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The Breast Self-Examination (BSE) Behaviour among Balinese Women of Reproductive Age

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Abstract: ***Breast cancer is a disease that commonly found in women worldwide. Early detection of breast cancer is breast self-examination. Objective of study to find the effect of promotion on breast cancer for conduct breast self-examination in women of reproductive age. The research conducted at Kesiman Petilan Village on Denpasar and Medahan Village at Gianyar on August dan September 2016. The research population were all women of reproductive age in Kesiman Petilan village and Medahan Village, the samples were taken by multi-stage random sampling in each village. The research's design is Quasi-experiments with the design non-equivalent pre-test post-test control group design. The instrument to collect the data used questionnaires and checklists. The statistics test that used was paired t-test (pre-test post-test) and independent t-test (control treated). Results of study noted that the knowledge, attitude, and practices of women of reproductive age after being given a promotion acquire average to a higher score than before got the promotion (p-value 0.00). Conclusions: There are significant differences in the behaviour of breast self-examination in the control and treatment group. It is recommended that the promotion program to women of reproductive age encouraged the implementation so the incidence of breast cancer can be detected as early as possible.***

Keywords:

1. Introduction

Cancer is the highest cause of mortality in the world. On 2013, in Indonesia breast cancer is the second highest prevalence of cancer after cervical cancer by 0.5% with the incidence evenly in each province. The breast cancer cases in Bali reached 0.6% more than the average in Indonesia (1). According to the medical record of Sanglah General Hospital Denpasar in 2009 showed the number of outpatient cases of breast cancer as much as 412 cases, of which 113 of them are new cases. On 2010, it was recorded 93 new cases from 620 cases of breast cancer, while in 2011 recorded the number of outpatient cases was 203 people with the number of new cases as many as 40 people (2). *Pusat Data dan Informasi Kemenkes RI* (Centre for Data dan Information of Ministry Health of Indonesia) stated that the prevalence of breast cancer cases in Bali reaches 0.6% more than the average in Indonesia (1).

Breast cancer is an accumulation of abnormal cells in the breast which growth is uncontrolled and multiplied. This accumulation of cells ultimately forms a lump in the breast and when not removed or controlled these cells will spread to other tissues called metastases and may lead to death (3). Women who classified into high-risk breast cancer are women with hereditary families who has breast cancer, have never been pregnant, and did not breastfeed, the first pregnancy occurred after the age of 35 years old, the long menstrual cycle (the first menstruation was less than 12 years old and experience menopause above 50 years old), had suffered benign breast tumour and exposure to radiation in the breast (4,5).

Healthy women can conduct primary prevention through efforts to avoid exposure to various risk factors and implement a healthy lifestyle (6). One of the things that need to be improved is the knowledge of breast self-examination (BSE). Women's lack of knowledge about early detection of breast cancer leads to a lack of awareness for early detection. One of the efforts that can be done to introduce breast self-examination to the public is by conducting health promotion through health education about breast cancer towards the behaviour of reproductive age woman about breast self-examination (BES).

2. Method

This type of research is Quasi-experiment with non-equivalent control group design. This study aims to analyse the influence of health promotion about breast cancer towards the increasing the behaviour of reproductive age woman regarding Breast Self-Examination in Kesiman Petilan Village of Denpasar City and Medahan Village of Gianyar Regency, Bali, Indonesia. The instrument of data collection used questionnaire and observation sheet. Respondents of this study were the woman from the family welfare program. Samples size 100 people was selected by using purposive sampling on August to December 2016. The subjects were divided into two groups: 50 people from women of the family welfare program in Kesiman Petilan Village as treatment group and 50 people woman of family welfare program in Medahan village as control group.

This research used primary data. Hypothesis testing of this research is an unpaired t test. In research, ethical research was conducted in the form of informed consent, respect the privacy and confidentiality of respondents, respect the circumstances, take into account the benefits and losses incurred. A form of an intervention conducted by providing the health education to the woman from the family welfare program who were selected as respondents using lecture and discussion methods, using leaflet and power point.

