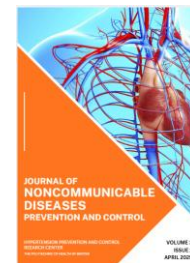




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*Research Article*

**THE EFFECT OF HEALTH EDUCATION USING DEMONSTRATION METHOD ON THE SKILL OF PERFORMING BREAST SELF-EXAMINATION (BSE) AMONG FEMALE ADOLESCENTS AT MA PONDOK PESANTREN KULNI CIKANDE**

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**ABSTRACT**

Breast self-examination (BSE) is an early detection method for breast cancer that is performed independently and regularly. By observing and palpating the breasts, individuals may identify early changes that could indicate potential health problems. BSE is an important preventive measure, particularly for female adolescents, as it helps foster early awareness of reproductive health. To determine the effect of health education using the demonstration method on breast self-examination (BSE) skills among female adolescents at MA Pondok Pesantren Kulni. This study employed a pre-experimental design with a one-group pre-test-post-test approach. The sampling technique used was total sampling (census sampling), involving 49 respondents. Data were collected using an observation checklist. The Wilcoxon test showed a p-value of 0.000, which was lower than the significance level of 0.05, indicating a statistically significant difference. The findings indicate that health education using the demonstration method had a significant effect on BSE skills among female adolescents.

**ABSTRAK**

Pemeriksaan Payudara Sendiri (SADARI) adalah metode pemeriksaan payudara mandiri yang dilakukan secara teratur. Dengan meraba dan mengamati payudara, kita dapat mendeteksi dini perubahan-perubahan yang mungkin menjadi tanda adanya masalah kesehatan pada payudara. Mengetahui pengaruh pendidikan kesehatan dengan metode demonstrasi terhadap keterampilan melakukan pemeriksaan payudara sendiri (sadari) pada remaja putri di ma pondok pesantren kulni. Metode yang digunakan dalam penelitian ini yaitu pra eksperimen dengan rancangan penelitian one group pre test post test. Cara pengambilan sampel pada penelitian ini dengan total sampling/sampling jenuh. Sampel yang digunakan dalam penelitian ini adalah 49 responden. Instrumen yang digunakan dalam penelitian ini adalah lembar observasi. Hasil uji wilcoxon menunjukkan bahwa nilai p-value = 0.000 lebih kecil dari nilai signifikan (<0.05). Hasil penelitian ini menunjukkan terdapat pengaruh antara metode demonstrasi terhadap keterampilan remaja putri.

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**INTRODUCTION**

Breast cancer is a disease in which normal breast cells grow uncontrollably and form a tumor (WHO, 2024). This cancer usually begins in the milk ducts or in the lobules that produce milk. In the early stage, cancer cells may be detected locally; however, over time, they can spread to surrounding tissues and form a lump or thickening. If left untreated, breast cancer may spread to the lymph nodes or other organs (metastasis) and become life-threatening (Efriani et al., 2024). Common early signs and symptoms of breast cancer include

changes in breast size, the presence of a lump that is still localized or invasive, and changes in the nipple ([Krisdianto, 2019](#)).

Based on estimates from GLOBOCAN, the International Agency for Research on Cancer (IARC), breast cancer became one of the leading cancer cases worldwide in 2022, with 2,296,840 new cases reported ([GLOBOCAN, 2022](#)). According to Global Cancer Statistics released by the World Health Organization, Indonesia recorded 396,914 new cancer cases and 234,511 cancer-related deaths ([Kemenkes, 2024](#)). The Banten Provincial Health Office also reported that the proportion of breast tumors or breast cancer lumps reached 12.7% across Banten Province ([DINKES, 2021](#)).

