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The Love My Breast Android Application as Educational and Early Detection of Cancer

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Abstract

Breast cancer is one of the leading causes of death in women worldwide. Lack of information and awareness about women's health problems results in delays in early detection, diagnosis, and treatment, and worsens the prognosis. In this digital era, practical and flexible educational media are needed as an effort to increase public knowledge. This study aimed to analyze the effectiveness of educational media and early detection of breast cancer through the use of the Love My Breast Android application in women of childbearing age. The method was Research and Development (RnD). The population was women of childbearing age (20-49 years). The sampling technique used purposive sampling. In this study, there were two test groups: a limited trial group of 10 respondents and 30 respondents in the broad trial group with Wilcoxon Signed Rank test Analysis. The instruments used the Love My Breast Android application as an educational medium and a questionnaire to measure respondents' attitudes, knowledge, and behavior. The results of this study obtained the application is suitable for use as an educational medium and early detection of Breast Self-Examination. Based on the data, the Love My Breast Android application educational media is effective in increasing respondents' knowledge, attitudes, and behavior. Early detection is an effort to identify abnormalities or diseases that are not yet clinically apparent. The development of easy, practical, and flexible application media is necessary in this digital era to support proactive and preventative efforts in health issues, particularly breast cancer.

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INTRODUCTION

One of the leading causes of death worldwide is cancer. Cancer is the abnormal growth of body tissue cells that become malignant. These cells can grow further and spread to other parts of the body, causing death. Body cells undergo mutations (changes) and begin to grow and divide more rapidly and uncontrollably than normal cells. Cancer cells do not die after a certain age but rather continue to grow and become invasive, causing normal cells to be crowded out or die (WHO, 2025). Currently, breast cancer is a very frightening type of cancer for women worldwide, including in Indonesia. Breast cancer is a malignant tumor formed from breast cells that grow and develop uncontrollably, allowing them to spread to nearby tissues or organs or other parts of the body. (Siegel et al., 2021). Breast cancer incidence is increasing worldwide, particularly in developing countries, where approximately 60% of all global deaths occur due to breast cancer (Ogunmodede et al., 2022). This increased mortality is due to late diagnosis, a consequence of a lack of knowledge and awareness about breast cancer, particularly among women in developing countries. This lack of understanding about early breast cancer detection leads to a poor prognosis for the disease. This lack of awareness about early breast cancer detection results in high mortality rates because most women present when they are already experiencing pain (Ahmed et al., 2018). Based on Global Cancer Observatory data, the International Agency for Research on Cancer (IARC), it is known that in 2022 there were 19,976,499 new cases of cancer and 9,743,832 deaths due to cancer worldwide. (Ferlay J, Ervik M, Lam F, Laversanne M, Colombet M, Mery L, Piñeros M, Znaor A, Soerjomataram I, 2020). Breast cancer and cervical cancer are the most common types of cancer in Indonesia. Both types have high mortality rates due to late diagnosis and treatment. Nearly 70% of cancer patients are detected at an advanced stage. Between 2021 and 2023, 2,277,470 women aged 30-50, or 13.7% of the target population, underwent early breast cancer screening with the Special Screening for Breast Cancer Examination. East Java ranked among the top five with the lowest coverage, at 2.7%. A total of 86 cases of suspected breast cancer were screened from 2021 to 2023 (Kemenkes, 2023). Coverage of breast cancer detection with clinical examination in Blitar Regency in 2023, tumors were found and suspected breast cancer was referred to 10 patients at the Talun Community Health Center. (Dinkes Blitar, 2023).

