

The Effect of Educational Video on The Knowledge Level of Chemotherapy Side Effect and Its Management on Patient Undergoing Chemotherapy in Gatot Soebroto Jakarta Hospital

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Abstract— Knowledge about chemotherapy side effects plays a significant role in cancer patient compliance with the regimen of chemotherapy. Educational video is a media that can be used to increase the level of knowledge of chemotherapy side effects on the cancer patient. This study aimed to know the effect of educational video on the level of knowledge of chemotherapy side effects on cancer patients undergoing chemotherapy in Gatot Soebroto Jakarta Hospital. This was an innovation project which involved 11 cancer patients in Gatot Soebroto Hospital. Statistical analysis using Wilcoxon-Test showed that there was a significant difference in the level of knowledge's score before and after using the educational video ($p = 0.006$). Based on the result, we concluded that educational videos could increase the level of knowledge about the side effects of chemotherapy. We suggest using educational video as a media to provide information about chemotherapy in a health education program on cancer patients. Further study using a larger sample size and longer duration of study is needed to be conducted.

Keywords— Cancer, Chemotherapy, Educational Video, Knowledge

I. INTRODUCTION

Cancer remains a public health concern in Indonesia. The cancer prevalence in Indonesia already reaches 1.4 per 1,000 population in 2014. Cancer also placed as the second disease that caused death after cardiovascular disease [1].

Cancer treatment is required to improve the cancer patient's outcome. The treatments are quite challenging for the cancer patient to endure. The most often recommended therapy for cancer patients is chemotherapy. Chemotherapy affects all cells that grow and divide quickly in the body. It aimed to decrease the number of malignant cells or tumor size in the body. The adverse effect of chemotherapy is the damages of healthy cells on the body which could cause various side effects on a cancer patient in the end [2].

Chemotherapy side effect management is an important part of care for the cancer patient. Nausea and vomiting are the most troubling and unpleasant side effects of chemotherapy. The other side effects of chemotherapy are oral mucositis, ulceration on the gastrointestinal organs, local pain which cause anorexia, malabsorption, extreme weight loss, anemia, fatigue, increase risk of sepsis, constipation or

diarrhea, the suppression of bone marrow, neuropathy, hair loss, fatigue, and some skin disorders [3]. Effective chemotherapy side effects management is required to improve cancer patients' Quality Of Life (QoL). Good quality of life would also impact their compliance to chemotherapy regimen [4].

One significant nurse's role while managing the side effect of chemotherapy on cancer patients is being a health educator. Education is an interactive process to improve one's knowledge, attitude, and behavior [5][6]. An important element employed in the education process is education media. Education media would make the information, stimulus, or culture transmission easier to be understood [7][8].

Health education could be done through various media. Leaflet, poster, flip-chart, and video are media that could be used to help nurses delivering information as an educator. Health education through video could significantly increase the knowledge about chemotherapy on cancer patients from various educational backgrounds. A study done by Carey M., et al [9] showed that education done through video could make the patients understood the information given comprehensively, increasing disease acceptance, and decreasing anxiety on the cancer patient.

II. METHOD

A. Participant and Sampling Technique

Participants were chosen by purposive sampling technique. The inclusion criteria were a cancer patient who was undergoing chemotherapy, aged ≥ 18 years old, and willing to participate in the study. Eleven cancer patients who met the inclusion criteria participated in this study.

B. Study Procedure

The researcher explained the study procedure to the participant. If the participant willing to participate in the study, they asked to sign the informed consent sheet and fill the questionnaire provided by the researcher. The questionnaire measured the participant's level of knowledge before and after the administration of the educational video. Educational video in this study could be categorized as an audiovisual aid-based education (AVA). The educational

video contained information about chemotherapy side effects and its management.

C. Statistical Analyses

This was a one group pretest-posttest study. Wilcoxon test was used to know the effect of educational video on the level of knowledge on chemotherapy side effects and its management. First, confirm that you have the correct template for your paper size. This template has been tailored for output on the A4 paper size. If you are using US letter-sized paper, please close this file and download the Microsoft Word, Letter file.

III. RESULT

A. Participant's Characteristics

Table 1 shows that the participant's mean age was 50.27 years old with an SD of 8.43 years. Table 2 also shows that the majority of participants were diagnosed as a breast cancer survivor (54.5%) and graduated from Senior High School (63.6%).

Table 1. Participant's Age Distribution of Frequency

Variable	Mean	SD	Min-Max
Age (Years)	50.27	8.43	35-63

Table 2. Participant Demography Characteristic

Variable	Frequency (n)	Percentage (%)
Level of Education		
Elementary School	2	18.2
Junior High School	1	9.1
Senior High School	7	63.6
University	1	9.1
Cancer Diagnoses		
Breast Cancer	6	54.5
Colon Cancer	1	9.1
Colorectal Cancer	1	9.1
Cervical Cancer	2	18.2
Nasopharyngeal Cancer	1	9.1

Table 3. The Participant's Level of Knowledge Before and After the Intervention

Variable	Level of Knowledge	
	Mean	SD
Before	4.73	2.24
After	7.91	2.12
p-value = 0.006		

The prevalence of cancer keeps increasing each year. Today, cancer is the leading cause of death in developed and developing countries. Cancer has a major impact on the quality of life of its survivor. Chemotherapy is the most recommended therapy used to treat cancer. Despite killing the malignant cells, chemotherapy also caused damages to healthy cells. These damages induced some adverse effect on the cancer patient's body such as nausea, hair loss, fatigue, constipation, fever, diarrhea, stomatitis or mucositis, burn sensation, infection, skin rash, bleeding gum, toothache, coughing, jaundice, edema, and dizziness [10].

Information about chemotherapy and its side effects are important for the cancer patient. The cancer patient is tend experiencing anxiety because of the lack of information about the treatments they needed to do in order to improve their condition [11][12][13]. On the other hand, cancer patients couldn't access adequate information about chemotherapy easily. Health professional plays an important role in providing information about chemotherapy, its procedure, the therapeutic effect, and the side effects. Adequate information correlates with a lower level of anxiety on cancer patients undergoing chemotherapy. A Study done by Tian, Jia, and Cheng [14] found that education on cancer patient was able to decrease the level of depression and increasing their daily performance status.

Health education is an important part of the chemotherapy side effect management. This study found that there was a significant difference in the level of knowledge before and after using the educational video. Inadequate information about chemotherapy and its side effects contribute to anxiety on the cancer patient [15]. Educational video is well accepted by cancer patients because it efficiently combines the vision, sounds, and movements to deliver complex information simply in a short amount of time [9].

This innovation was only an initial step to improve the health education practice on the cancer patient, especially on the management of the side effect of chemotherapy. This study only uses a small sample size and conducted in a short duration of time, therefore further study is needed to conduct in order to confirm the effect of the educational video on the larger sample size and longer duration of the study. The educational video used only included some common side effects of chemotherapy, another study also need to be conducted to know the effective management of other side effects of chemotherapy experienced by the cancer patients [10].

IV. CONCLUSION

Based on the result and explanation in the discussion section, we conclude that educational video affected the level of knowledge about chemotherapy side effects and its management on cancer patients in Gatot Soebroto Jakarta Hospital. AVA is a proper health education media that could be used to achieve certain goals in a health education program on cancer patients effectively.

ACKNOWLEDGMENT

We would like to thank Gatot Soebroto Jakarta Hospital for providing us the study location. We also expressed our gratitude to all participants and research assistant participated in this study.

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