

Effectiveness of Video and Leaflet about BSE (Breast Self Examination) on Changes in Teenage Behavior

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Abstract According to GLOBOCAN (IARC) data in 2012 it was found that breast cancer is a cancer with the highest percentage of new cases (after being controlled by age), which is 43.3%, and the percentage of deaths due to breast cancer is 12.9 %. Breast Self Examination (BSE) is the easiest detection of breast cancer compared to the others, namely breast examination by health personnel and mammography examination. Generally, breast cancer is detected first by the sufferer himself. This information exposure is very important because it increases the knowledge of young women about breast cancer and the dangers and ways to make early detection of breast cancer. The purpose of this study was to find out the effectiveness of Videos and Leaflets about breast self-examination (breast self-examination) on changes in adolescent behavior. The study population was high school teenagers throughout the city of Tangerang. Sampling technique with Random Sampling (Probability Sampling). The statistical test used is man-whitney and independent samples t-test obtained Video results are more effective than leaflet even though there is no significant difference in effect on health education with video compared to leaflets in changes in adolescent behavior about awareness.

1 INTRODUCTION

Cancer is one of the leading causes of death worldwide. In 2012, around 8.2 million deaths were caused by cancer. Lung, liver, stomach, colorectal, and breast cancer are the biggest causes of cancer deaths every year (Infodatin, 2015).

According to GLOBOCAN (IARC) data in 2012 it was found that breast cancer is a cancer with the highest percentage of new cases (after being controlled by age), which is 43.3%, and the percentage of deaths (after age control) due to breast cancer is 12.9 % (Infodatin, 2015). Breast cancer is the biggest cause of cancer death in women in general, which is 425,000 in 2010 (Ghartey, 2016).

The incidence of breast cancer in Indonesia to date has a lot of attacking women at an advanced stage with metastatic complications so that treatment has been difficult to do so it ends with death, the number of Indonesian teenagers has reached 62 million. That is, a quarter of Indonesia's population are teenagers, namely people who are in the age range between 10-24 years. If 35% of them are high school students, it means that in the next 7 years there will be 20 million Indonesian adults who are ideally in their adult and productive age. Indonesian teenagers

use the age limit of 11-24 years and are not married (Sarwono 2008).

More than 30% of cancers can be prevented by changing the risk factors for behavioral and dietary causes of cancer. Cancer that is known early has the possibility to get better treatment. Therefore, it is necessary to take preventative measures to increase public awareness in recognizing the symptoms and risks of cancer so that they can determine appropriate prevention and early detection measures (Ghartey, 2016; Infodatin, 2015).

Breast Self Examination (BSE) is the easiest detection of breast cancer compared to the others, namely breast examination by health personnel and mammography examination. Generally, breast cancer is detected first by the sufferer himself. For that reason, so that the cancer can be detected early, breast self-examination needs to be done regularly every month by women, both high-risk women and women without risk. Early detection is a very important step to reduce mortality due to breast cancer. This early detection can be done by breast self-examination, breast imaging, and mammography testing. Research results in the United States show that mammography testing of 40-year-old women can reduce mortality rates by up to 30% while breast imaging can also diagnose cysts accurately by 95% -99% but do not

definitively rule out malignant lesions (Crawford, 2016; Diananda, 2009)

The research results conducted by Wahyuni (2015) showed the level of knowledge of respondents about BSE, that most respondents had a lack of knowledge, half of the respondents never got information about BSE. Half of the respondents who had received information about BSE were mostly from family or friends and only a small proportion received information from health workers.