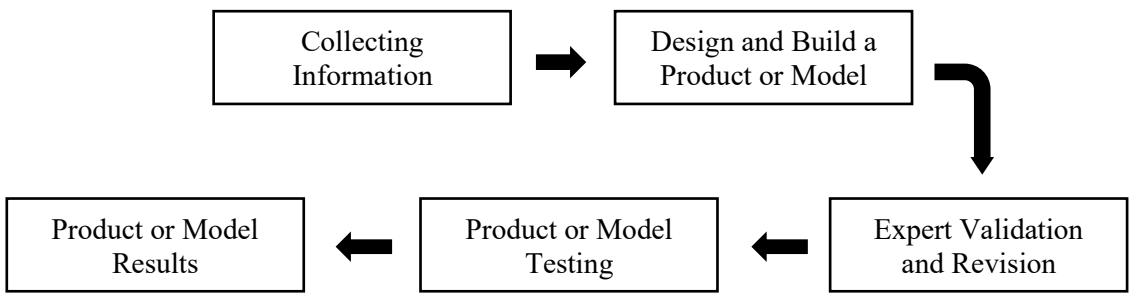
Early detection of breast cancer improves treatment effectiveness, resulting in a better prognosis and thus reduced morbidity and mortality. One of the easiest methods for early breast cancer detection is breast self-examination (BSE). This method is inexpensive, very simple, and does not require special equipment or regular hospital visits. Performing BSE regularly can monitor any changes in the breasts (Ahmed et al., 2018). Indonesia is Asia's "sleeping digital technology giant." With a population of 250 million, the number of Indonesian smartphone users is also growing rapidly (KOMDIGI, 2020). The use of mobile applications has been widely developed by experts. In the learning concept, mobile-based learning media offers the benefits of readily accessible information and engaging visualization of materials (Setiawan, 2017). The mobile-based Love My Breast Android application is an educational medium that can be used by women of childbearing age to learn about breast cancer and as a reminder to perform BSE.

METHODS

The method in this study used Research and Development (R&D). R&D is a process to develop a new product or by improving an existing product, which can be accounted for and used to produce certain products and to test the effectiveness of the product. Direct breast self-examination education for women of childbearing age by utilizing application media that can be downloaded on the available mobile application as an outcome of this research. In this study there are limited trial groups consisting of 6-10 people and a broad trial group consisting of 20-30 people. Groups are given a pretest-posttest using a questionnaire to measure knowledge, attitudes, and behavior with Wilcoxon Signed Rank test Analysis (Gusti et al., 2023; Putri

et al., 2023). The research and development procedure included five main steps, namely: Information Collection, product or model design, expert validation and revision, product trials, and product results. The following was a picture of Research and Development. This research was conducted in Blitar Regency with a population of women of childbearing age, using a purposive sampling technique. Inclusion Criteria: 1. Women of childbearing age aged 20-45 years, 2. Women of childbearing age who have and are able to operate an Android cellphone. Exclusion criteria: 1. Women of childbearing age who do not follow the research process until the end. Dependent variables: knowledge, attitudes and behavior in performing BSE. Independent variables: Love My Breast Android. The following is the content of the Love My Breast app: 1. Breast Cancer Education; 2. Breast Cancer Screening Videos and Methods, including the results of the examination (early detection results) and Sadari examination records; 3. When to go to a health facility; 4. Examination alerts; 5. Contact health facilities in Blitar city and regency; 6. Feedback app. The expected achievement indicators of this research are behavioral changes that can be measured or observed as an effort to see the achievement of the reminder application in performing BSE. This research has been ethically tested by the Patria Husada Blitar Health Research Ethics Committee with number: 06/PHB/KEPK/312/07.25.

The following is a chart of what we did in accordance with the research design we created, which we explained in the paragraph above.



Picture 1. Borg and Gall's development research model

RESULTS

Information gathering through the Blitar City Health Service

Description of Respondents' Answers to the Questions:

1). What is the outlook for Breast Cancer in Blitar Regency in 2025?

Answer: "We cannot yet provide a definitive figure for the number of breast cancer cases in 2025, as it is still mid-year. However, we have evaluated the number of breast cancer cases from 2023 to 2024. We believe the overall picture of breast cancer cases in Blitar Regency is higher than the data presented because we are only reporting data, and in reality, much data is not reported to us."

2). What is the government's policy regarding breast cancer prevention programs for women of childbearing age?

