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Online Education to Improve Cancer-Related Fatigue Knowledge Among Cancer Patients

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Abstract

Cancer patients can experience symptoms due to their disease and or cancer therapy. One of the symptoms experienced by patients is fatigue. 65% of cancer patients consistently experience fatigue, which is felt distressingly within 6 months and for several years after treatment. Fatigue experienced by cancer patients will have an impact on compliance with treatment or care roles and activities. This research contributes to knowing the effect of online education about fatigue treatment in cancer patients on the knowledge of cancer patients in Surakarta, Indonesia. This type of research is quantitative, using a quasi-experimental method with a pre-pot test design without a control group. The subjects of this research were 56 cancer patients. This research instrument used a fatigue maintenance knowledge instrument. The sampling technique used purposive sampling. Data was collected in July – August 2023. Bivariate analysis used the Wilcoxon test. The results of bivariate analysis before and after being given education obtained a P value of 0.000. Online education about fatigue treatment in cancer patients influences cancer patients' knowledge.

Keywords: *Education; Cancer; Fatigue*

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1. Introduction

The prevalence of cancer in Indonesia is 396,914 new cases in 2020 from a total population of 273,523,621, the number of cancer patient deaths is 234,511. (WHO, 2021) Cancer is the rapid growth of abnormal cells beyond normal limits and spreads to other organs and tissues, this process is called metastasis. Abnormal cells arise due to cell DNA which results in the growth and spread of related cells. These metastases constitute the majority of causes of death.

Cancer patients can experience symptoms due to their disease and/or cancer therapy. Symptoms experienced by patients include fatigue, pain, decreased appetite, dyspnea, anxiety, constipation, depression, nausea, and vomiting. Fatigue is the major symptom felt by all cancer patients. Fatigue in cancer patients is called cancer-related fatigue (CRF), which is a continuous feeling of physical, emotional, and/or cognitive fatigue or exhaustion related to the disease or cancer treatment that is disproportionate to and interferes with normal activities. (Fisher Insana, 2022; Tewes Mitra, 2021).

CRF is not the same as other fatigue, fatigue in cancer patients cannot be treated just by resting or sleeping. CRF of 65% is always experienced by cancer patients, some patients describe CRF as very bad within 6 months and for several years after treatment. Patients perceive CRF as wrenching and distressing fatigue rather than pain, nausea and vomiting that can be managed with medication. (Fabi A, 2020; Fisher Insana, 2022).

Daily care makes cancer patients vulnerable to poor health status. Patients who experience CRF will have an impact on compliance in treatment or care-role activities. Patients, families and/or caregivers are expected to manage the acute effects of medication, create a healthier lifestyle, manage comorbid conditions, polypharmacy and overcome psychosocial consequences. Cancer care services have not lagged behind other chronic disease services in providing self-management support, and being proactive in routine care. They enable patients and families to manage the side effects of the disease and/or therapy itself which can be done independently at home.(Howell Doris, 2021) .

The Sustainable Development Goals agenda as a global development agreement, with the theme "Changing Our World: The 2030 Agenda for Sustainable Development", has 17 goals and 169 targets which are action targets throughout the world for the next 15 years. In the SDGs, health issues are integrated into one goal, namely goal number 3, ensuring a healthy life and promoting prosperity for all people at all ages. There are 38 SDGs targets in the health sector that need to be realized. One of the new things that is of concern is deaths due to non-communicable diseases (NCDs). One of the strategies of the Ministry of Health in preventing and controlling NCDs is to increase research, studies and strengthening information systems via web-based/online. This study contributed to analyze the effect of online education about fatigue treatment in cancer patients on the knowledge of cancer patients in Surakarta, Indonesia.

2. Method

This study uses a quantitative approach. Research design quasi experimental non control group design. In this design, the researcher does not create a control group, so that patients who meet the inclusion criteria are included in the experimental group. The population in this study were cancer patients using non-probability sampling as a sampling technique, namely that the characteristics of the subjects in a research population were heterogeneous with the aim of achieving a representative sample. Inclusion criteria: Patients diagnosed with cancer, patients who have WhatsApp, composmentist and cooperative patients who can use WhatsApp independently. Exclusion criteria: Patients who are not diagnosed with cancer, patients with decreased consciousness, patients who cannot use WhatsApp independently. The total number of respondents in the study was 56 respondents that choosen randomly. Researcher come to hospital and check medical record to analyze criteria of respondent. After that patient choosed randomly as respondent. The analysis technique in the research used the Wilcoxon test.

3. Result dan Discussion

In Table 1, the characteristics of respondents include the age range of patients of 44 years - 60 years suffering from cancer, this is the same as (Nazia Hossain, 2023) that patients suffering from cancer range in age from 40 years to 60 years or more. The majority of patients were men aged 35, while there were 21 women. This is in accordance with data from WHO, the majority of cancer cases are in men, namely 10,065,305 cases, 9,227,484 cases of cancer in women (Sung Hyuna, 2021). Patients who experienced mild and moderate fatigue were not much different, 17.9% of patients experienced mild fatigue and 16.7% experienced moderate fatigue, these results are not the same as (Li Xiaotong, 2023), the majority of patients experienced moderate fatigue 57.8 %.

The results from Table 2 illustrate the knowledge of cancer patients before being given education, namely 21.8% (fair), after being given education the results of patient knowledge increased to 42.3% (good). These results are in accordance with (Teixeira Stephanie, 2023) in cancer patients the majority of patients answered incorrectly, after being given education the majority of patients answered correctly.