3. Result/ Discussion

Table 1: Characteristics of Subjects

		Group			
		Control		Treatment	
		f	%	f	%
Education	Elementary	16	26,7	9	15,0
	Junior High School	30	50,0	43	71,7
	High School	14	23,3	8	13,3
	Total	60	100	60	100
Age	20-35	19	31,7	23	38,3
	> 35	41	68,3	37	61,7
Total		60	100	60	100

Table 1 shows that the highest number of jobs in the control group was 28 private employees (46.7%), while the lowest was Housewives of 15 (25%) people. In the treatment group, it was found that housewives have the highest number of 37 people (61.7%), and the lowest was Civil employees of 4 people (6.6%). Respondent's Education in the control group who have medium education has the highest number which was 30 people (50%). While in the treatment group, respondents who have Junior High School education has the highest number of 43 people (71.7%).

Considering the characteristics of age, it was found that respondents from the control group with age of 20-35 years were 41 people (68.3%), while in the treatment group were 37 people (61.7%).

Prior to hypothesis testing, the prerequisite test is performed in the form of normality test using Kolmogorov-Smirnov. Based on the test results found that the p-value in all groups were > 0,05 so that it can be concluded that all groups of data were normally distributed.

Table 2: Respondent's Knowledge of Breast Cancer and Breast Self-Examination in Control and Treatment Groups

Statistic	Control			Treatment			*p*
	Pre	Post	*p*	Pre	Post	*p*	
Min	0	18		8	20		
Max	23.0	25		22	25		
Mean	18.6	22.0	0.00	14.8	23.0	0.00	0.00
SD	3.3	1.6		3.2	1.1		

Table 2 describes descriptive statistics of knowledge on breast cancer and BSE in both groups of control and treatment. Test results in the control group during pretest shows that the lowest score achieved by the respondent is zero (0) and the highest score reached is 23 and the average value is 18.6. At the post-test, it can be seen that the lowest score reached by the respondent is 18 and the highest score is 25 and the average value is 22.

Test results in the treatment group before were given health education showed that the lowest score achieved by the respondents was 8 and the highest score was 25 and the average value was 14.8. After the health education, it can be seen that the lowest score reached by the respondent is 20 and the highest score is 25 and the average value is 23.

The statistical test of t-paired test on the knowledge variables obtained p-value 0.00, health education had a significant effect on knowledge of reproductive age women regarding breast self-examination as well as knowledge between control group and treatment group obtained p-value 0.00, means health promotion with lecture methods, frequently asked questions, presentation of images and demonstrations using module, and leaflet highly increase knowledge about breast cancer in women of reproductive age.

Table 3: Behaviour of Reproductive age women regarding BSE in Control and Treatment Groups

Statistic	Control			Treatment			*p*
	Pre	Post	*p*	Pre	Post	*p*	
Min	4	31		13	37		
Max	50	54		40	50		
Mean	37.8	2.1	0.00	23.7	6.3	0.00	0.00
SD	6.5	4.4		5.21	3.04		

According to Table 3 which contains descriptive statistics of attitude variable in both control and treatment groups. The test results of the control group during pre-test showed that the lowest score achieved by the respondents was 4 and the highest score was 50 and the average value was 37.8. At the post-test result, it was seen that the lowest score reached by the respondent was 31 and the highest score was 54 and the average value was 42.

The test results in the treatment group before being given health education showed that the lowest score achieved by the respondents was 13 and the highest score reached was 40 and the average value was 23.7. After the health education, it can be seen that the lowest score achieved by the respondent was 37 and the highest score was50 with the average value was 46.3.

T-paired test statistic on attitude variable obtained p-value 0.00, health education had a significant effect on the attitude of fertile age women regarding BES as well as attitude between control group and treatment group in which resulting the p-value 0.00, means health education with the method of lecture, questions and answer, presentation of images and demonstrations with a module, and leaflet highly improve the attitude about breast cancer awareness in women of reproductive age.

Table 4: Women of Reproductive Age Practice regarding Breast Self-Examination to Control Group and Treatment Group

Statistic	Control			Treatment			*p*
	Pre	Post	*p*	Pre	Post	*p*	
Min	2	8		0	8		
Max	14	14	0.00	8	14		
Mean	5.5	11.1		3.8	12.3	0.00	0.00
SD	2.0	1.9		2.2	1.6		

Based on Table 4 which contains descriptive statistics of practice variables in both groups namely control and treatment. Test results in the control group on pre-test showed that the lowest score achieved by the respondents was 2 and the highest score was 14 and the average value was 5.5. At the post-test, it appeared that the lowest score achieved by the respondent was 8 and the highest score was 14 and the average was 12.