Answer: "Policies/programs already exist, and we are closely involved with the Ministry of Health, which implements the Breast Self-Examination early detection program, but coverage is still insufficient."

3). What efforts has the Blitar Regency government made to reduce the incidence of breast cancer?

Answer: "We don't have a specific plan for our cancer program, but we integrate it into our cancer reduction program. So, its implementation can be integrated with cervical and breast cancer health education activities. So, when VIA is implemented simultaneously, SADANIS is also conducted."

4). Are there any obstacles encountered in the field when providing education and outreach about breast cancer to women of childbearing age?

Answer: "We don't believe there are any obstacles in implementing education and outreach, but the challenge is compiling data from the examination

results. We believe that practical educational media that can be accessed anywhere by WUS themselves are needed."

5). Are technology-based media relevant as educational tools today, especially in the health sector?

Answer: “Of course it’s very good, because in this era, everything needs to be easy, practical, and fast. The increasing level of busyness of the target so that it is very necessary educational media that is concise and easy to use at any time such as applications on mobile phones. We also feel very helpful if this application can be combined with government applications or at least linked to the Health Office so that we can directly monitor the progress of these promotive and preventive efforts, because as we said, there are still many of them whose cases are not reported to us, for various reasons in the field. We hope this application can be developed more widely.”

Model Design (model design explanation)

The application design model was created based on data collected from interviews. The application includes information about breast cancer, video tutorials on breast self-examination (BSE) and early detection, as well as a record of test results. The application is equipped with an alarm clock to help users remember and perform BSE, as well as contact health facilities in the Blitar city and regency.

Expert Validation Test Results

The model design results were tested by two expert validators: Dr. Arga Budiyono, Sp. B, as a material expert, and Inun Pujianto, S. Kom, as a media expert. The validators completed a 16-question questionnaire, with the following results:

Expert Validation Assessment Results

Expert Validation				
Name	N	F(%)	Mean	Interpretation
dr. Arga Budiono, Sp.B	16	88.75	87.5	Feasible
Inun Pujianto, S. Kom	16	86.25		Feasible

Expert Validator Input Results

Validator	**Input**
dr. Arga Budiono, Sp.B	1. Improved layman's language for customers/application users. 2. Monthly summaries are presented on the dashboard to increase satisfaction with performance/prime condition.
Inun Pujianto, S. Kom	1. The acronyms SADARI and SADANIS are explained on the initial dashboard after logging in. 2. Larger and more attractive menu icons. 3. The application is attractive and good enough to be continued and developed further, including user identity and data continuity.

The test results from 2 expert validators were interpreted as meaning that the application was feasible.

Test Analysis Results

Table 1. Characteristics of Respondents in the Limited and Extensive Trial Groups

No	**Characteristic**		**Total**	
			Limited Trial Group	**Large Trial Group**
1	Age	20 to 40	7	26
		41 to 49	3	4
		Total	**10**	**30**

2	Educational	Elementary School	0	1
		Junior High School	1	13
		Senior High School	7	13
		Bachelor	2	3
		Total	**10**	**30**
3	Work	Housewife	7	24
		Farmer	0	1
		Trader	2	1
		Private Employees	1	4
		Government employees	0	0
		Health Workers	0	0
		Total	**10**	**30**
4	Family History of Breast Cancer	No	10	30
		Yes	0	0
		Total	**10**	**30**
5	History of suffering	No	0	29
		there is a lump	0	1
		Yes	0	0
		Total	**10**	**30**
6	Information of SADARI	Never	9	27
		Ever	1	3
		Total	**10**	**30**
7	Have you ever done SADARI?	Never	10	28
		Ever	0	2
		Total	**10**	**30**