Information about BSE and breast cancer motivate women to increase knowledge about the breast area. This is the main basis for increasing knowledge about breast examination. The increasing level of knowledge about breast self-examination will affect women's behavior to realize the importance of breast self-examination to prevent the risk of breast cancer. This increases awareness of women, especially early adulthood to motivate themselves to practice directly breast self-examination so that they can know the condition of their breasts. This information exposure is very important because it increases the knowledge of young women about breast cancer and the dangers and ways to make early detection of breast cancer (Handayani, 2008). According to the results of Niatilina's (2006) study of breast self-examination in Harapan Hamperan Perak High School class II that respondents who knew about BSE were the majority of 22 people (62.9%) who had less knowledge, while class I was a minority of 13 people (37, 1%) who are knowledgeable enough. the results of Irma's (2008) study of BSE in YP Private High School Medan. Of the 96 respondents who studied the majority who had less knowledge as many as 60 people (62.5%), enough knowledge as many as 35 people (36.5%), while the minority who had good knowledge was 1 person (1.0%). (Varney, 2007) Knowledge of adolescents, especially young women to do BSE is still lacking even though detecting early-stage breast cancer is very easy and normal to do alone at home, just a few minutes, once a month, by checking your own breast so that breast cancer can be found at an early stage and immediately treat or heal. The more often he knows the easier it is to find something that is not right, however BSE is an important part of getting to know breast changes over time. (Azizah, 2009) Based on the above background, it is stated where there is still a lack of knowledge of adolescents about breast self-examination which is obtained specifically from health workers and teenagers' reluctance to know the methods of BSE, therefore researchers are interested in conducting research of effectiveness Video and Leaflets about BSE on changes in teenage behavior.

2 METHOD

This research was carried out in 4 (four) high schools / vocational schools in the city of Tangerang. This research was carried out for 8 months from making proposals to the final report. This research is a Quasi Experiment research using Two Group Pretest-Test Design research design. The total sample used was 498 students with sampling techniques, cluster sampling. The sample was divided into two groups: 249 treatment students with video, and 249 students for leaflet groups. Data collection techniques used in this study are knowledge questionnaires, attitudes, validated and reliability behavior. Questionnaires were given before and after treatment. Test the normality of the data using the Kolmogorov-Smirnov test formula. The hypothesis test used is the free t-test (independent samples t-test). The t-test is used if the data is proven to be normally distributed. But if the data is not normally distributed, the data is analyzed using Mann-Whitney data processed with SPSS program with the provision if the p value less than 0.05 means the null hypothesis is rejected or the research hypothesis is accepted.

3 RESULT & DISCUSSION

Knowledge

Based on the results of calculations with the SPSS program, the description of data from research on knowledge can be described in the following table

Table 1 Knowledge Score Results

Description	Video		Difference
	Pretest	Posttest	
N	249	249	
Mean	6.2266	8.1070	
Minimum	1.82	4.55	1.8804
Maximum	10.00	10.00	
Std. Dev	1.63718	1.36761	
Variance	2.680	1.870	
Description	Leaflet		Difference
	Pretest	Posttest	
N	249	249	
Mean	6.4456	8.2424	
Minimum	1.82	4.55	1.7968
Maximum	10.00	10.00	
Std. Dev	1.48313	1.33195	
Variance	2.200	1.774	

From the table above it can be seen that there are differences in the scores of the two treatment groups. This can be seen from the percentage results of increasing score achievement in group I greater than group II. This means that the provision of health

education with Video turns out to have a better influence than the Leaflet on knowledge.

Attitudes

Based on the results of calculations with the SPSS program, the description of the data about research attitudes can be described in the following table form:

Description	Pretest	Video Posttest	Difference
N	249	249	
Mean	8.1175	8.7795	
Minimum	2.50	7.27	0.6620
Maximum	10.00	10.00	
Std. Dev	0.85894	0.66858	
Variance	0.738	0.447	

Description	Pretest	Leaflet Posttest	Difference
N	249	249	
Mean	8.1333	8.7208	
Minimum	4.77	7.05	0.5875
Maximum	10.00	10.00	
Std. Dev	0.75756	0.66858	
Variance	0.574	0.447	

From the table above it can be seen that there are differences in the scores of the two treatment groups. This can be seen from the percentage results of increasing score achievement in group I greater than group II. This means that the provision of health education with Video turns out to have a better influence than Leaflets on Attitudes.

