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The Impact of Audiovisual Health Education on Adolescent Women's Knowledge and Proficiency in Early Fibroadenoma Mammae (FAM) Detection

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ABSTRACT

The lack of knowledge and skills among young women regarding breast self-examination to detect mammary fibroadenoma is due to the lack of information among young women about early detection of mammary fibroadenoma. The aim of this research is to determine the effect of health education using audiovisual media on the level of knowledge and skills for early detection of mammary fibroadenoma (FAM) in young women. This research used a quasi-experimental quantitative research design with the Non Equivalent Control Group Design method, with the Stratified Random Sampling technique, obtaining a sample of 125 female students. The dependent variable is health education with audiovisual, the independent variable is the level of knowledge and skills of young women. Data analysis used the Wilcoxon test and Mc Nemar Test. The research results showed that there were 55 young women who had good knowledge in the intervention group (87.3%) while in the control group there were 3 respondents (4.8%). And it was found that there were 63 young women who had capable skills in the intervention group (100%) while in the control group there were 31 respondents (49.2%). The results of the Wilcoxon statistical test and the Mc Nemar Test obtained a significance value of 0.000 (<0.05), it can be concluded that there is an influence of health education with audiovisual media on the level of knowledge and skills regarding early detection of mammary fibroadenoma (FAM) in young women.

Keywords: Health Education, Knowledge, Mammary Fibroadenoma, Skills, Young Women

BACKGROUND

Mammary fibroadenoma or benign breast tumor is a lump in the breast that can be moved and has clear boundaries. Young women aged around 16-20 years are at risk of developing FAM (Artini et al., 2021). This disease occurs asymptomatically in 25% of women and often occurs in adolescence and peaks between the ages of 15 and 35 years (Brave, 2009 in Rahayu et al., 2020). Cunningham (2010) explains that the incidence of fibroadenomas during adolescence is related to changes in hormone levels. The hormone referred to in the incidence of mammary fibroadenoma is the hormone estrogen (Rahayu et al., 2020).

If FAM growth is allowed, the risk of breast cancer will be high and recurrence will occur if FAM is not removed completely (Price, 2013). The results of research conducted by the American Cancer Society (revised 2016) found that women diagnosed with FAM were 1.5 to 2 times more likely to develop breast cancer than women with normal breasts. The prognosis will be better if detected early (Price, 2013 in Hanifah, 2017). One of the early detection of breast tumors is breast self-examination (BSE). Breast self-examination (BSE) is an efficient and effective method for early detection of tumors in the breast (Rahayu et al., 2020). Based on existing phenomena, the term BSE has not been fully socialized and there are still many

young women who do not know the term BSE and its application properly and correctly (Nikmah & Lutfiasari, 2018).

In Indonesia, data reports on FAM disease are still incomplete, but it is estimated that up to 100 people were exposed to benign breast tumors until mid-2011 (Indonesian Cancer Foundation, 2012). In research, Sidauruk (2013) reported 103 cases of FAM at Santa Elizabeth Hospital in Medan for the 2007-2011 period. Of the 103 FAM patients, most were found to be less than 35 years old, namely 72.8% of cases (Hanifah, 2017).

Globocan (2018) explains that there are 18.1 million new cases of FAM every year with a death rate of 9.6 million deaths, where one in five men and one in six women in the world experience cancer. Globocan (2018) also explains that one in eight men and one in 11 women die from cancer.

From the results of interviews that researchers obtained, high school student Ibrahimy Wongsorejo said he had never received information or education about FAM and how to detect FAM early. The results of interviews regarding the skills of female students in carrying out early breast detection showed that almost all female students said that they had never examined their own breasts because of a lack of knowledge and information about breast self-examination to detect lumps or FAM in their breasts.

