International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

A Study to Assess the Effect of Demonstration on Knowledge and Attitude Regarding Breast Self-Examination Among Women in Selected Rural Area

Dr. Jayabala Aghamkar[1], Ms. Tanuja Khaladkar[2], Dr. Sadhana Adhyapak[3], Dr. Khurshid Jamadar Professor[4]

[1]Associate Professor Dr. D.Y. Patil College of Nursing, Dr D. Y Patil Vidyapeeth Pimpri, Pune – 18
[2]M.Sc. Nursing, Dr. D.Y. Patil College of Nursing, Dr D. Y Patil Vidyapeeth Pimpri, Pune – 18
[3]Associate Professor Dr. D.Y. Patil College of Nursing, Dr. Dr D. Y Patil Vidyapeeth
[4]Professor Dr. D.Y. Patil College of Nursing, Dr D. Y Patil Vidyapeeth Pimpri, Pune – 18

Abstract

Breast Self-Examination (BSE) is a crucial, cost-effective, and non-invasive method that enables early detection of breast abnormalities, particularly in rural areas with limited access to advanced diagnostic tools like mammography. Despite its benefits, awareness and practice of BSE remain alarmingly low among women in India, especially in underserved communities. This study aimed to assess the effect of demonstration on knowledge and attitude regarding BSE among women in a selected rural area. A quantitative approach with a one-group pre-test post-test research design was adopted. The sample consisted of 60 women aged 30 years and above, selected through purposive sampling from Chandoli village in Pune. A structured questionnaire was used to assess knowledge and an attitude scale measured perceptions before and after the demonstration. Data were analyzed using descriptive and inferential statistics. The findings revealed a significant improvement in both knowledge and attitude following the demonstration. Before the intervention, 26.67% of women had poor knowledge and 68.33% had average knowledge; after the intervention, 85% demonstrated good knowledge. Similarly, 65% of participants had a negative attitude before the demonstration, which decreased to 6.67% post-intervention, while those with a positive attitude increased to 93.33%. Paired t-tests confirmed statistically significant improvements in knowledge ($t=8.83$, $p<0.00001$) and attitude ($t=14.61$, $p<0.00001$). No significant association was found between demographic variables and outcomes, indicating that the intervention was uniformly effective. The study concludes that demonstration-based education significantly enhances knowledge and fosters positive attitudes toward BSE, proving to be an impactful strategy in promoting early breast cancer detection among rural women. Health professionals should incorporate practical demonstrations in community education to bridge the knowledge-practice gap and reduce breast cancer-related morbidity and mortality.

Keywords: Breast Self-Examination, Demonstration, Knowledge, Attitude, Women's Health, Early Detection, Rural Area, Health Education

Introduction

Breast cancer is the most common cancer affecting women globally and is a leading cause of cancer-related deaths. In India, breast cancer accounts for 27.7% of all female cancers and has surpassed cervical cancer as the most prevalent malignancy among Indian women, especially in urban areas. The incidence of breast cancer begins to rise in women in their 30s and peaks between the ages of 50 and 64. One in 28 women in urban India is at risk of developing breast cancer during her lifetime. Early detection through screening plays a critical role in reducing both mortality and morbidity. However, access to diagnostic technologies like mammography and clinical breast examination is limited, particularly in rural settings. In such areas, Breast Self-Examination (BSE) emerges as an essential, non-invasive, and cost-effective screening method that empowers women to detect abnormalities at an early stage.

Despite the availability and simplicity of BSE, it is not widely practiced in India due to lack of awareness, cultural taboos, and misconceptions. Many women are not familiar with the proper technique or the significance of performing BSE regularly. Moreover, embarrassment and stigma associated with discussing breast health often lead to delays in diagnosis and treatment. Educational interventions such as demonstrations are effective tools for bridging this knowledge gap, particularly in rural populations. Demonstrations provide visual, step-by-step guidance that enhances understanding and promotes behavioral change. Promoting BSE through such methods can lead to early detection, timely medical attention, and improved survival outcomes. This study focuses on assessing the impact of demonstration on the knowledge and attitude of rural women regarding BSE. It emphasizes the importance of empowering women through health education and highlights the need for incorporating practical teaching strategies into community health programs to combat the growing burden of breast cancer in India.

Need of the Study

Breast cancer is the leading cause of cancer-related deaths among women globally, and its incidence is steadily rising in India. Despite the advancements in medical diagnostics, many women—especially in rural and underserved areas—lack access to timely screening services like mammography or clinical breast examinations. As a result, breast cancer is often detected at a later stage, leading to poorer outcomes. One of the simplest and most cost-effective methods of early detection is Breast Self-Examination (BSE), which empowers women to monitor their own breast health. However, awareness and practice of BSE remain low, particularly in rural populations, due to limited knowledge, social stigma, and insufficient health education.

