

SELF-EFFICACY USE OF THE USE SADARI JURKEP APPLICATION BREAST CANCER DETECTION IN KUPANG CITY

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Abstract

Cancer can attack anyone, therefore an attitude is needed to pay more attention to health and early detection. One of the causes of increasing the rate of cancer is because it is too late to realize the signs and symptoms of cancer, one of which is breast cancer. The delay of breast cancer patients in conducting early detection to health services in Indonesia reaches 80%. This causes the incidence of breast cancer to be found when the patient is in an advanced stage condition. Breast self-examination was introduced using the SADARI Jurkep application so that breast health promotion is no longer limited by space and time but can be used anytime, anywhere and by anyone. This condition makes it easier for all women to pay more attention to their own health. Various methods have been carried out by the government, but there are still cases of breast cancer found with advanced stage conditions. This allows that the self-efficacy of each individual is still enough to pay attention so that there needs to be encouragement from health workers to be more active in promoting early detection of breast cancer. This study used quantitative techniques with a cross sectional approach The determination of respondents in this study used a probability sampling approach with a sample of 94 women. The research location is in Kupang City. Data analysis in this study was using univariate analysis, data normality and bivariate test. The results showed a significant relationship between p value 0.02 and value (r) 0.00 high self-efficacy with effective self-awareness measures from respondents

Kata Kunci: application SADARI Jurkep; Self Efficacy; cancer detection

INTRODUCTION

Non-communicable diseases are increasing at this time, one of which is cancer. Cancer is one of the non-communicable diseases that can attack tissues in various organs of the body, including female reproductive organs consisting of breasts, uterus, ovaries and vagina (Mardiana, 2007). Cancer can attack anyone, therefore an attitude is needed to pay more attention to health and early detection. One of the causes of increasing the rate of cancer is because it is too late to realize the signs and symptoms of cancer, one of which is breast cancer. The delay of breast cancer patients

in conducting early detection to health services in Indonesia reaches 80%. This causes the incidence of breast cancer to be found when the patient is in an advanced stage condition.

Based on WHO data in 2013, the incidence of cancer increased from 12.7 million cases in 2008 to 14.1 million cases in 2012, with the number of deaths increasing from 7.6 million people in 2008 to 8.2 million in 2012. Cancer is the number 2 cause of death in the world by 13% after cardiovascular disease (Kemenkes, 2018). The incidence of breast cancer in Indonesia is 40 per 100,000 women (Globocan/IARC 2012) (Wahidin, 2015). Riskesdas data in 2018 shows an increase from 1.4 per mile of population to 1.8 per mile of population cancer prevalence based on a doctor's diagnosis. The age group with the most cancer according to Riskesdas 2018 is women 2.9 per mile of population in the age category of 55-64 years. When viewed from the background of work, the highest prevalence of cancer patients having jobs as civil servants / TNI / Polri / BUMN / BUMD is 4.1 per mile of population. While the most educational background with a minimum education of Diploma 1 is 3.57 per mile of population (Kemenkes, 2018).

Based on the results of personal communication between Mrs. NF, the PTM subdivision at the East Nusa Tenggara Provincial Health Office on April 10, 2019, showed that socialization data on breast cancer prevention in the form of teaching SADARI Techniques had been carried out but was limited to counseling programs using poster and leaflet media. According to the NTT Provincial Health Profile in 2017, cervical cancer detection implementation data is more dominant than breast cancer detection data. The coverage of early detection of breast cancer by health workers in puskesmas with CBE examination from 22 regencies/cities in NTT Province is still very low. The puskesmas that conducted the most CBE examinations were in Kupang City as many as 11 puskesmas conducted CBE examinations on 1,575 women in the age category of 30-50 years, other districts that participated in the CBE examination were TTS Regency (1 person), East Manggarai (3 people), West Manggarai (77 people), Belu (6 people) and Rote Ndao (4 people). Other districts do not have CBE data in their health centers (NTT Health Profile, 2017). The results of RISKESDAS 2018, the prevalence of cancer in general based on the doctor's diagnosis by province when compared to RISKESDAS 2013, NTT Province experienced a considerable increase of 1.2 per mile population to 1.8 per mile population, the same figure as the national figure. According to data from GLOBOCAN, the International Agency for Research on Cancer (IARC), it is known that in 2012 there were 14,067,894 new cases of cancer and 8,201,575 deaths from cancer worldwide. The data showed that breast cancer, prostate cancer, and lung cancer were the types of cancer with the highest percentage of new cases (after age-controlled), at 43.3%, 30.7%, and 23.1%. Meanwhile, lung cancer and breast cancer are the highest causes of death (after age-controlled) due to cancer (Zhang et al., 2023).