One effort that can be made to introduce and increase young women's knowledge about BSE is by providing health education (Rachman & Putri, 2020). Health education is a health promotion activity in the form of providing health information or messages to provide or increase knowledge and attitudes about health to encourage healthy behavior (Notoatmodjo, 2012 in Pratiwi et al., 2019). However, the success of health education also depends on the media used in the education (Rachman & Putri, 2020).

Attractive media will increase the audience's motivation to learn and understand the extension material. One type of interesting outreach media is video media (Rachman & Putri, 2020). Counseling using audio-visual media is media that contains elements of sound and also contains elements of visual images that can be seen such as videos, various sizes of film, sound slides, etc. Audiovisual capabilities are considered better and more interesting because they contain two elements that can be seen and heard (Epita et al., 2020).

METHODS

The type of design used in this research is Quasi-Experiment with the Non Equivalent Control Group Design method. The population in this study was all 185 class X and XI female students. The sample size in this study was 125 female students using the Stratified Random Sampling technique. Then tested using Wilcoxon and Mc. Nemar Test with a significance value of <0.05 so that H1 is accepted, which means there is an influence of health education with audiovisual media on the level of knowledge and skills of young women regarding early detection of fibroadenoma mammae (FAM) in young women.

RESULTS

This research consisted of 125 respondents who were divided into 2 groups, namely 63 respondents in the intervention group and 63 respondents in the control group. Of the 125 respondents involved, their characteristics were then analyzed based on age, class, never receiving information, never being aware, and never having a previous history of FAM.

Table 1. Characteristics of Respondents Based on Age

Age	Intervention Group		Control Group	
	f	%	f	%
15 Year	8	12,7	10	15,9
16 Year	24	38,1	22	34,9
17 Year	17	27,0	19	30,2
18 Year	9	14,3	8	12,7
19 Year	5	7,9	4	6,3
TOTAL	63	100	63	100

Table 2. Characteristics of Respondents Based on Class

Class	Intervention Group		Control Group	
	f	%	f	%
X	32	50,8	32	50,8
XI	31	49,2	31	49,2
TOTAL	63	100	63	100

Table 3. Characteristics of respondents based on whether they have ever received information about BSE, whether they have ever done BSE, whether they have had a previous history of FAM

Characteristics	Once				Never			
	Intervention Group		Control Group		Intervention Group		Control Group	
	f	%	f	%	f	%	f	%
Have you ever received information about BSE?	9	14,3	10	15,9	54	85,7	53	84,1
Have you ever done BSE?	0	0	0	0	63	100	63	100
Have you ever had a history of FAM before?	0	0	0	0	63	100	63	100
TOTAL	63	100	63	100	63	100	63	100

Table 4. Cross tabulation of knowledge before and after Health Education

Group	Category	Pre test knowledge		Post Test Knowledge	
		f	%	f	%
Intervention	Not enough	48	76.2%		
	Enough	15	23.8%	8	12.7%
	Good			55	87.3%
TOTAL		63	100%	63	100%
Control	Not enough	50	79.4%	29	46.0%
	Enough	13	20.6%	31	49.2%
	Good			3	4.8%
TOTAL		63	100%	63	100%

In this study, it was found that of the 63 respondents in the intervention group, most of the knowledge about early detection of mammary fibroadenoma (FAM) during the pre-test was poor, namely 48 respondents (76.2%) and knowledge during the post-test was good, namely 55 respondents (87.3%). Meanwhile, from the 63 respondents in the control group, it can be seen that most of the knowledge about early detection of mammary fibroadenoma (FAM)

during the pre-test was lacking, namely 50 respondents (79.4%) and knowledge during the post-test was sufficient, namely 31 respondents (49.2%).