In response to the high incidence of breast cancer, the government established a policy through the Regulation of the Minister of Health of the Republic of Indonesia Number 34 of 2015 concerning breast cancer control. This policy emphasizes community health services that include promotive and preventive activities. Promotive activities include providing health education to community members and community groups in public facilities, through networks or media both indoors and outdoors, printed media, electronic media, socio-cultural associations, religious groups, and other public activities. Preventive activities aim to prevent the development of risk factors in public facilities and healthcare services and are carried out by authorized health professionals ([Minister of Health of the Republic of Indonesia, 2015](#)). One example of promotive and preventive activity is health education on breast self-examination (BSE).

Inadequate health education may result in limited knowledge of health-related information. Low levels of knowledge may influence an individual's health behavior and actions, including BSE behavior for the early detection of breast cancer. According to the Indonesian National Strategy for Breast Cancer Control, one of the recommended approaches is the early detection of breast cancer. Breast self-examination (BSE) is a method of examining the breasts independently and regularly. By observing and palpating the breasts, individuals may detect early changes that could indicate potential health problems in the breast.

Research on breast self-examination (BSE) as an early detection effort for breast cancer has been widely conducted; however, most studies have focused more on improving adolescents' knowledge of BSE. Meanwhile, studies assessing practical BSE skills through the demonstration method remain limited, particularly among female adolescents in Islamic boarding school settings. In fact, the demonstration method is considered more effective in improving practical skills. Therefore, this study aims to determine the effect of health education using the demonstration method on the skill of performing breast self-examination (BSE).

A preliminary study conducted by the researcher at MA Pondok Pesantren Kulni involving 10 female adolescents found that they had never performed breast self-examination (BSE), had no knowledge about BSE, and had never received health education related to breast self-examination. Based on these findings, the researcher was interested in conducting a study entitled "The Effect of Health Education Using the Demonstration Method on the Skill of Performing Breast Self-Examination (BSE) Among Female Adolescents at MA Pondok Pesantren Kulni, Cikande."

## **MATERIALS AND METHODS**

### **Instruments, Materials, and Samples**

This study employed a quantitative method with a pre-experimental research design using a one-group pre-test–post-test design. The study population consisted of all female students enrolled at MA Pondok Pesantren Kulni Cikande. The sampling technique used was total sampling, resulting in a total of 49 respondents. Therefore, all female adolescents at MA Pondok Pesantren Kulni Cikande were included in this study. The study was conducted in March 2025.

The instrument used in this study was an observation checklist containing a series of aspects or indicators that were observed and assessed in relation to the participants' ability to perform breast self-examination (BSE). The observation checklist used to measure BSE skills was adapted from the training module on early detection of cervical and breast cancer published by the Indonesian Ministry of Health ([Ministry of Health of the Republic of Indonesia, 2021](#)).

The respondents first underwent an initial assessment to evaluate their skills in performing BSE. Subsequently, the researcher provided educational material and demonstrated the steps of BSE using the demonstration method, after which the respondents practiced independently for two days. A final assessment was then conducted by the researcher through direct observation of each student individually while performing BSE in one room.

**RESULT AND DISCUSSION**

The univariate analysis in this study was conducted to describe the characteristics of the study variables, namely the participants’ skills before and after health education.

**Table 1.** Distribution of BSE Skills Among Female Adolescents at MA Pondok Pesantren Modern Kulni

Variable	Intervention	Mean	Median	St. Deviasi	Min	max
Skill	Pre-demonstration	.49	.00	1.938	0	8
	Post-demonstration	75.35	75.00	18.252	50	100

Bivariate analysis was conducted to determine the effect of health education using the demonstration method on female adolescents’ skills in performing breast self-examination (BSE)

**Table 2.** Normality Test of Female Adolescents’ BSE Skills Before and After Health Education

Variable	P – value
Before health education	0.000
After health education	0.000

**Table 3.** Effect of Health Education Using the Demonstration Method on BSE Skills Before and After the Intervention

Variable	N	p-value
Effect of health education using the demonstration method on BSE skills among female adolescents at Pondok Pesantren Kulni	49	0.000

Based on the research that has been conducted, the discussion in this study focuses on the effect of health education using the demonstration method on the skills of female adolescents in performing breast self-examination (BSE) at MA Pondok Pesantren Modern Kulni Cikande.