The results of research conducted by Dyanti & Suariyani, (2016) show that the most influential factor in the delay of breast cancer patients in conducting early examinations of health services is caused by non-routine early detection behavior. In addition to not doing routine examinations, another cause is that 65.45% of patients postpone the examination because they do not know if the lump in the breast that does not feel pain is an early symptom of malignant cancer (Kim et al., 2016). After examination and diagnosis of cancer, there are 23.64% of patients delayed treatment

due to fear of medical procedures (Labib et al., 2013). If you look at the data above, the higher the incidence of cancer in the women's group, action is needed to carry out early detection in that group to prevent the occurrence of more severe conditions.

Various techniques are carried out such as counseling examinations with breast self-examination techniques (SADARI), conducting clinical breast examinations (SADANIS) using breastlight tools to increase knowledge and understanding of women in paying attention to their reproductive health, especially early detection of breast cancer. According to (Hashemieh et al., 2015) in his study on breast cancer detection using breastlight conducted on 500 Iranian women from July 2011 to September 2013 showed breastlight was able to detect breast masses with a diameter of 1 cm to more than 4 cm by comparing the results of CBE examination, the conclusion is that breastlight is very significant in early detection of breast cancer. In line with research conducted by Labib et al.,(2013) in Egypt shows breastlight is a simple tool that can be used by medical personnel and medical professionals to detect breast cancer. This tool has sensitivity, specificity, positive prediction value, negative prediction value and total accuracy of 93.0%, 73.7%, 91.4%, 77.8% and 88.2%, respectively in detecting breast cancer.

In addition to breast examination using breastlight, one of SADARI's health education programs uses an electronic system in the form of an e-health application. E-health applications are available in smartphone applications, research results that show the effectiveness of the use of smartphone applications introduced by Heo et al., (2013) at Yeongtong-gu University School of Medicine to women under 30 years old where the group is very active 81.8% in carrying out breast self-examination (BSE) behavior or better known as the BSE method. The breast self-examination was introduced using the electronic system of the SADARI Jurkep application developed by researchers with the aim of promoting breast health. By using this method, breast health promotion is no longer limited by space and time but can be used anytime, anywhere and by anyone. This condition makes it easier for all women to pay more attention to their own health. In line with Heo et al., (2013) according to (Derisma & Febrian, 2020) in their research developed an e-health model for early detection of breast cancer at RSK UNAND. The results of her research show that with the use of the e-health system in breast health promotion, it can be used as basic data in medical monitoring sensors. Medical monitoring sensors are used with the aim of knowing the patient's body condition and as input of medical record data to get the right algorithm and quickly in detecting early breast cancer on mammography images.

The early detection program for cancer in women, especially breast cancer by the Government of the Republic of Indonesia through the Ministry of Health, is very concerning. We can know this from the Ministry of Health, through the Sub-Directorate of Cancer Control, Directorate of Non-communicable Disease Control, in collaboration with related programs, local governments, Non-Governmental Organizations (NGOs), professional organizations, Female Cancer Program (FCP), United Indonesia Cabinet Wives Solidarity (SIKIB), and Work Cabinet Era Solidarity Action Organization (OASE-KK), as well as PKK in developing early detection programs for cervical and breast cancer. In 2007 a pilot project for early detection of cervical cancer and breast cancer was developed in 6 regions, namely Deli Serdang (North Sumatra), Gresik (East Java), Kebumen (Central Java), Gunung Kidul (D.I. Yogyakarta), Karawang (West Java), and Gowa (South Sulawesi). In

developing the pilot project, the Ministry of Health was technically assisted by JHPIEGO, an NGO in women's health affiliated with John Hopkins University, United States, and in collaboration with the Female Cancer Program (FCP). The National Program for Early Detection of Cervical and Breast Cancer was launched by First Lady Hj. Ani Yudhoyono on April 21, 2008, followed by the Launching of the National Program for Community Participation in the Prevention and Early Detection of Cancer in Indonesian Women 2015-2019 by First Lady Iriana Jokowi. This program continues to be strengthened and developed to other regions in Indonesia.

