

Differences in Student's Knowledge Levels Against *Fibroadenoma Mammae* Before and After the Provision of Breast Self Examination Intervention in SMA PGRI 2 Palembang

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Abstract: *Fibroadenoma Mammae* disease is a benign tumor that grows expansively. Therefore, every woman must be aware of any changes occurs in their breasts, one of much easier and more effective way to detect breast abnormalities by themselves is recognized as breast self-examination (SADARI). This study is aimed to identify the differences between knowledge level of female students at SMA PGRI 2 Palembang toward *Fibroadenoma Mammae* before and after conducting breast self-examination (SADARI) behavioral intervention. This study is a quasi experimental research through pre test and post test time series design using primary data taken from class XII science students at SMA PGRI 2 Palembang with total samples as much as 86 samples that comply with the inclusive and exclusive criteria. The samples were collected by using total sampling technique. Data obtained through filling out the questionnaire by all respondents before (pretest) and after (Post-test) counseling was given. Data was analyzed through univariate and bivariate. The results of statistical test was taken by using Marginal homogeneity test showed that there was a meaningful difference between knowledge level of female students at SMA PGRI 2 Palembang toward *Fibroadenoma Mammae* before and after conducting breast self-examination (SADARI) behavioral intervention with -value 0.000 (< 0,05). It can be concluded that there is a meaningful difference between knowledge level of female students at SMA PGRI 2 Palembang toward *Fibroadenoma Mammae* before and after conducting breast self-examination (SADARI) behavioral intervention.

Keywords: *Fibroadenoma Mammae*, SADARI Behavior, Knowledge

Introduction

Fibroadenoma Mammae disease is a benign tumor that can grow expansively by pressing on the surrounding area and can be enlarged due to pressure on its environment. The space it occupies can cause serious problems and cause complaints in the sufferer as well (Wim, 2005). Therefore, women must be aware of any changes in their breasts, by applying BSE behavior (Breast Self Examination) to detect the presence of cancer or breast tumors as early as possible. This is highly suggested for women who have a high risk of developing breast cancer.

Total of 3845 benign breast biopsies performed in the African-American population racial group, 1798 people (47%) were diagnosed with fibroadenoma mammae. Women with *fibroadenoma mammae* when the biopsy was employed more commonly belong to under the age of 40 years (31.9%) compared to women without *fibroadenoma mammae* (18.9%) (Shaik *et al.*, 2018) in the western population, *fibroadenoma mammae* is found in 7-13 % of patients undergoing breast examinations, whereas in Shanghai approximately 1 in 350 women are diagnosed with *fibroadenoma mammae* before the age of 60 years. The incidence of *Fibroadenoma Mammae* in women decreases with increasing age and partly decreases at menopause (Nelson *et al.*, 2010).

According to the WHO 2030, there will be a jump in cancer sufferers in Indonesia up to seven times. This is due to the large number of women of childbearing age and lifestyle that have switched from agriculture to industry. This results in a high risk of *Fibroadenoma Mammae* in women. In Palembang, reports of *Fibroadenoma Mammae* cases were included in the breast tumor group, and in 2018 there were 313 new cases. According to the South Sumatra Provincial Health Office in 2018, the age group suffering from breast tumors in Palembang during 2018 are categorized such as the following; the age group of 15-19 years with 18 cases, aged 20-24 years with 95 cases, age 45-54 years with 113 cases, age 55-59 years with 49 cases, aged 60-69 years as many as 26 cases and aged 70 years and over with 12 cases. Aging is one of the risk factors for breast tumors, due to hormonal exposure for a long time, especially the hormone estrogen which is very sensitive to tissue growth in the breast. There is also the influence of other risk factors such as birth control pills and menopause that require time to induce the occurrence of tumors (Sihombing *et al.*, 2014).

Based on recapitulation data from the Muhammadiyah Hospital Palembang in 2018, quite a lot of *fibroadenoma mammae* sufferers do a treatment at the hospital every year. In 2016 there were 370 people recorded, in 2017 there were 219 people, and in 2018 there were 214 people with *Fibroadenoma Mammae* who were hospitalized. Based on the background above, researchers are interested in conducting research on the Differences in Knowledge Levels of Students Against *Fibroadenoma Mammae* Before and After Giving BSE Intervention in SMA PGRI 2 Palembang. The purpose of this study was to determine differences in the level of knowledge of SMA PGRI 2 Palembang students against *Fibroadenoma Mammae* before and after the provision of BSE behavioral intervention.