Test results in the treatment group before being given health education showed that the lowest score achieved by the respondents was 8 and the highest score was 14 and the average value was 12.3. After being given the health education, the lowest score achieved by the respondent was 8 and the highest score reached was 14 and the average value was 12.3.

The statistical test of t-paired test on the practice variables obtained p-value 0,00, health education and demonstration have significant effect on the practice of woman of child-bearing age regarding breast self-examination as well as practice between control group and treatment group in which resulting the p-value 0.00, means health education with the methods of lecture, questions and answer, presentation of images and demonstrations with modules and leaflets highly increases the practice of BSE.

Based on the result of the research, it was found that the test in the control group at the pre-test showed that the lowest value achieved by the respondent was zero (0) and the highest score was 23 and the average value was 18.6. On the post-test result, it can be seen that the lowest value achieved by the respondent was 18 and the highest score was 25 and the average value was 22. The test results in the treatment group before being given health education showed that the lowest score achieved by the respondents is 8 and the highest score reached by respondent was 25 and the average value was 14.8. After the health promotion, it can be seen that the lowest score reached by the respondent was 20 and the highest score reached was 25 and the average value was 23.

The results showed that the treatment group had a higher mean value than the control group. Thus, it can be said that health education with the method of lecture, question and answer, presentation of pictures and demonstrations, and equipped with modules for control group and module and leaflet for treatment group can improve knowledge of women of reproductive age about breast self-examination.

The result of this research is in accordance with the idea of Setiawan (2010) which is the aim of health promotion is altering knowledge of a person, where knowledge is the result of knowing and this happened after people held sensing of an object occurs through the five senses of human obtained through the eyes and ears (7). Health education is an educational activity that is carried out by spreading the message and implementing the belief of the importance of health, so that the community not only conscious, know, but can do something and know what can be done (8,9). The increased knowledge of the respondents after the health education about BSE is influenced by several things, which are the knowledge that has been obtained and stored in the memory, then re-generated by health education (10). The results of this study correspond with the research conducted by Efina (2015) in which she found a significant influence of BSE health promotion to the knowledge of young women about early detection of breast cancer in SMK Perintis 29 Ungaran (11). The increased knowledge about breast cancer will raise public awareness for early detection through BSE (12-15).

Based on the result of the research, it was found that the result of attitude test in the control group at the pre-test showed that the lowest score reached by the respondent was 4 and the highest score reached was 50 and the average value was 37.8. The post-test result, it can be seen that the lowest score reached by the respondent was 31 and the highest score reached by respondent was 54 and the average value was 42. Test results in the treatment group before being given health education showed that the lowest score attained by the respondents was 13 and the highest score reached was 40 and the average score was 23.7. After the health education showed that the lowest score achieved by the respondent was 37 and the highest score reached by the respondents was 50 and the average value was 46.3. The results of this study indicate the treatment group given intervention by health education with lecture method, question and answer, presentation of pictures and demonstrations equipped with media modules and leaflets have a higher mean value. Thus it can be said that the health promotion method using modules and leaflets can improve the attitudes of respondents regarding breast self-examination.

With the increasing value of attitude after the health education shows that the given health education influences and changes the opinions of the respondents. The results of this study were strengthened by the theory that health education is a health education which was conducted to spread the message and instilling confidence so that people not only know, conscious and understand, but also willing and able to do the suggestion which is related to health matters (16).

The results of this study are in line with the research conducted by Dian (2013) in which mentioning that health education about breast self-examination has a significant effect on the attitude of early detection of breast cancer in women aged 15-45 years in Krinjing 4 Jatisarono Nanggulan, Kulon Progo (17). A good attitude in women of reproductive age will encourage to do BSE routinely (18-20).