When viewed with the development of the times in the form of the industrial revolution 4.0 in the health sector along with the development of a very massive digital system where all people can have digital mobile phones. Currently, consumer technology that uses digital mobile phones and fitness equipment that is used daily can collect various detailed data about a person's health and fitness status. Data like this has the potential to transform, not only individual health and medical needs, but also for health research. There is even a study also conducted by The Economist Intelligence Unit says that 50% of doctors believe that smartphone technology empowers patients so that they play a role in managing their health proactively (Tjandrawinata, 2016). In addition to the use of e-health methods, health workers can also introduce a tool that can be used by ordinary people to detect breast cancer early, namely by using breastlight devices.

Various methods have been carried out by the government, but there are still cases of breast cancer found with advanced stage conditions. This allows that the self-efficacy of each individual is still enough to pay attention so that there needs to be encouragement from health workers to be more active in promoting early detection of breast cancer. The results of research conducted by Susilowati and Susilowati & Qomaruddin, (2018) obtained data on good self-efficacy having good self-awareness behavior as well. Therefore, it is necessary to increase the number of BSE coverage by increasing self-efficacy by providing motivational values to care more about reproductive health. In line with the above statement, the results of research conducted by Hu et al., (2018) in the form of a survey of women who carried out breast cancer detection with the BSE method at the oncology polyclinic and general surgery clinic at Ankara Hospital Turkey 60.7% of women who have done BSE and 48.1% have undergone clinical breast examination and the self-efficacy is very high compared to women who are not trained BSE / SADARI ($p < 0.001$), the conclusion of the research is that self-efficacy is highly recommended in the BSE/SADARI training program. Based on the background above, NTT Profile 2017 and RISKESDAS 2018 data still have a lot of coverage of women aged 30-50 years who have not received CBE / SADARI examination services at Puskesmas throughout East Nusa Tenggara Province, and there is still limited knowledge of women in conducting early detection of breast cancer, only limited to the City area, so researchers are interested in conducting this study.

RESEARCH METHODS

This study was an observational quantitative study using a cross-sectional research design. The implementation of research from April to August 2020 in Kupang City. This research passed the stages of ethical tests, validity tests and instrument reliability with an alpha cronbach value of 0.856. In addition, researchers

also conducted an equalization test of perception of observers with the results of Cohen's Kappa showing data of 0.70 and 0.77 with very good reliability conclusions between researchers and 2 research companions. Random sampling using systematic sampling method, with a sample of 94 women who have inclusion criteria Willing to be research respondents, Women aged 30-50 years, Able to write and read in Indonesian, Have a smartphone of any brand, Do not experience mental disorders. Not pregnant, Never diagnosed with breast cancer by medical examination, Able to communicate well using Indonesian, Residing in Kupang City area during the study. Research conducted from April to August 2020.

RESULTS AND DISCUSSION

The android application "Sadari Jurkep Kupang" is the result of research from a lecturer of the Kupang Poltekkes Nursing Department and has been disseminated in community service activities. This application can be downloaded from the playstore for android users. The filling component of the application is about breast cancer knowledge including understanding, signs and symptoms, causes, early detection methods, management and breast self-examination videos (BSE). The application looks as below.