This study involved 40 respondents consisting of limited and extensive trials. The limited trial group consisted of 10 respondents and the extensive trial group consisted of 30 respondents. Based on age data, the majority of respondents were in the 20–40-year age group in the limited trial group as many as 7 people and 26 people in the extensive trial group. The level of education, respondents in the limited trial group were divided into several categories: 1 person with junior high school education, 7 people with high school education and 2 people with university education, while in the extensive trial consisted of: 1 person with elementary school education, 3 people with university education and junior high and high school education, each 13 respondents. In terms of occupation, the majority were housewives (IRT), as many as 7 people in the limited trial group and 24 people in the extensive trial group. All respondents in this study had no family history of breast cancer in either the limited trial group or the extensive trial group. In the limited trial group, there was no history of suffering from it, while in the extensive trial group there was 1 person who had a history of lumps. Regarding knowledge regarding breast self-examination (BSE), 9 respondents in the limited trial group had never received information. In the extensive trial group, 28 respondents had never received information about BSE. All respondents in the limited trial group stated they had never performed a BSE, while 2 respondents in the extensive trial group had performed the examination.

Table 2. Results of Limited Trial Group

		Pre		Post		ρ-Value
		F	%	F	%	
Knowledge	Good	6	60.0	10	100.0	0.007
	Enough	4	40.0	0	0.0	
	Poor	0	0.0	0	0.0	
Total		10	100.0	10	100.0	
Attitude	Positive	9	90.0	10	100.0	0.011
	Negative	1	10.0	0	0.0	
Total			100.0	100	100.0	
Behavior	Good	8	80.0	10	100.0	P = 0.027
	Poor	2	20.0	0	0.0	
Total		10	100.0	10	100.0	

A limited-group trial of this study was conducted to assess application use and identify any obstacles. It was conducted on respondents who met the same criteria as the larger trial group. This study aimed to measure changes in three main aspects: knowledge, attitudes, and behavior of respondents, by comparing pre-test and post-test data. If significant results were obtained and there were no obstacles in application use, the study could proceed to the actual study. Data were collected from 10 respondents, each of whom completed a questionnaire to measure their level of knowledge, attitudes, and behavior before and after the intervention.

Knowledge

In the pre-test, the results of the respondent knowledge measurement showed that 4 out of 10 respondents (40%) had adequate knowledge, and 6 out of 10 respondents (60%) had good knowledge. After the intervention, a significant change was observed in the post-test; all respondents had good knowledge (100%). A Wilcoxon Signed Ranks test yielded a p-value of 0.007 (<0.05), indicating a significant change in knowledge after the intervention.

Attitude

In the pre-test, data on respondent attitudes showed that 1 out of 10 respondents had a negative attitude (10%). Nine out of 10 respondents (90%) had a positive attitude. In the post-test, all respondents also had a "positive" attitude (100%). A Wilcoxon Signed Ranks test yielded a p-value of 0.011 (<0.05), indicating a significant change in attitude after the intervention.

Behavior

In the pre-test, respondent behavior data showed a distribution: 2 out of 10 respondents (20%) had poor behavior and 8 out of 10 respondents (80%) had good behavior. In the post-test, there was an increase in behavior, with all respondents (100%) having good behavior. A Wilcoxon Signed Ranks test yielded a p-value of 0.027 (<0.05), indicating a significant change in behavior after the intervention.

Table 3. Results of the Large Trial Group

		Pre		Post		ρ-Value
		F	%	F	%	
Knowledge	Good	9	30.0	29	90.0	0.000
	Enough	21	70.0	1	10.0	
	Poor	0	0.0	0	0.0	
Total		30	100	30	100.0	
Attitude	Positive	29	96.7	30	100.0	0.000
	Negative	1	3.7	0	0.0	

Total		30	100.0	30	100.0	
Behaviour	Good	27	90.0	30	100.0	0.000
	Poor	3	10.0	0	0.0	
Total		30	100.0	30	100.0	

This study aims to measure changes in three main aspects: respondents' knowledge, attitudes, and behavior, through a comparison of pre-test and post-test data. Data collected consisted of 30 respondents, each of whom completed a questionnaire to measure their level of knowledge, attitudes, and behavior before and after the intervention.

