ISSN: 0975-8542

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ISSN: 0975-8542

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Volume 12 Issue 02 (2020) Feb. 2020

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ISSN: 0975 -8542

Journal of Global Pharma Technology

Available Online at: www.jgpt.co.in

RESEARCH ARTICLE

Self Care Behavior As An Indicator Of Psychological Adaptation In Patients Undergoing Chemotherapy

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Abstract

Background: Chemotherapy is one of the medical actions taken to treat cancer and kill cancer cells using cytostatic drugs. This treatment not only has positive effects but also the negative effects of sufferers. This study aims to analyze the relationship of self-care behavior with the psychological adaptability of patients undergoing chemotherapy Methode: This study used a cross-sectional design. The Sample was 120 patients in the chemotherapy treatment unit at the hospital in Jember-Indonesia district, with purposive sampling. The independent variables were self-care behavior (include *self-care confidence, self-care management, Self-care maintenance*). The dependent variable was a psychological adaptation. Data were obtained through a modified Self Care Heart Failure In-dex (SCHFI) instrument which has been modified for patients undergoing chemotherapy. Data were analyzed by using Chi-square with a significance level of $p \leq 0, 05$. Results: of this study indicate there was a relationship between self-care behavior with the psychological adaptability of patients with chemotherapy, the p-value was $0.00 \leq 0.05$. Conclusion: Self-care behavior is one form of nursing service that can be applied to patients undergoing chemotherapy. The ability to engage patients independently during chemotherapy can increase patient self-esteem and will help improve patient adaptation due to the side effects of chemotherapy. Further study recommends developing the intervention to improve the adaptation of patients undergoing chemotherapy.

Keywords: *Adaptation, Self Care Behavior, Chemotherapy.*

Introduction

Cancer is a terminal disease that can attack all levels of society without knowing social status, age, and gender [1, 2]. This disease is still a threat to human well-being and health in general [3, 4]. World Health Organization (WHO) revealed an increase in the number of cancer patients each year to reach 6.25 million people and two-thirds are from developing countries including Indonesia [5].

WHO data shows that cancer incidence increased from 12.7 million cases in 2008 to 14.1 million cases in 2012. In addition, the number of deaths also increased from 7.6 million patients in 2008 to 8.2 million in 2012 [6, 7]. Cancer is the number two cause of death in the world at 13% after cardiovascular disease [8]. Cancer incidence in 2030 is estimated to reach 26 million patients and 17 million of them died. This condition especially can occur in poor and developing countries that tend to be faster [4, 9].Chemotherapy is one of the medical actions taken to treat cancer and kill cancer cells using cytostatic drugs [10]. The selection of chemotherapy must be done by considering various factors, especially related to the need for a fast and significant response and quality of life [9, 11].

Chemotherapy has the principle of working to inhibit and control cancer cells and kill cancer cells [4]. Chemotherapy treatment can reach cancer cells that have spread to parts of the patient's body and can damage normal tissue both acute and chronic [7]. Some acute side effects, which can be caused by chemotherapy include nausea, vomiting, alopecia, and bone marrow suppression [12, 13]. Whereas slow side effects, which occur vary and include pulmonary fibrosis, neuropathy, and nephropathy [14]. According to research conducted on 41 patients, it was found that 32% of patients had peripheral

neuropathy, 14.7% felt pain in the legs, 2.4% felt numb and 51.2% had fever after undergoing chemotherapy [11]. While other studies have shown that the effects of chemotherapy cause 71.4% of chemotherapy patients complain of fatigue and 85.7% complain of experiencing sleep disorders [3, 10]. Side effects of chemotherapy vary depending on the modification of chemotherapy drugs given [12].

According to the National Cancer Institute, side effects that can occur due to chemotherapy using anthracycline (adriamycin/doxorubicin) chemotherapy drugs are nausea, vomiting, diarrhea, stomatitis, alopecia, susceptible to infection, thrombocytopenia, neuropathy, and myalgia [15, 3]. Data shows that patients with chemotherapy frequency three times, with radiation frequency 12 times have energy intake, poor protein [11]. The frequency of chemotherapy can affect nutrient intake due to side effects resulting from chemoradiation in the form of nausea, vomiting, and diarrhea which can reduce the intake of nutrients for patients [16, 17].