As shown in Table 1, before health education using the demonstration method was provided to the female adolescents, the mean score was 0.49. The minimum pre-intervention score was 0, which was found in 93% of respondents. These findings indicate that most of the female adolescents had never been exposed to information about BSE, a condition that is highly concerning. If left unaddressed, this may pose serious risks in the future. At present, many female adolescents adopt unhealthy lifestyles, including dietary patterns that may increase the risk of breast cancer. Without adequate education on BSE skills and early preventive efforts, there is concern that the incidence of breast cancer at a young age may increase. The skill of performing BSE is important because it helps detect lumps or other breast changes that may be early signs of breast cancer. Early detection of breast cancer is essential, because if breast cancer is identified at an early stage and treated appropriately, the recovery rate can be relatively high ([Ministry of Health of the Republic of Indonesia, 2013](#)).

One of the factors contributing to limited BSE skills is the lack of knowledge about the correct technique for performing breast self-examination. Limited skill in performing BSE occurs because female adolescents often have insufficient knowledge about breast self-examination. This skill requires direct demonstration so that adolescents can learn the correct technique accurately. Health education using the demonstration method is expected to have a substantial influence on adolescents’ knowledge, which in turn may improve their skills in independently performing BSE as a reflection of the understanding they have acquired.

Based on the data presented in Table 1, the BSE skills of female adolescents improved after they received health education using the demonstration method, with a post-intervention mean score of 75.35.

The improvement in BSE skills is consistent with Albert Bandura's Social Learning Theory, which explains that individuals learn through observation, imitation, and modeling ([Bunyamin, 2021](#)). Through the demonstration method, adolescents are able to directly observe how to perform BSE and then imitate the procedure, leading to more effective learning. Health education using the demonstration method is effective in improving female adolescents' ability to perform BSE. By providing an interactive and supportive learning experience, this method may enhance adolescents' knowledge, skills, and motivation to conduct regular breast self-examination independently. [Hildayanti \(2022\)](#) stated that increased understanding of BSE practice is expected to improve healthy behavior and preventive behavior related to breast health problems, thereby reducing morbidity and mortality from breast cancer. Health education using the demonstration method can therefore serve as an effective approach to improving female adolescents' knowledge and awareness regarding the practice of BSE. The findings of this study indicate that BSE skills improved because health education using the demonstration method was provided, which represents one of the effective approaches in health education, particularly for improving the ability to perform BSE.

The results from 49 respondents showed that the mean score before the intervention was 0.49, and after the intervention it increased to 75.35. Based on the Wilcoxon test results, there was a significant difference between the pre- and post-demonstration measurements of BSE skills, with a p-value of 0.000 ( $<0.05$ ). This indicates that the demonstration method had a significant effect on adolescents' skills in performing breast self-examination (BSE). The improvement following health education delivered through the demonstration method showed significant results. The demonstration method is effective because it involves learning through direct observation and practice, allowing participants to imitate the demonstrated steps systematically. According to Social Learning Theory, individuals can acquire a skill through observation, imitation, and reinforcement of the behavior being observed. In the context of health education, the demonstration method gives participants the opportunity to observe concretely how to perform a health-related action correctly and then practice it directly. This can enhance understanding, self-confidence, and the ability to perform breast self-examination independently and correctly. Therefore, the demonstration method is considered one of the effective approaches for improving practical health skills among adolescents.

These findings are consistent with the study by [Iriani \(2024\)](#), which also reported improvement after health education using the demonstration method was provided. By using the demonstration method and teaching aids, students' ability to practice BSE improved. The demonstration method allows educators to guide participants consistently and provide a clear illustration of the correct procedure.

The researcher concludes that the skills of female adolescents in performing breast self-examination (BSE) improved significantly after the intervention in the form of health education using the demonstration method, as this method enabled participants to understand and directly practice the examination steps accurately.