Table 1. Respondent Characteristics

Variable		frequency	percent
Age	25-44	2	2,6%
	44-60	28	35,9%
	55-75	9	11,5%
Gender	Women	21	26,9%
	Men	35	23,1%
Therapy	Chemotherapy	35	44,9%
	Radiation	4	5,1%
Fatigue	Light	14	17,9%
	Moderate	13	16,7%
	Heavy	9	11,5%
	Very Heavy	3	3,8%
Fatigue Education	Ever	6	15,4%
	Never	33	84,6%

Table 2. Description of cancer patients' knowledge pre and post test

	Knowledge					
	Less		Enough		Good	
	freq	%	freq	%	freq	%
Pre	7	9,0%	17	21,8%	15	19,2%
Post	0	0%	6	7,7%	33	42,3%

The results of the analysis in Table 3 show that online-based education influences cancer patients' knowledge about fatigue treatment in cancer patients. Based on research results, 84.6% of patients had never received information about fatigue in cancer patients, (Schmidt Martina, 2021) that 58% of cancer patients did not receive complete information about fatigue, 41% of patients reported never being asked about fatigue by the treating doctor. Cancer patients have insufficient knowledge about cancer-related fatigue and its treatment, and many patients feel uninformed. Providing education in this research uses the WhatsApp platform which everyone has and is easy to use and effective in conveying education to patients about fatigue and how to treat it. Previous studies also used social media platforms to convey education to patients as prevention and guidance for treating chronic diseases. (Dorje Tashi, 2018; Wong Eliza, 2022; Wong Ling Eliza, 2020) Educational interventions about fatigue have a small impact on fatigue intensity, but have a moderate effect on fatigue disorders. Educational interventions that focus on cancer patient fatigue help reduce anxiety and improve quality of life.(Bennet, 2016)

Patients, patient families, and caregivers should know that fatigue management is an integral part of total health care and that fatigue can persist after treatment. Fatigue in cancer patients is underreported, underdiagnosed, and undertreated. Fatigue is a common symptom experienced by cancer patients and almost all cancer patients who receive chemotherapy, radiation therapy, spinal cord transplantation, or biological treatment.(Fisher Insana, 2022)

Table 3. Analysis of the influence of obline education

Knowledge	
Z	*P*
-4,456	0,000

Family, family caregivers (care givers) are family members who are directly involved in the caring for cancer patients. Family members have responsibility for care activities and handling symptom management, patient equipment needed, patient transportation, and providing emotional and social support. (Given A Barbara, 2012) Cancer patients, families and care givers, they need information about managing symptoms, including fatigue. The information that needs to be conveyed is the causes of fatigue, patterns, consequences of fatigue during treatment and end-of-life care. Fatigue tends to have a significant effect on emotional well-being.

Cancer patients and survivors and their families are expected to be able to manage the acute effects of treatment, the chronic effects of the disease and adopt a healthy lifestyle to reduce the risk of late effects from treatment and disease. Patients who complete treatment have the responsibility to manage the effects of their treatment and disease, as well as making decisions about when and how to seek help to manage these effects.(Howell Doris, 2021)

Health literacy is an indication of a patient's ability to understand health care information in order to make appropriate decisions. This health literacy can be achieved by giving tools to patients and making their own choices, such as helping patients understand various aspects of care. Health material is presented on an easily accessible platform. Social media is a space that can be reached by a wide audience from all levels of education (Chirumamilla, 2021).

Social media is widely accessed by young people, but now parents are also accessing social media, who previously had less participation in care, to bridge the communication gap. Patients assess the credibility of a media based on, source, design, scientific language, and ease of use, but patients often forget where the information was taken from. (Chirumamilla, 2021) The use of mobile communication technology is good for delivering cancer health education that is sensitive to culture and language (Musa Jonah, 2017).

Digital health services are chancing the way individuals manage their health and participate in care. The potential difference to survive and grow in the eHealth era is enormous, as more information is made available online. Healthcare organizations must adopt a universal precautions-based approach in designing eHealth to provide accessibility to all patients (Smith Benjamin, 2019).

Internet usage is 98.3% of the population in Indonesia and they own mobile devices, both smartphones and feature phones.170 million Indonesians access social media, the average time spent accessing social media is 3 hours 14 minutes per day. 83% of Indonesian people interact and communicate using WhatsApp (WA). (Rianto, 2021) mobile health (mHealth) is a component of electronic health (eHealth) where the method of delivering health is developing rapidly. mHealth has the potential to improve primary and secondary preventions of disease and provide interventions, improve health care treatment services, and provide real time services.(Scott, 2009)

4. Conclusion and Suggestions

Based on the research results above, it can be concluded that 21.8% of patients' knowledge was sufficient about fatigue treatment before being given education, 42.3% of patients' knowledge was good after being given online education about fatigue treatment in cancer patients. There is an influence of online education about fatigue treatment in cancer patients on cancer patients' knowledge.

Based on the conclusions above, researchers provide advice for cancer patients who experience fatigue or do not experience fatigue. It is hoped that patients can actively ask health workers to consult on how to handle fatigue according to conditions. So that patients do not experience worsening of their condition so that their quality of life improves. For future researchers, research is not only provided by patients but also provided by families or people who care for patients while at home.

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