 (in Dessy Sumanty's research, et al. 2018)) that he stated that although men and women actually pay attention to appearance and pay attention to beauty norms, women are reported to pay more attention to things that are related to physical beauty than men. If the body image is higher, it will also reduce the level of stress experienced by cancer patients while undergoing chemotherapy treatment and vice versa. The positive self-concept that is formed will also lead the individual to become a person who can accept his condition sufficiently to accommodate all mental experiences about himself well. Patients who have a positive self-concept will be able to accept opinions or facts about themselves so that they are able to accept their weaknesses and strengths (State, 2022).

In individuals who have experienced body image disturbances, support and motivation from family and relatives is the most basic thing to deal with problems that result in increased levels of stress. The most effective way is to invite individuals to always think positively. In addition, another way that can be done is to provide counseling in the form of health and spiritual education to patients directly and to their families in order to reduce anxiety and excessive stress levels in these individuals.

This is in line with the research conducted by Akhmad Mukhlis, (2013) namely increasing body image and confidence in individuals after therapy and training in positive thinking. According to (Elfiky, 2008) Positive thinking training is a way of thinking processes that are closely related to concentration, feelings, attitudes, and behavior. Positive thinking can be described as a way of thinking that places more emphasis on positive perspectives and emotions, both towards oneself, others and the situation at hand. According to Fordyce (in Seligman et al, 2005) also found that positive psychological conditions in individuals can increase the ability to solve various problems. Positive thinking also helps someone in giving positive suggestions to themselves when facing failure, when certain behaviors, and generate motivation (Hill & Ritt, 2004).

The results showed that respondents with very severe and severe severity tended to experience delirium. The results of the statistical correlation test also showed that there was a significant relationship between the severity of stroke and the occurrence of delirium in the respondents. The strength of the relationship is strong, which means that the more severe the stroke experienced by the patient, the more at risk of experiencing delirium.

4 CONCLUSION

Body image in cancer patients undergoing chemotherapy treatment at Banjarmasin Hospital in 2019 showed that the majority of respondents experienced body image disturbances in the moderate category, as many as 18 people (64%).

The level of stress in cancer patients undergoing chemotherapy treatment at Banjarmasin Hospital in 2019 showed that the majority of respondents had a severe category of stress with 12 people (43%).

There is a relationship between body image disturbance and stress levels in cancer patients undergoing chemotherapy treatment at Banjarmasin Hospital in 2019.

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