## CONCLUSION

Based on the results of this study on breast self-examination (BSE) skills among female adolescents at MA Pondok Pesantren Modern Kulni Cikande, it was found that the respondents' skills were still low before receiving health education. After health education using the demonstration method was provided, the respondents' skills in performing BSE improved, as indicated by the increase in the mean skill score compared with the pre-intervention score.

The statistical analysis showed a p-value of 0.000 ( $p < 0.05$ ), indicating a significant difference before and after the health education intervention. Therefore, the demonstration method was proven to be effective in improving female adolescents' skills in performing breast self-examination (BSE).

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

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## REFERENCES

- Bunyamin. (2021). *Belajar dan Pembelajaran*. Uhamka Press.
- DINKES. (2021). *Profil Kesehatan Banten Tahun 2021*.  
[https://dinkes.bantenprov.go.id/storage/dinkes/files/1109/PROFIL KESEHATAN/Profil Kesehatan Banten Tahun 2023.pdf](https://dinkes.bantenprov.go.id/storage/dinkes/files/1109/PROFIL%20KESEHATAN/Profil%20Kesehatan%20Banten%20Tahun%202023.pdf)
- Efriani, R., Sholihat, S., Eliana, & Mardianti, O. (2024). *Pemeriksaan Payudara Sendiri (SADARI) Panduan untuk Deteksi Dini Kanker Payudara*. Penerbit Nem.
- GLOBOCAN. (2022). *Cancer Today*. <https://gco.iarc.fr/today/en>
- Hildayanti, Juliantika, & Wati, S. dewi. (2022). *Pengaruh Pelaksanaan Pemeriksaan Payudara Sendiri (SADARI) terhadap Pengetahuan dan Kemampuan Siswi Dalam Upaya Deteksi Dini Kanker Payudara*. 16.
- Iriani, oktariani sri, sari, dian purnama, Rosita, Syafrullah, H., & Ardayani, dini sandi. (2024). *Pengaruh Edukasi Demonstrasi Terhadap Kemampuan Dalam Melakukan Praktik SADARI Pada Siswi SMA PGII 2 Kota Bandung*. *Ilmu Kesehatan*, 18.
- Kemkes. (2024). *Kanker Membebani Dunia*.  
<https://sehatnegeriku.kemkes.go.id/baca/blog/20240506/3045408/kanker-masih-membebani-dunia/>
- kemkes RI. (2021). *Modul Pelatihan Deteksi Dini Kanker Leher Rahim Dan Kanker Payudara. Perhimpunan Ahli Bedah Onkologi Indonesia*, 30–35. <https://peraboi.org/>
- Kementrian Kesehatan RI. (2013). *Pedoman Teknis Pengendalian Kanker Payudara & Kanker Leher Rahim*. Departemen Kesehatan RI.
- Krisdianto, B. F. (2019). *Deteksi Dini Kanker Payudara dengan Pemeriksaan Payudara Sendiri (SADARI)*. AndalasUniversity press.
- Mentri Kesehatan RI. (2015). *Peraturan Menteri Kesehatan Republik Indonesia*.  
[http://hukor.kemkes.go.id/uploads/produk\\_hukum/PMK\\_No.\\_34\\_ttg\\_Penanggulangan\\_Kanker\\_Payudara dan Leher Rahim .pdf](http://hukor.kemkes.go.id/uploads/produk_hukum/PMK_No._34_ttg_Penanggulangan_Kanker_Payudara_dan_Leher_Rahim_.pdf)
- WHO. (2024, March 13). *Kanker Payudara*. [https://www-who-int.translate.google/news-room/factsheets/detail/breast-cancer?\\_x\\_tr\\_sl=en&\\_x\\_tr\\_tl=id&\\_x\\_tr\\_hl=id&\\_x\\_tr\\_pto=tc](https://www-who-int.translate.google/news-room/factsheets/detail/breast-cancer?_x_tr_sl=en&_x_tr_tl=id&_x_tr_hl=id&_x_tr_pto=tc)