

Empowerment of youth peer groups in improving breast cancer awareness in high school in Samarinda



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ABSTRACT

Introduction: Breast cancer is the type of cancer that has the highest contribution to the prevalence of women's cancer in Indonesia. This type of cancer has a high mortality rate due to late early detection. Breast cancer is the most common cancer in women. Early detection of breast cancer plays a significant role in reducing mortality and improving patient prognosis. Based on initial data taken, the knowledge results of 10th grade were obtained SMA Negeri 1 Samarinda reached 52,5%, which is classified as knowledge level (less <56%). Apart from that, the percentage of 10th-grade high school students who have a family history of breast cancer is 15%. The percentage of early menstruation in 10th-grade high school students is 28%. Therefore, it is necessary to continue to be reminded of health information about breast cancer. The aim is to provide students with an understanding of breast cancer, its impact, and risks, and to create facilities to increase this knowledge.

Methods: The purpose of this community service was to community empowerment through youth peer groups regarding breast cancer awareness. The community service methods were health education about breast cancer awareness and Breast Self Examination (BSE) demonstrations. The population in this study were female students in 10th grade. The sample was 94 respondents. Primary data of this study were collected using a pre and post-test questionnaire. The data analysis used was the percentage and frequency.

Results: The results obtained an increase in knowledge of students after being given breast cancer awareness education whereas 78,7% in the good category increased to 88,3%.

Conclusion: With increasing levels of knowledge, hopefully, it will be possible for adolescent's attitudes toward Breast Self Examination (BSE).

Keywords: Awareness; empowerment; peer groups; youth.

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INTRODUCTION

Breast cancer is the type of cancer that has the highest contribution to the prevalence of cancer in women in Indonesia. This type of cancer has a high mortality rate due to late early detection. Breast cancer survivors are generally detected at stage carry-on. Breast cancer is the most common cancer in women. Early detection of breast cancer plays a significant role in reducing mortality and improving patient prognosis.¹ Global Burden of Cancer Study (Globocan) from WHO in 2020, there were 2.3 million women diagnosed with breast cancer and 685.000 deaths globally. Until the end of the year 2020, there were 7.8 million living women diagnosed with breast cancer in the last 5 years, making it the most common cancer in the world.

In Indonesia, the number of new cases of breast cancer reached 68.858 cases (16.6%) of the total 396. 914 new cases of cancer in Indonesia. Meanwhile, the number of deaths reached more than 22.000 cases.²

Based on initial data taken, the knowledge results of 10th grade were obtained SMA Negeri 1 Samarinda reached 52,5%, which is classified as knowledge level (less <56%). Apart from that, the percentage of 10th-grade high school students who have a family history of breast cancer is 15%. The rate of early menstruation in 10th-grade high school students is 28%. Based on the data above, there is a high possibility of breast cancer caused by a late diagnosis of cancer.

Due to the absence of prompt recognition and access to treatment services, the incidence rate is highest in

more developed regions, but mortality is much higher in less developed regions. In low and middle-income countries, women face several barriers to breast cancer care, right from accessing prompt detection programs to receiving timely diagnosis and suitable treatment. Early detection of breast cancer is important for early treatment, and as such, we will be reducing cancer-related mortality. Breast Self-Examination, clinical breast exam, and mammography are the recommended screening methods aimed at reducing breast cancer mortality and related morbidity.³

So, to prevent the increasing number of deaths due to breast cancer is urgently needed early detection of cancer, namely Breast Self-Examination (BSE). By practicing BSE, a woman can recognize

and evaluate any changes to her own body and evaluate any changes to her own body and receive the necessary treatment and care at an early stage. Indonesian teenagers are currently experiencing significant social change from traditional society to modern society, which is also changing their norms, values, and lifestyle. Lifestyle and the development of the times is an essential factor that really influences adolescents at risk of breast cancer.⁴

Adolescents need health services, which are good and proper education. Health education will be better if given directly at school through their peers. Peers can be more effective and open in providing health education so that communication will be easier compared to education carried out by parents and teachers. Nowadays, several health education methods have been developed, such as lectures and discussions, Focus Group Discussions (FGD), games, and health education by peer groups. Therefore, it is necessary to continue to be reminded of health information about breast cancer. The aim is to provide students with an understanding of breast cancer, its impact and risks, and to create facilities to increase this knowledge.^{5,6}

Previous research about peer group empowerment in optimizing increased knowledge about adolescent reproductive health results shows that facilities available (Reproductive Health Ambassador, Adolescent Corner at school, and peer groups) in increasing adolescent knowledge regarding reproductive health have been proven to make students and schools enthusiastic to continue to develop together teenager's knowledge in particular about health, both in general and about reproductive health.⁵ The purpose of this community service was to community empowerment through youth peer groups regarding breast cancer awareness. The community service methods were health education about breast cancer awareness and Breast Self-Examination (BSE) demonstrations.

METHOD

The location of this program is SMA 1 Samarinda, Samarinda City, East Kalimantan Province, Indonesia. It was held in June-September 2023. The criteria

for inclusion were female students in 10th grade who already have menstruation. The exclusion criteria were not following this program until it was finished.

In this community service program, we used a quantitative approach with an experimental method. We attempted to examine whether or not there was an influence in the program that we were conducting. The experimental design that we applied made use of the pre-test and post-test techniques. In these tests, we provided questions to measure public knowledge. Knowledge was categorized into good (76-100%), enough (56-75%), and less (0-55%). We took our samples using the probability sampling method with simple random sampling. The population in this study were female students 10th grade. The sample was 94 respondents.