Table 5. Cross tabulation of skills before and after Health Education

Group	Category	Pre Skills		Post Skills	
		f	%	f	%
Intervention	Unable	63	100.0%		
	Capable			63	100.0%
	TOTAL	63	100.0%	63	100.0%
Control	Unable	63	100.0%	32	50,8%
	Capable			31	49,2%
	TOTAL	63	100.0%	63	100.0%

In this study, it was found that of the 63 respondents in the intervention group, the skills of all respondents regarding early detection of Fibroadenoma Mammary (FAM) during the pre-test were inadequate, namely 63 respondents (100.0%) and the skills during the post-test were capable, namely 63 respondents (100.0%). Meanwhile, from the 63 respondents in the control group, it can be seen that the skills of all respondents regarding early detection of mammary fibroadenoma (FAM) during the pre-test were inadequate, namely 63 respondents (100.0%) and the skills during the post-test were mostly inadequate, namely 32 respondents (50.8%) but there was an increase in 31 respondents (49.2%) from not being able during the pre-test to being able during the post-test.

Table 6. Statistical test: Wilcoxon

Test Statistics[b]		
	Post Test Experiment - Pre Test Experiment	Post Test Experiment - Pre Test Experiment
Z	-7.138[a]	-4.899[a]
Asymp. Sig. (2-tailed)	.000	.000
a. Based on negative ranks.		
b. Wilcoxon Signed Ranks Test		

The results of statistical tests using the Wilcoxon test obtained a significance value of 0.000 which means <0.05, so H1 is accepted which means there is an influence of health education with audiovisual media on the level of knowledge of young women regarding early detection of mammary fibroadenoma (FAM) in young women.

Table 7. Statistical test: Mc Nemar Test

Test Statistics[b]		
	Pre Experiment & Post Experiment	Pre Control & Post Control
N	63	63
Chi-Square[a]	61.016	29.032
Asymp. Sig.	.000	.000
a. Continuity Corrected		
b. McNemar Test		

The results of statistical tests using the Mc Nemar Test showed a significance value of 0.000, which means (<0.05), it was concluded that there was a significant difference between before

and after providing health education with audiovisual media. So H1 is accepted, which means that there is an influence of health education with audiovisual media on the skills of young women regarding early detection of fibroadenoma mammae (FAM) in young women.

DISCUSSION

Knowledge of young women about early detection of fibroadenoma mammae (FAM)

The results of the research carried out revealed that of the 63 respondents in the intervention group who were given health education using audiovisual media and of the 63 respondents in the control group who were given health education with leaflets as another form of intervention, the majority of respondents had insufficient knowledge about early detection of mammary fibroadenoma (FAM) before being given health education, namely 48 respondents (76.2%) in the intervention group and 50 respondents (79.4%) in the control group. These results are supported by data on respondent characteristics where of the 63 respondents in the intervention group and of the 63 respondents in the control group, the majority of respondents had never received previous information about BSE, namely 54 respondents (85.7%) in the intervention group and 53 respondents (84.1%) in the control group. It is assumed that the majority of respondents still lack knowledge about early detection of mammary fibroadenoma (FAM). The lack of knowledge among respondents is caused by several factors, one of which is a lack of information.

Researchers concluded that the factors that most influence respondents' knowledge of characteristics are interests and sources of information. Proven in this research is that when someone has a high interest in knowing something new and is given supporting information, it will be easier to absorb knowledge and apply it, and it will be easier to increase one's knowledge. Respondents (adolescent girls) have not received correct information regarding early detection of mammary fibroadenoma (FAM) and memory has not been processed in the brain, so respondents have insufficient knowledge. This is in accordance with the theory which states that knowledge can be obtained either from direct experience or from other people.

Skills of young women regarding early detection of fibroadenoma mammae (FAM)

The results of the research carried out revealed that of the 63 respondents in the intervention group who were given health education using audiovisual media and of the 63 respondents in the control group who were given health education with leaflets as another form of intervention, all respondents were unable to carry out early detection of mammary fibroadenoma (FAM) before being given health education, namely 63 respondents (100%) in the intervention group and 63 respondents (100%) in the control group. These results are supported by data on respondent characteristics where of the 63 respondents in the intervention group and 63 respondents in the control group, the majority of respondents had never received previous information about BSE, namely 54 respondents (85.7%) in the intervention group and 53 respondents (84.1%) in the control group. And it is known that of the 63 respondents in the intervention group and 63 respondents in the control group, all respondents had never done BSE, namely 63 respondents (100%) in the intervention group and 63 respondents (100%) in the control group.