Methods

Design of this study employed *quasi-experimental* research with a *pretest, posttest, time-series design* conducted at SMA PGRI 2 Palembang on November 19, 2019. The design of this study was by collecting initial data on the number of female students of class XII IPA SMA PGRI 2 Palembang will be used as respondents, determining the population and research sample, filling the first questionnaire (Pre-test) in the sample, then giving an intervention in the form of counseling BSE, then filling out the second questionnaire (Post-test), processing data and compiling research reports.

Samples in this study were 86 people and were taken by total sampling. The inclusion criteria in this study were enrolled as students and present at the time of research in class XII natural sciences at SMA PGRI 2 Palembang and were willing to become research respondents and fill out the informed consent. Exclusion criteria in this study were students who filled out incomplete questionnaires, were not willing to become research respondents and were registered as students but were not present at the time of research in class XII sciences at SMA PGRI 2 Palembang. Data analysis employed bivariate data analysis.

Result

Table 1. Frequency Distribution of Respondents by Age

Age	Frequency	Percentage
15	2	2,3
16	20	23,3
17	61	70,9
18	3	3,5
Total	86	100,0

Table 2. Frequency Distribution of Respondents Based on FAM History

FAM History	Frequency	Percentage
Yes	0	0
Never	86	100,0
Total	86	100,0

Table 3. Frequency Distribution of Respondents Based on FAM Information

FAM Information	Frequency	Percentage
Yes	22	25,6
Never	64	74,4
Total	86	100,0

Table 4. Frequency Distribution of Respondents Based on BSE Information

SADARI Information	Frequency	Percentage
Yes	15	17,4
Never	71	74,4
Total	86	100

Table 5. Frequency Distribution of Respondents by FAM Knowledge Level Before BSE Intervention

Knowledge Level	Frequency	Percentage
Good	58	67,4
Adequate	21	24,4
Less	7	8,2
Total	86	100,0

Table 6. Frequency Distribution of Respondents Based on FAM Knowledge Level After BSE Intervention

Knowledge Level	Frequency	Percentage
Good	80	93,0
Adequate	5	5,8
Less	1	1,2
Total	86	100,0

Table 7. Differences in the Knowledge's Level of FAM Before and After the Provision of BSE Intervention in SMA PGRI 2 Palembang

	After		Total	<i>P-Value</i>	
	Good	Less			
Before	Good	58	0	0	58
	Adequate	20	1	0	21
	Less	2	4	1	7
Total		80	5	1	86

Discussion

From the 86 respondents, it was found that the age group with the highest number of respondents was a group of 17 years with 61 people (70.9%). Young adults or adolescents are ages in the range of 10-19 years. According to WHO in 2014, the age of young adults or adolescents is in the age range of 10-24 years and is unmarried. At this age, individuals increase their habits in rational thinking, have adequate life and education experience, and are psychosocially considered capable of solving personal and social tasks (Hateriah *et al.*, 2017). The results showed that all respondents did not have a history of FAM on their breasts (100%). This is consistent with the theory claiming that the highest frequency of FAM is a group of women aged 20-25 years. FAM is a benign breast tumor that is most often diagnosed in young women and adults, namely in the first 3 decades of life. The occurrence of FAM constitutes one-third of all occurrences of benign breast tumors (Brave, 2009).

The results showed that as many as 64 people (74.4%) acknowledge information about FAM and 71 people (82.6%) who do information about BSE. Information is one of the factors that influence knowledge. The ease of obtaining information can help someone to obtain new knowledge provision of information will increase knowledge in order to cause awareness, and it eventually leads people to behave in accordance with the knowledge they have (Notoadmojo, 2012).