In addition to physiological effects, chemotherapy also impacts psychological changes including helplessness, anxiety, shame, self-esteem, stress, and anger [9, 4]. The psychological impact experienced by each person varies, depending on the severity (stage), type of treatment and characteristics of each patient [10, 17].

About 30.0% of cancer sufferers experience adjustment problems and 20.0% are diagnosed with depression [18, 14]. Patients with chemotherapy must be able to adapt to the treatment [19], so patients can receive all side effects both physical and psychological [14]. This condition certainly requires the support of all parties from family, friends and service providers. Self-care behavior is one form of nurse action that can be done by giving patients the opportunity to understand their condition and be directly involved in self-care during and after chemotherapy so that patients are able to improve their adaptation [20, 21].

Social support helps a person live life and is needed to maintain physical and emotional well-being [22, 23]. This study aims to analyze the relationship of self-care behavior with the adaptability of patients undergoing chemotherapy

Materials and Methods

This study uses correlation design with a cross-sectional approach, which aims to determine the relationship between self-care and the psychological adaptability of cancer patients undergoing chemotherapy. The population is cancer patients undergoing chemotherapy at the chemotherapy center of a Jember-Indonesia hospital in the period of January - December 2018 totaling 150 patients. The sample in this study took 80% of the population as many as 120 samples.

Inclusion criteria that have been set are: Cancer patients in stage II or more, who are undergoing chemotherapy routinely, have health insurance. And the exclusion criteria in this study were patients undergoing chemotherapy in very weak conditions. The sampling technique used was purposive sampling. The sample in this study was recruited based on ethical principles. The sample involved in this study had previously received a written explanation of the study objectives, procedures, advantages and disadvantages during the study.

The independent variables were self-care behavior (include *self-care confidence, self-care management, Self-care maintenance*). The dependent variable was a psychological adaptation. The instrument used in this study was a questionnaire with Self Care Heart Failure In-dex (SCHFI) version 6.2 [20] who have obtained permission and has been modified for patients with chemotherapy. There are 3 categories of self-care questionnaire namely to identify Self-Care Maintenance, Self-Care Management and Self-Care Confidence in patients with chemotherapy [20].

Meanwhile, to assess psychological adaptability the data were obtained from an adaptation questionnaire with a Likert scale compiled by researchers. Data analysis was performed using the chi-square test with a value of $\alpha = 0.05$ and p-value $\leq \alpha$. and has obtained ethical approval from the Muhammadiyah University of Jember Ethics Commission with a number 231/ II.3.AU / FIKes / E / 2018.

Results

The study was conducted at a chemotherapy treatment center in a hospital in Jember district on 120 samples according to inclusion criteria.

Data obtained through a questionnaire consisting of the characteristics of respondents include gender, age, education, occupation, duration of chemotherapy, marital status. As for the variables of self-care and adaptation obtained using a questionnaire.

Table 1: Characteristic Respondent (n=120)

Characteristics	n	%
Gender :		
a. Male	48	40
b. Female	72	60
Age :		
a. 15-25 years (late adoleseence)	8	6.6
b. 26-35 years old (early adulthood)	27	22.5
c. More than 36 years (late adulthood	85	70.8
Education:		
a. Elementary school	39	32.5
b. Secondary school	68	56.6
c. High School	13	10.83
Occupation		
a. Did not work/Jobless	42	35
b. entrepreneur	39	32.5
c. Farmers	25	20.8
d. Employee	14	11.6
Marital status		
a. Married	78	65
b. Divorced / separated	27	22.5
c. single	15	12.5
Cancer type		
a. Breast cancer	68	56.6
b. Lymph cancer	17	14.16
c. Other cancers	35	29.12
Duration of chemotherapy treatment		
a. 6 months	32	26.6
b. 1 year	77	64.16
c. More than 1 year	11	9.16
Early physical complaints during chemotherapy		
a. Nauseous vomit	100	83.3
b. Sprue	8	6.6
c. Fatigue	120	100
d. Hair loss	85	70.8
e. Dry and blackened skin	94	78.3
f. diarrhea	18	15
Patient response to the effects of chemotherapy		
a. shame	74	61.6
b. depression	72	60
c. adjustment disorder	67	55.8