Researchers argue that skills are also influenced by the respondent's level of knowledge. If the respondent's knowledge about early detection of mammary fibroadenoma (FAM) is lacking, this will affect the respondent's skill level in providing health education. So it can be concluded that before providing health education, respondents had poor skills, indicated by the indicator that respondents were not able to carry out BSE procedures.

Knowledge of young women about early detection of fibroadenoma mammae (FAM)

Based on the results of the research conducted, it is known that of the 63 respondents in the intervention group who were given health education with audiovisual media, they had

sufficient knowledge at the pre-test to be good at the post-test and of the 63 respondents in the control group who were given health education with leaflets as another form of intervention, their knowledge was insufficient at the pre-test to be sufficient at the post-test. Knowledge can be said to be good if respondents can correctly answer the questionnaire questions given by researchers which consist of several indicators, namely: Definition of early detection of mammary fibroadenoma (FAM), aim of early detection of mammary fibroadenoma (FAM), time of early detection of mammary fibroadenoma (FAM) and how to carry out early detection of mammary fibroadenoma (FAM).

This is proven by scoring results of 76-100% or being able to answer at least 8 out of 10 statements correctly. 55 respondents from the intervention group had good knowledge, this was proven by the questionnaire scoring results between 76-100% or could answer 8 out of 10 statements. The other 8 respondents had sufficient knowledge, as evidenced by results of 56-75% or could only answer statements correctly in a maximum of 7 questions out of 10 questions. 3 respondents from the control group had good knowledge, this was proven by the questionnaire scoring results between 76-100% or could answer 8 out of 10 statements, 31 respondents had sufficient knowledge, this was proven by the questionnaire scoring results between 56-75% or could answer 7 out of 10 statements and the other 29 respondents had poor knowledge, this was proven by the scoring results <56% or could only answer 5 out of 10 questions.

The researcher believes that after receiving education regarding early detection of mammary fibroadenoma (FAM), from the initial lack of knowledge to a good category in the intervention group and insufficient knowledge to a sufficient category in the control group, with indicators that respondents began to understand the definition of early detection of mammary fibroadenoma (FAM), the purpose of early detection of mammary fibroadenoma (FAM), the timing of early detection of mammary fibroadenoma (FAM) and how to carry out early detection of mammary fibroadenoma (FAM). This is one of the goals of providing health education about early detection of mammary fibroadenoma (FAM).

CONCLUSSION

1. Knowledge of young women about early detection of mammary fibroadenoma (FAM) before being given education, the majority of respondents in the intervention group had insufficient knowledge, namely 48 respondents (76.2%). Meanwhile, in the control group there were 50 respondents (79.4%).
2. Knowledge of young women about early detection of mammary fibroadenoma (FAM) after being given education, the majority of respondents in the intervention group had good knowledge, namely 55 respondents (87.3%). Meanwhile, the control group had a sufficient category, namely 31 respondents (48.4%).
3. Skills of young women regarding early detection of mammary fibroadenoma (FAM) before being given education, all respondents in the intervention group were unable to carry out early detection of mammary fibroadenoma (FAM), namely 63 respondents (100%). Meanwhile, in the control group there were 63 respondents (100%).
4. Skills of young women regarding early detection of mammary fibroadenoma (FAM) after being given education, all respondents in the intervention group were able to carry out early detection of mammary fibroadenoma (FAM), namely 63 respondents (100%). Meanwhile, the control group had the unable category, namely 32 respondents (50.8%).
5. There is an influence of health education with audiovisual media on the level of knowledge and skills for early detection of mammary fibroadenoma (FAM).

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