Knowledge

In the pre-test, the results of the respondent knowledge measurement showed that 21 out of 30 respondents (70%) had adequate knowledge, and 9 out of 30 respondents (30%) had good knowledge. After the intervention, a significant change was observed in the post-test. Only 1 respondent (3%) was in the "sufficient" category, and 29 respondents (97%) showed an increase in knowledge to the "Good" category. A Wilcoxon Signed Ranks test yielded a p-value of 0.000 (<0.05), indicating a significant change in knowledge after the intervention.

Attitude

In the pre-test, only 1 respondent (3%) had a negative attitude, while 29 respondents had a positive attitude toward BSE. In the post-test, all respondents also had a "positive" attitude. A Wilcoxon Signed Ranks test yielded a p-value of 0.000 (<0.05), indicating a significant change in attitude after the intervention.

Behavior

In the pre-test, the respondent behavior data showed a distribution: 3 out of 30 respondents (10%) had poor behavior, and 27 out of 30 respondents (90%) had good behavior. In the post-test, there was an improvement in behavior, with all respondents well-behaved (100%). In the statistical test using the Wilcoxon Signed Ranks test, a p-value of 0.000 (<0.05) was obtained, meaning that there was a significant effect of behavioral change after the intervention was given

DISCUSSION

Respondent Characteristics

The respondents in this study were divided into two groups: a limited trial and a broad trial. Each group differed in age, education, occupation, family history of breast cancer, and knowledge and behaviors related to early breast cancer detection. This study involved 40 respondents divided into two groups: a limited trial of 10 respondents and a broad trial of 30 respondents. This study aimed to evaluate the effectiveness of the Love My Breast app in improving the knowledge, attitudes, and behaviors of women of childbearing age regarding breast self-examination (BSE).

Respondent characteristics based on age showed a predominance in the 20-40 age group in both the limited trial group (7 out of 10 respondents) and the broad trial group (26 out of 30 respondents). This age group can be considered a group in their productive phase, so raising awareness of health, including early breast cancer detection, is crucial. It is important to note that women of childbearing age are at high risk for breast cancer, but they are often unaware of the importance of early screening, which can detect cancer at an early stage (Noveri Aisyaroh et al., 2024).

In terms of education, the majority of respondents in the limited trial group had a high school education, followed by 2 respondents with a tertiary education. Meanwhile, in the extensive trial group, the majority of respondents also had a high school education (13 people), followed by 3 respondents with a tertiary education. A person's education refers to the learning process an individual experiences throughout their life, which can include formal experiences (such as school, college) or non-formal (such as training or courses). In this context, a person's education refers to the level and type of education an individual has received, which influences their knowledge, skills, attitudes, and ways of thinking. This suggests that

higher formal education is often associated with better knowledge about health, but most respondents in this study had a sufficiently high level of education, which enabled them to better access and understand health information. (Alam et al., 2021; Kundarti et al., 2025).

Respondents were predominantly housewives, with 7 in the limited trial group and 24 in the extensive trial group. Women of childbearing age who are housewives tend to have more flexible time to receive information about family health, including information on breast self-examination (BSE). However, this can also present challenges in providing education due to limited resources to reach them more widely (Kundarti et al., 2025).

Respondents' knowledge (BSE information) regarding BSE showed that the majority had never received information about breast self-examination before. This indicates that although breast cancer education has been implemented in several regions, many women still lack knowledge about the importance of regular breast examinations for early detection of breast cancer. This underscores the importance of educational media that is easily accessible and understood by the general public, such as smartphone-based applications, which can provide reminders and information regarding early detection of breast cancer. Information provided about BSE increases individuals' knowledge about the correct way to perform a breast self-examination and the importance of early detection of breast cancer. The more information individuals receive about the benefits of BSE, the more likely they are to adopt the behavior (Sundari & Happy, 2022). Sufficient knowledge can make someone feel more confident and ready to perform Breast Self-Examination independently and regularly (Dwitania et al., 2021).