Based on demographic data, it was found that patients who were included in the sample category were 60% female, with most patients over the age of 36 years. Meanwhile, 35% did not work or jobless, and 68% married. The results of data analysis about the disease most of the samples suffered from breast cancer as much as 56.6%. With an average chemotherapy that has been running for 1 year which is 64.16%. In the analysis of the effects of chemotherapy on the sample obtained almost all samples undergoing chemotherapy experienced fatigue

Table 2 Analysis of self-care behavior in patients undergoing chemotherapy (n=120)

Dimensions of self-care behavior	Self-care behavior			
	Adequate		Inadequate	
	n	%	n	%
self-care confidence	83	69.1	37	30.8
self-care management	78	65	42	35
Self care maintenance	96	80	24	20

Table 3:Adaptation of patients undergoing chemotherapy (n=120)

Adaptation	n	%
Adaptive	78	65
Mal adaptive	42	36

Table 4 Relationship between self-care and adaptation of patients undergoing chemotherapy n=120

Variable Self Care Behavior	Adaptation Of Chemotherapy Patients		P-Value
	Mal adaptive	Adaptive	
In adequate	35 (29,1%)	0 (0%)	0,000
adequate	7 (5,8 %)	78 (65%)	
TOTAL	42 (35%)	78 (65%)	

Based on the table 3, most respondents have good adaptability. Table 4 show that that there was a relationship between self-care behavior and client's adaptability with p-value 0.00

Discussion

Self-care is a conceptual model of a person's ability to care for themselves independently so that the ability to maintain their health and well-being is achieved [18, 24]. Self-care according is a natural decision-making process for selecting behaviors to maintain physiological stability (self-care maintenance) and response to symptoms experienced (self-care management) [10].

The ability of individuals to perform self-care is influenced by basic conditioning factors such as; age, sex, development status, health status, sociocultural orientation, health care system (diagnostics, modality management), family system, lifestyle, environment and availability of resources [25].

This is consistent with the results of this study that most respondents have a fairly mature age, so they are able to take self-care decisions well. Self-care behavior in patients undergoing chemotherapy is a step in decision making and strategies undertaken by patients in an effort to maintain life, improve health function, and achieve complete health to minimize the decline in quality of life [26].

States that universal self-care requisites are a major part of the life each individual lives [25]. Activities undertaken related to universal self-care requisites are shown by maintaining adequate air, water, and food that are useful for metabolism and also produce energy [14]. Universal self-care requisites can also directly affect patients with chemotherapy [20]. Developmental self-care requisites are an effort made to support the patient's development process when experiencing discomfort due to chemotherapy [14].

While health deviation requisites are often associated with pain conditions experienced by patients, namely how the patient's ability to feel the condition of his pain or inability to carry out normal functions [11]. The ability of self-care gained through experience during chemotherapy will have an impact on lifestyle changes and can directly affect the patient's adaptation ability itself [27, 10].

Psychosocial adaptation is a process and a final stage as an individual response to environmental stimuli to improve life goals and survive, grow, reproduce, and self-actualize [28, 10]. Each individual is a biopsychosocial unitary system in constant interaction with the environment, which is constantly changing [11]. The results of this study indicate that the majority of respondents have adaptive behavior during chemotherapy.

This condition is supported by high motivation, and his desire to recover from cancer, the maturity of thinking and decision making causes patients to be able to adapt to their conditions, this is supported by respondents who have a mature age [9]. In addition, the length of chemotherapy can also be a factor that supports sufferers more adaptable from the side effects of chemotherapy.

Another factor affecting adaptability is marital status [29, 30]. The participation of families and people around patients in providing life support for patients undergoing chemotherapy is very significant, as indicated by 65% of the sample having a married status. The results of this study indicate that there is a relationship between

self-care and adaptation of patients undergoing chemotherapy with a P-value of 0.00.

The existence of physiological changes and chronic conditions on health is very influential on changes in a person's quality of life [4]. Adequate support becomes very important when someone cannot meet their own needs. Someone who can not meet their own needs, often because of physical limitations or insufficient resources to overcome them. Appropriate and adequate social support can improve the quality of life in patients [10].

Conclusion

Self-care behavior is a form of nursing service that can be applied to patients undergoing chemotherapy. The ability to engage patients independently during chemotherapy can increase patient self-esteem. This will certainly make patients more adaptable to the side effects of chemotherapy.

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