The results of the percentage of FAM and BSE knowledge prior to the intervention in this study showed that only the majority of female students' knowledge was in the good category (67.4%). The same results were obtained in a study conducted by Hateriah *et al.*, 2017 on "The Differences of Knowledge Management Principles About Early Detection of *Fibroadenoma Mammae* Using BSE Method in SMPN 18 Banjarmasin" where the level of knowledge of respondents categorized as less was found as many as 61 people (79.22 %). This is possible because, based on the characteristics of respondents, only a small proportion of students have received information and experience regarding *Fibroadenoma Mammae* and BSE. Moreover, it can be influenced by several factors such as information and experience. The knowledge possessed by humans sometimes comes from experience and thoughts. The knowledge that comes from experience includes all things experienced by the five senses, intuition, or conscience. Meanwhile, a knowledge that comes from the mind, that is knowledge gained through the process of reasoning. After being given the intervention, the percentage results of FAM and BSE knowledge obtained in the good category rose to 93%.

The same results were obtained in a study conducted by Hateriah *et al.*, 2017 on "The Differences of Knowledge Management Principles About Early Detection of *Fibroadenoma Mammae* Using BSE Method in SMPN 18 Banjarmasin in which after counseling most respondents had a good level of knowledge with 70 people (90.91%) (Nelson *et al.*, 2010). This is in accordance with the theory that knowledge is the result of knowing and this

happens after people have sensed a particular object (Perry and Potter, 2012). Knowledge is everything that is known based on the experience gained by every human being (Budiman & Riyanto, 2013). Providing an intervention is one of the media to get information. The easier it is to obtain information and the more the tendency to experience, the newer and more in-depth the knowledge (Notoadmojo, 2012). The information obtained from both formal and non-formal education can have a short-term influence (Immediate impact), resulting in a change or increase in knowledge (Olfah *et al.*, 2013).

Respondents' knowledge in SMA PGRI 2 Palembang concerning FAM knowledge before and after being given intervention about BSE resulted in the *Marginal Homogeneity* correlation test results with a significant value of p-value <0.05. The results were carried out through SPSS 23 test, and it was found out that the significance of the correlation of *Marginal Homogeneity* is 0,000. From these results, an Asymp value was obtained. Since Sig (2-tailed) is valued 0,000 <0.005, Ho is rejected and Ha is accepted. This shows that there is a significant difference in the level of knowledge of SMA PGRI 2 Palembang against *Fibroadenoma Mammae* before and after the provision of BSE interventions. From the above results, there is a tendency for a better level of knowledge of female students about FAM through BSE which can be seen from the results of the value of knowledge with a good category. The increase in the value of respondents' knowledge about FAM after being given an intervention regarding BSE occurred because it was influenced by several factors, one of them is education. Education is an activity or learning process to develop or improve certain abilities so that the educational goals can stand by itself.

The level of education also determines whether or not someone is easy to absorb and understand the knowledge they obtain. In general, the higher one's education, the better the knowledge. The level of one's education affects the level of knowledge of that particular person. This is related to the amount or the amount of information obtained. Information is also one of the factors that influence the increase in knowledge levels. Information obtained from the mass media influences a person's cognitive and affective functions.⁹ Information can also be obtained from formal or informal education, for example, counseling (Intervention), and from various sources, education, age, and occupation (Wawan, 2015).

The results of this study are in accordance with the research conducted by Amalia Floreska, Dewi Puspitaningrum and Lia Mulyanti in 2014 stating that there was a significant influence between the knowledge of adolescent girls on the prevention behavior of *Fibroadenoma Mammae* disease in MA Sabilul Muttaqin Trimulyo Demak as evidenced by a value of $p = 0.005 < (0.05)$ (Floreska *et al.*, 2014).

This research also increased the interest of students to find out more about reproductive health issues, especially breast health. Such finding is evidenced by more than 50% of students who were present asking questions about breast health problems after being given an intervention regarding FAM and BSE behavior. High interest also influences the increase factor of knowledge. Interest makes someone try and pursue one thing and ultimately gain in-depth knowledge (Mubarak, 2011).

Conclusions

The results obtained a p-value of 0,000 which indicates that there are differences in the level of knowledge of SMA PGRI 2 Palembang against *Fibroadenoma Mammae* before and after giving BSE behavioral intervention. Suggestions for further research are to conduct similar studies in other places for comparison.

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