Women with a history of breast lumps tend to be more aware of changes in their breasts, both new and previously detected. The presence of lumps, whether benign or risky, makes women more likely to perform regular breast self-exams (BSE) as an early detection measure. They recognize that breast self-exams are an easy and practical way to detect changes in the breasts that could indicate health problems, including breast cancer (Dwita Ayu Israwati et al., 2025).

The Effect of Educational Media and Early Cancer Detection on the Effectiveness of Breast Self-Examination (BSE) in Women of Childbearing Age Based on the Love My Breast Android App in a Limited Trial Group

In the limited trial group, this study demonstrated significant changes in three main aspects: knowledge, attitudes, and behavior of respondents after using the Love My Breast App. Prior to the intervention, most respondents had adequate knowledge about BSE (40%) and a positive attitude (90%). However, after receiving education through the app, all respondents showed significant improvements in knowledge (100%) and positive attitudes (100%). Respondent behavior also changed, with all respondents demonstrating good breast self-examination behavior after using the app (100%).

Statistical results using the Wilcoxon Signed Ranks test showed significant p-values ($p<0.05$) for knowledge (0.007), attitude (0.011), and behavior (0.027), indicating that the Love My Breast Android app had a positive impact on improving knowledge, attitudes, and behavior related to BSE. This increase in knowledge indicates that the app is effective in providing a better understanding of the importance of early breast cancer detection through BSE. The importance of early detection in breast cancer is undeniable, as it can increase cure rates and reduce mortality. Breast Self-examination (BSE) is a method that women can easily perform at home, yet it often receives little attention. Therefore, this app provides a practical solution for women to learn the correct way to perform BSE and regularly monitor their breast health (Udoh et al., 2020).

The positive attitude changes after using the app also demonstrate the importance of appropriate educational media in shaping public mindsets. This positive attitude can increase respondents' motivation to perform regular breast examinations and introduce BSE to others (Putri et al., 2023). It is hoped that this positive attitude towards early breast cancer detection will spread to others around them,

such as family and friends, who can help raise awareness of the importance of breast examinations.

Furthermore, behavioral changes were also significant. Before the intervention, some respondents had poor breast examination practices, but after using the app, all respondents demonstrated positive behaviors. This demonstrates the important role of the Love My Breast Android app in encouraging healthier behavior changes. The use of a smartphone-based app, accessible anytime and anywhere, makes it easy for women to obtain the necessary information and follow the steps for early breast cancer detection in a practical manner (Anggraini & Listiana, 2024; Fauziah et al., 2022).

(Khana et al., 2022) research also states that educational media serves to accelerate the learning process and improve information retention. In the context of early breast cancer detection, app-based digital media can increase women's awareness and independence in maintaining their breast health. Furthermore, research based on the (Putri et al., 2023) explains that individuals will undertake preventive measures (such as breast self-examination) if they understand the risks of the disease, the benefits of the examination, and believe that these measures can prevent serious consequences. The Love My Breast app serves as a tool that increases the perception of these risks and benefits through evidence-based education and early detection features.

The Love My Breast Android app is a technology-based tool designed to support education and behavior change related to BSE (Breast Self-Examination). To understand how this app can influence BSE behavior change, we need to examine several relevant theories of learning and behavior change. The following theories explain how the Love My Breast app can contribute to BSE behavior change. The Love My Breast app can provide visual tutorials or video demonstrations on how to perform BSE correctly. App users who observe the video or instructions from the app (modeling) will be more likely to imitate the learned behavior. If they see that BSE can help in early breast cancer detection and improve their health, they will be more motivated to do it regularly.

The Effect of Educational Media and Early Cancer Detection on the Effectiveness of Breast Self-Examination (BSE) in Women of Childbearing Age Using the Love My Breast Android App in the Large Trial Group

In the large trial group, similarly significant results were observed in respondents' knowledge, attitudes, and behavior. Before the intervention, most respondents (70%) had adequate knowledge about BSE, while only 30% had good knowledge. After the intervention using the Love My Breast app, 90% of respondents demonstrated good knowledge, and only 10% were in the adequate category. Furthermore, all respondents demonstrated positive attitudes toward BSE (100%) after the intervention.