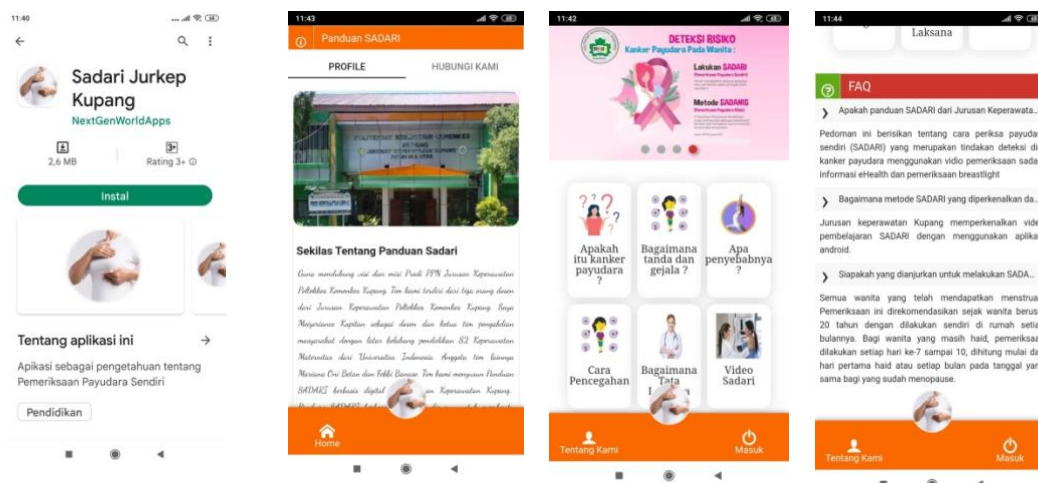


Figure 1. Display of the eHealth Application "Sadari Jurkep Kupang" that has been published in the playstore

<https://play.google.com/store/apps/details?id=com.panduansadari.apps>

How to Use Android Application " Sadari Jurkep Kupang "

1. Download Android App " Sadari Jurkep Kupang" from playstore
2. Register in the additional menu as a participant
3. Click on the "Sign in" menu
4. Educational options can be seen in the learning menu: Explanation of breast cancer, signs and symptoms of breast cancer, causes, ways of prevention, learning videos BSE.

Results of Breast Examination using the e-health method

Table.1
Distribution of breast self-examination results by respondents using e-health method for early detection of breast cancer in Kupang City (September 2020, n=94)

Variabel SADARI	F	%
Ineffective	15	16,0
Effectiive	79	84,0
Sum	94	100,0

Table 1 shows the distribution of breast self-examination results (BSE) by respondents using the e-health method early detection of breast cancer as much as 84% show effective examination and there are still 16% of respondents ineffective in doing BSE using the e-health method.

Self Efficacy women aged 30-50 years

Table 2
Distribution of respondents' self-efficacy in using the e-health method of early detection of breast cancer in Kupang City (September 2020, n=94)

Variabel Self Efficacy	F	%
Poor	33	35,1
Good	61	64,9
Sum	94	100,0

Table.2 Shows the distribution of respondents' self-efficacy in using the e-health method of early detection of breast cancer as much as 64.9% showed high self-efficacy and there were still 35.1% showing low self-efficacy

The relationship between self-efficacy and self-awareness examination using the e-health method.

Table 3
The relationship between self-efficacy and BSE examination using the e-health method for early detection of breast cancer in Kupang City (September 2020, n=94)

Variabel	SADARI				Sum	r	P	
	Ineffective		Efective					
Self Efficacy	f	%	f	%	f	%		
Poor	10	10,63	23	24,4	33	35,10	0,00	0,01
Good	5	5,0	56	59,57	61	64,9		
Sum	15	15,63	79	83,97	94	100,0		

Table 3 shows the results of respondents' self-efficacy research using e-health methods of early detection of breast cancer showing a strong correlation. The results of the analysis showed a correlation coefficient value (r) of 0.00 and a p value of 0.01

In conclusion, women who have high self-efficacy have a strong relationship to conduct early detection of breast cancer using the e-health method

In this study, Self-Efficacy of women aged 30-35 years in the use of E-Health for BSE examination. Self-efficacy refers to a person's belief in his ability to organize and carry out actions necessary to achieve goals (Bandura, 1997). Bandura (1982) refers to self-efficacy as the belief of the individual to be able to master certain activities, situations or aspects of his own psychological and social functioning. It can be concluded that self-efficacy makes a person believe in their ability to overcome obstacles that hinder the achievement of their goals. They believe that they can achieve their willingness, their dreams, and their goals in an effective way