The primary data of this study were collected using pre- and post-test questionnaires. The data were analyzed using SPSS. The data were analyzed with percentage and frequency. Univariate data analysis was carried out to describe the distribution frequency and proportion. This type of data in community services is that only primary data is taken using questionnaires. We used the questionnaires from previous studies.

This study's procedure began with a pretest that assessed female students' knowledge of breast cancer awareness. Subsequent events were education and discussions about breast cancer, demonstrating Breast Self-Examination (BSE). The last phase was a posttest that assessed knowledge.

RESULT

Three lecturers conducted this community service. The purpose of the community service was to raise breast cancer awareness through education and Breast Self-Examination (BSE) demonstrations (Figure 1-4). We distributed a pre-questionnaire test to determine the levels of knowledge of teenagers about breast cancer awareness.

Table 1 shows the distribution of female students who participate in these educational activities. In terms of current age, most students were 15 years old (46,8%), and the least were 14 years old

(9,6%). In terms of family history of breast cancer, most students did not have breast cancer in the past generation (87,2%), and the least had breast cancer from the past generation (12,8%). In terms of BSE practice, most students do not ever practice BSE (80,9%) and the least students ever practiced BSE (19,1%).

Table 2 shows that the knowledge of students increased after being given breast cancer awareness education. This is because of various factors that can influence it, including age, family history of breast cancer, and others.

DISCUSSION

The spread of health education is in various circles, starting from schools and the health community. Health education carried out by schools provides many benefits in increasing awareness and maintaining health for both school students and residents of the environment around the school, which can support the learning process. The existence of health education has a vital role in improving personal health.⁷

Peer group is one of the means or a medium for exchanging ideas and mutual discussion regarding current problems facing it as a group can achieve success and satisfaction while making life happen more effectively.⁸ Peer groups play a primary role in BSE that has an impact on improving adolescent skills. This increased skills due to the intervention provided, namely, health education through peer groups, so that adolescents' knowledge increased, which led to changes in skills. Peer group health education is considered effective in conveying health information to adolescents.⁹

Accompanied by peers, adolescents will be more open and communicate more quickly than with parents, health workers, and teachers. Information that is sensitive and uncomfortable when conveyed by adults can be conveyed by peers using age-appropriate language. In this way, information is more complete and easier to understand, and ultimately, goals can be achieved. Apart from that, as peer educators, peers not only provide but also act as internal role models.¹⁰ Things that are considered taboo to discuss, especially regarding reproductive health, when



Figure 1. Education about Breast Cancer Awareness.



Figure 2. Youth Peer Group.



Figure 3. BSE Demonstration.



Figure 4. Documentations.

the information is provided become no more extended taboo when peers give the information.¹¹

It is the lack of sensitivity, curiosity, and activeness of Indonesian young women in seeking information about BSE that causes their knowledge and positive attitudes to be lacking. Many young women think that it is not the time for them to think about or learn about breast cancer. They have the opinion that breast cancer will only infect married women or women aged 25 years and over. They consider that young people are still very healthy

and their body condition is still in better condition compared to those who are more mature. So, they think that they will not get this deadly disease.¹² Breast cancer among younger women is generally more aggressive and has a poor prognosis. This necessities the importance of awareness of breast cancer and the practice of BSE for early detection and to reduce morbidity and mortality.¹³

In early cases, when a woman is suspected of having pre-breast cancer, the BSE examination becomes very helpful in the treatment process because it is detected early. BSE is as form of developing women's concern for their health breasts.¹⁴ Breast Self-Examination (BSE) is an effective screening tool for early detection of cancer; more awareness programs and counseling are needed regularly to alleviate this anxiety.¹⁵ It has been documented that a significant proportion of breast cancers

are self-detected.¹⁶ To meaningfully achieve early detection of breast cancer in developing settings, factors impeding on the screening practices of women need to be addressed accordingly.¹⁷ Improving the knowledge level can significantly improve women's attitude toward breast neoplasm and BSE and subsequently affect their performances.¹⁸

However, we could only invite 10th grade students as our participants in this project due to resource limitations. We may need to improve and broaden this youth peer group to empower the community that has been built to raise awareness about women's disease.

CONCLUSION

Students' knowledge increases after they are given breast cancer awareness education. With increasing levels of knowledge, hopefully, adolescents' attitudes towards BSE will improve. BSE, as early detection, also requires community social support, especially in schools. Suggestions for further community service need to be carried out in the development efforts to maintain these youth peer groups.

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CONFLICT OF INTERESTS

The authors declare no conflict of interest. All co-authors have seen and agree with the contents of the manuscript. We certify that the submission is original work and is not under the review at any other publications.

Table 1. Description of the participant's characteristics

Characteristics	Frequency	Percentage	
Current Age	14 years old	9	9,6
	15 years old	44	46,8
	16 years old	27	28,7
	17 years old	14	14,9
Family History of Breast Cancer	Yes	12	12,8
	No	82	87,2
BSE Practice	Yes	18	19,1
	No	76	80,9

Table 2. The Test Results on Knowledge about Breast Cancer Awareness

Knowledge	Total	
	F	%
Pre Test		
Good	74	78,7
Enough	20	21,3
Less	0	0
Post Test		
Good	83	88,3
Enough	9	9,6
Less	2	2,1
Total	94	100

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AUTHOR CONTRIBUTION

Contributor 1 : contributing in concepts, experimental studies and guarantor.

Contributor 2 : contributing in data acquisition, manuscript preparation and manuscript review.

Contributor 3 : contributing in data analysis and statistical analysis.

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