Behavioral changes were also significant, with 90% of respondents exhibiting good behavior before the intervention and 100% after. Statistical tests using the Wilcoxon Signed Ranks test showed highly significant results with very low p-values ($p=0.000$ for knowledge, attitudes, and behavior), indicating that the app was highly effective in improving understanding and practice related to BSE among women of childbearing age in the large trial group.

Overall, the results from both trial groups indicate that the Love My Breast Android app significantly improved knowledge, attitudes, and behaviors related to early breast cancer detection through breast self-examination. Therefore, this app is highly relevant and can be used as a useful tool for health education among women of childbearing age.

It is important to remember that early breast cancer detection, as taught through this app, has the potential to save lives. Therefore, it is crucial to disseminate information about this app so that more women can utilize technology to maintain their health. Furthermore, the app's success in improving knowledge and attitudes also demonstrates the important role of technology in health education, which is increasingly accepted by the wider community, especially the younger generation who are familiar with technology (Mutiara Putri et al., 2022)

Several factors supporting the effectiveness of the Love My Breast app in changing behavior include ease of access, interactivity, and regular reminders. Apps that allow reminders for scheduled checkups and provide step-by-step guidance make users feel more confident in performing breast self-exams correctly. Users who feel they receive support and clear information through the app are more likely to be motivated to continue performing breast self-exams regularly (Fauziah et al., 2022; Prasetyorini, 2022).

Results from a large cohort trial demonstrated that the Love My Breast app was highly effective in improving knowledge, attitudes, and behaviors related to breast self-examination (BSE) in women of childbearing age. Use of the app resulted in significant changes, as evidenced by increased knowledge, more positive attitudes, and improved behaviors regarding routine breast self-examination. This supports the use of technology-based apps in health education for early breast cancer detection (Alomair et al., 2020; Karimian et al., 2022).

These findings align with (Dian Anggraini et al., 2021) research, which states that providing education using interactive digital media can increase the effectiveness of reproductive health learning compared to conventional counseling. Field evidence indicates that the majority of respondents felt more interested and motivated to use the Love My Breast app because its interface is interactive, easy to understand, and accessible anytime via mobile phone.

According to the author, the use of the Love My Breast app is an innovation relevant to the digital age and has significant potential to increase the effectiveness of women's reproductive health education. This app allows for ongoing, personalized, and flexible education, making it more effective than short-term face-to-face counseling. The author believes that implementing this app can be a practical solution for primary healthcare facilities, such as community health centers or clinics, in expanding the reach of BSE education. Through interactive features, video guides, and symptom-based early detection, this app can help women of childbearing age better understand their health and take preventive measures independently.

CONCLUSION

The findings highlight the importance of accessible and interactive educational tools, such as mobile applications, in enhancing public health education. The application proved to be a useful tool in empowering women to take proactive steps in breast cancer prevention through self-examination.

SUGGESTION

Given the significant impact observed in both the limited and wider trial groups, it is recommended that the *Love My Breast* application be widely distributed and promoted to ensure that more women are reached by health workers in community settings., especially in rural or underserved areas, have access to the education it provides and It would be beneficial to integrate the application uses to educational and screening too with local health systems or government health applications to allow for better tracking and reporting of screening efforts. This could help overcome the issue of unreported cases and encourage more women to participate in early detection programs.

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CONFLICTS OF INTEREST

All authors fully contributed to research started from making the concept of the activity, managing the tabulation of the data, writing a draft manuscript and analysis. Every author made a positive contribution to the activity from the

beginning until the end including publishing the articles in this journal.

AUTHOR CONTRIBUTIONS

Maratus and Handayani served as data collection and performance reporting, Wimar Anugrah Romadhon served as supervising proposals and writing and producing articles.

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