According to the result of research, it was found that the testing of BSE practice in the control group at pretest shows that the lowest score reached by respondent was 2 and the highest score reached was 14 and the average value was 5,5. Based on the post-test of BSE practices shows that the lowest score reached by respondent was 8 and the highest score reached was 14 and the mean value was 12. Test results in the treatment group before being given health education showed that the lowest score achieved by the respondents was 8 and the highest score was 14 and the average value was 12.3. After being given health education, the lowest score achieved by the respondent was 8 and the highest score reached was 14 and the average value was 12.3. The results showed the mean value of practice after treatment in the treatment group was higher than the control group.

Based on the results of empirical research indicates an increase in the score of practice conduct breast self-exam. According to Sagala (2011) in which mentioning about the health education by the method of demonstration is a

process of imparting or appearance that is exemplified so that can be known and understood by learners in real (21). This increase in practice is influenced by the interest of respondents, where respondents are motivated to be able to detect early breast cancer and prevent death from breast cancer (22). This thing is in accordance with Yajout, et. al's opinion (2014) in Yolanda (2015) that awareness of BSE is important to be grown to motivate women to regularly perform BSE to identify early abnormal lumps in their breasts so that they can be treated immediately and reduce deaths due to breast cancer (23).

The high interest of a person to information that they have not previously heard or got, thus someone will be more motivated in the process of giving health education. They will pay careful attention so that the given information can be easily accepted by the respondent. This notion is in accordance with the opinion of Saryono (2009) that skills in practising things are influenced by interest and motivation, interest in influencing a person to try or pursue a thing so that someone gains deep knowledge and eventually skills will also increase. The results obtained also illustrate that respondents have a great interest to listen and watch the demonstration, it is seen from the average score after being given health education which is higher than before being given health education (18).

The results of this study were in line with Yolanda (2015) which mentioned that breast self-examination health education (BSE) with demonstration method improves the skill of performing BSE in 10th grade SMAN 1 Imogiri Bantul (23).

Based on the results of research on the average value indicates there is a significant difference in the differences between two groups, t-independent statistical test obtained p-value <0.05, meaning at alpha 5%, H_0 rejected, which means health education by lecture method, question and answer, Images and demonstrations as well as equipped with modules and leaflets further enhance the knowledge, attitudes and practices about breast cancer in women of reproductive age.

Based on the results of the research, the lecture, question and answer provide benefits for participants who do not understand well about BSE directly, so that things are not understood could be more clear, whereas the demonstration can improve the skills of the respondents because this method involves the entire senses to receive information and is given directly by the counselor about the examination of BSE. It corresponds with the opinion of Maulana (2009) that the more senses are used, the understanding or comprehension that obtained will be more clear so that respondents are able to practice BSE proficiently. The demonstration method is conducted with props. The use of props is intended to exert the senses as much as possible on an object as to facilitate understanding, in this case, the sense of the eye has a 75% -87% ability to capture information and discharge to the brain (24).

The health education uses the device in the form of images and sentences about the matters conveyed. The use of such tools enables learners to see theoretical conformity with reality and able to do it themselves (21).

It corresponds to the opinion of Syarifudin (2009), the benefits of props are to see the essence of the matter presented, to make it easier to comprehend the matter, avoid boredom because the respondent can see the writing or the picture (25). According to Sagala (2011), the advantages of demonstration method are the easiness to understand something, more interesting, learners are stimulated to observe, and conduct it independently (re-demonstration) (21). This is in accordance with the opinion of Mahfoedz (2005) which says that the purpose of health education is divided into 3, which are cognitive (knowledge), affective (attitude), and psychomotor (behaviour) (16).

The results of this study are in line with research conducted by Hidayati (2011) under the title "The Effect of Health Education Through Lecture and Demonstration Methods Can Increase Knowledge About Breast Cancer and BSE Practice In grade XII Students of Futuhiyyah Mranggen Senior High School of Demak District in 2011 (26).

4. Conclusion

The results of this study indicate that there is an influence of health education about breast cancer regarding the increasing behaviour of reproductive age women about breast self-examination in Kesiman Petilan Village of Denpasar City and Medahan Village of Gianyar Regency

5. Suggestion

For the stakeholders of Health of Reproduction of Denpasar and Gianyar Regency to conduct socialisation activities about Reproduction Health in the form of health education to society regularly and continuously. For women from the family welfare program to actively seek information as much as possible through the source that can be accounted for.

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