Behavior

Based on the results of calculations with the SPSS program. Description of data on behavioral research results can be described in the following table form:

Description	Pretest	Video Posttest	Difference
N	249	249	
Mean	2.6757	4.8996	
Minimum	0,00	0,00	
Maximum	8.75	10.00	2.2239
Std. Deviation	1.95088	2.24562	
Variance	3.806	5.043	

Description	Pretest	Leaflet Posttest	Difference
N	249	249	
Mean	2.5201	4.7088	2.1887
Minimum	0,00	0,00	

Maximum	8.75	10.00
Std. Deviation	1.96032	2.11574
Variance	3.843	4.476

From the results of the above calculations it can be seen that there are differences in the scores of the two treatment groups. This can be seen from the percentage results of increasing score achievement in group I greater than group II. This means that the provision of health education with Video turns out to have a better influence than Leaflets on behavior.

Analysis of differences in the influence of research

Tests of the research hypothesis for differences in the influence of health education with Video compared to Leaflets on changes in adolescent behavior about BSE using independent t-test analysis techniques with a significance level of 5% due to the total score of knowledge, attitudes and behavior showing data distributed. The results are as follows:

Table 4 Test results for independent t test

Levene's Test for Equality of Variances					
		F	Sig.		
Val		1.111	.292		

t-test for Equality of Means					
T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
.819	496	.413	.19321	.23600	.27046

F test tests the basic assumption of t-test that the variants of both groups are the same. From table 4.9 the results of the Sig. knowledge on F test (0.292) > α (0.05), then both groups have the same variant. then hypothesis testing uses the upper row value with df 496. The mean difference value shows the difference in the increase in the average of each variable. In the behavior change variable the mean difference value is 0.19321 which means that the video education media has an increase in the average value of knowledge 0.19321 is higher than the Leaflet. But statistically with a 95% CI, the results were not significant because the value of Sig. t test on behavior change variables (0.413) > α (0.05).

DISCUSSION

On the change behavior variable the mean difference value is 0.19321 which means that the video education media has an increase in the average

value of knowledge 0.19321 higher than the Leaflet. From the analysis it can be concluded that Video is more effective than Leaflets on changes in adolescent behavior about BSE. This is according to Melina's (2014) study where there are differences in the effect of leaflet and video learning media on conscious skills as indicated by a significant value of 0.021. Notoatmojo (2007) explained that a person's or society's behavior about health is determined by knowledge, attitudes, information, beliefs and traditions. Still lack of awareness of Indonesian women in early detection of breast cancer, even many women still do not know the methods of early detection. Realize it is one of the early detection to prevent the occurrence of breast cancer which will be more effective if done as early as possible when a woman reaches reproductive age. Behavioral change according to the response stimulus theory (S-O-R) causes the occurrence of behavior change depending on the excitatory qualities (stimulus) that communicate with the organism. Acceptance of new behavior or adoption of behavior through a process like this is based on knowledge, awareness, and positive attitudes, the behavior will be long lasting otherwise if the behavior is not based on knowledge and awareness it will not last long (Notoatmodjo, 2007). This is based on the principle that knowledge in humans is received and captured through the five senses. The more senses used to receive something the more and more clearly the understanding and knowledge gained. The use of learning media is more real or direct experience so the message (information) in the learning process delivered by the teacher to students will be conveyed well. So that Video is better than leaflet media (Machfoedz and Suryani, 2008; Notoatmodjo, 2007; Nursalam and Efendi, 2009). In health education about BSE, it is expected to increase understanding and change in knowledge, attitudes and behavior of adolescents.

In health education about BSE, it is expected to increase understanding and change in knowledge, attitudes and behavior of adolescents. As well as the educational media, it can affect effectively. So that teenagers can take the best action in relation to their awareness for early detection of breast cancer (Machfoedz, 2008; Gharthey, 2016).

4 CONCLUSIONS

Based on test of hypotheses, the conclusion of the analysis is: Video is more effective than leaflets on changes in adolescent behavior about BSE. Although the results of the statistical test show less meaningful because both media are good if used for health

education about BSE. For health workers should choose which media to use health education about BSE in accordance with the characteristics that receive health education.

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