BSE using the e-health method

The results of data collection in the research conducted obtained SADARI examination using the e-health method was very effective (table 3) for most respondents. This can be influenced by the use of applications that are very easy to use by mothers despite having a low educational background (SMP) and working as housewives. The BSE examination using the e-health method can also be influenced by the age of the mother, the majority of whom in the respondent group are in the age group of 40 years. This age group based on the results of the Indonesia Millennial Report 2019 shows that this group is in the category of productive age that always moves to follow electronic developments. This result is in line with research conducted by ZA & Sari, (2019), which found that Instagram can provide convenience for users in disseminating information and ease of obtaining information related to SADARI actions

Self Efficacy women aged 30-50 years

In this study we tested the effect of high and low self-efficacy on women aged 30-35 years in the use of E-Health as a medium for self-awareness examination. The results showed that there was a difference between the averages of these two groups, indicating individuals with high self-efficacy believed in the effective use of E-Health as a medium in self-awareness examinations. The study confirmed that there was a significant difference between the average group with high self-efficacy of 61 participants (64.9%) and with low self-efficacy of 33 participants (35.1%) among subjects. Participants with high self-efficacy had the confidence to take the BSE test (Table. 4)

It is evident that self-efficacy makes a difference in how people feel, think, and act (Bandura, 1997b). When it comes to thinking, a strong sense of competence facilitates cognitive processes and performance in a variety of settings. In terms of feelings, a low sense of efficacy is associated with depression, anxiety and helplessness. Such people also have low self-esteem and harbor pessimistic thoughts about their personal achievements and development. As far as action is concerned, people who experience a high level of self-efficacy may have increased motivation, allowing them to take a BSE check.

Self-efficacy facilitates goal setting, investment efforts, perseverance in the face of obstacles and recovery from setbacks. This can be considered a positive resistance resource factor. Perceived self-efficacy is an operative construct – that is, it is related to subsequent behavior and, therefore, relevant for clinical practice and behavior change (Bandura, 1997b). The construct of perceived self-efficacy reflects optimistic self-confidence. It is the belief that a person can perform new or difficult tasks, or overcome

difficulties, in various domains of human functioning (Bandura, 1997b). It is clear that Bandura's view of self-efficacy is related to explanations of self-efficacy in specific domains, rather than a sense of global competence.

The relationship between self-efficacy and self-awareness examination using the e-health method.

Self-efficacy is also a much stronger predictor of how effectively people will perform a given task than their confidence or their self-esteem. A high level of self-efficacy makes people work hard and persevere in the face of setbacks. In dynamic work contexts, where continuous learning and improved performance are required, high self-efficacy helps individuals to react less defensively when they receive negative feedback. Where their self-efficacy is low, people often see negative outcomes as confirming their perceived inadequacy in themselves. When people have low self-efficacy, they also tend to blame the situation or others when there is a problem. Denial of responsibility for poor performance hinders the chances that an individual will learn how to perform more effectively in the future (Heslin & Klehe, 2006). This was found in our study, there were 33 people with low self-efficacy but there were 10 effective participants in the BSE examination as well as 61 participants with high self-efficacy but there were 5 participants who were not effective in the BSE examination using the E-Health method, this was influenced by negative feedback and physiological and emotional states consisting of mood, Negative emotional feelings so that high self-efficacy can reduce their performance in carrying out self-awareness actions as well as low self-efficacy of participants but doing self-awareness well is influenced by speech or family experience and the experience of the closest person (Vicarious Experience) and / or knowledge, past experience and ability to act (skill) (Performance accomplishment).

CONCLUSION

Based on data analysis and discussion, it was concluded that respondents who had sufficient knowledge, basic education and good skills had high self-efficacy to conduct breast self-examination using the e-health method. The majority of respondents with high self-efficacy have the awareness to perform effective self-awareness actions. The SADARI Jurkep application developed by researchers can be used by respondents to share breast cancer detection information with friends and companions who did not participate in this study. The app is also easy to download from the playstore and easy to use. Health promotion for the era of the industrial revolution 4.0 requires the development of telehealth and telenursing methods to optimize available facilities.

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