Educational strategies that incorporate live demonstrations have proven to be more effective than conventional methods in improving knowledge retention and changing health behavior. Demonstrations can provide visual clarity, boost confidence, and motivate women to adopt preventive practices like BSE. Therefore, there is an urgent need to implement demonstration-based education among rural women to enhance their understanding, correct misconceptions, and encourage regular practice of BSE. This approach not only promotes self-care but also contributes significantly to reducing the burden of late-stage breast cancer diagnoses and improves women's overall health outcomes.

Research evidence strongly supports that educational interventions, especially demonstrations, significantly improve women’s knowledge and practice of BSE. Studies conducted in rural India, Ghana, and Southeast Asia have shown that women who received demonstration-based training were more likely to practice BSE regularly and correctly. For example, Shahid Siraj et al. (2020) found a significant post-

intervention increase in knowledge and attitude among female students after a structured teaching demonstration. These findings emphasize the need to replicate demonstration-based programs in low-resource settings. By addressing educational gaps and behavioral barriers, demonstration methods serve as a practical and impactful solution in promoting early breast cancer detection.

Aim of the Study

The aim of the study is to assess the effectiveness of demonstration on knowledge and attitude regarding Breast Self-Examination (BSE) among women in a selected rural area.

It seeks to evaluate the improvement in awareness and perception post-intervention.

The study also aims to identify the existing gaps in knowledge and attitude toward BSE.

Furthermore, it explores the association between demographic variables and BSE knowledge and attitude..

Research Methodology

- **Research Approach: Quantitative**
- **Research Design: One Group Pre-test Post-test (Pre-experimental design)**
- **Research Setting: Selected rural area – Chandoli village, Pune**
- **Population: Women aged 30 years and above**
- **Sample Size: 60 participants**
- **Sampling Technique: Purposive sampling**
- **Sampling Criteria:**
  - ***Inclusion*:** Women aged 30+, willing to participate
  - ***Exclusion***: Women with known breast cancer or unwilling to participate
- **Tool Description:**
  - Structured knowledge questionnaire
  - Attitude assessment scale
- **Data Collection Method:** Pre-test, demonstration on BSE, post-test
- **Data Analysis:**
  - Descriptive statistics (mean, SD, frequency, percentage)
  - Inferential statistics (paired t-test)
- **Reliability:**
  - test-retest method used
- **Validity:**
  - Tool validated by done by 15 experts
- **Pilot Study:**
  - Conducted in a similar setting (Shiroli village, Pune**)**

Results

Table 1: Demographic Variables Distribution

Demographic Variables	Frequency (*f*)	Percentage (%)
1. Age in year-		
a. 30 – 40	12	20.00
b. 41 – 50	18	30.00
c. 51 – 60	22	36.67
d. above 61	8	13.33

2. Marital status-		
a. Single	3	5.00
b. Married	48	80.00
c. Divorced	4	6.67
d. Widowed	5	8.33
3. Educational qualification -		
a. Informal education	10	16.67
b. Primary school	15	25.00
c. High school graduate	20	33.33
d. undergraduate	11	18.33
e. Postgraduate	4	6.67
4. occupation -		
a. Self employe	14	23.33
b. lobular	14	23.33
c. government employee	2	3.33
d. private employe	17	28.33
e. homemaker	13	21.67
5. number of children -		
a. None	6	10.00
b. 1-2	42	70.00
c. 3-4	12	20.00
d. 5 or more	0	0.00
6. Received any formal education or information on breast self-examination before-		
a. Yes	20	33.33
b. No	40	66.67
c. If yes,	0	0.00
7. Source of receiving health information		
a. Television	11	18.33
b. Radio	0	0.00
c. Internet/Online sources	4	6.67
d. Printed materials (brochures, pamphlets)	4	6.67
e. Healthcare professionals (doctors, nurses)	1	1.67
8. Regular healthcare services in your area		

a. Yes, easily accessible	16	26.67
b. Yes, but with some difficulty	34	56.67
c. No, not easily accessible	10	16.67

Table 2: Level of Knowledge Pre Test And Post Test Of Women Regarding Breast Self-Examination

Level of Knowledge	Pre Test		Post Test	
	Frequency (*f*)	Percentage (%)	Frequency (*f*)	Percentage (%)
Poor Knowledge	16	26.67	2	3.33
Average Knowledge	41	68.33	7	11.67
Good Knowledge	3	5.00	51	85.00
Mean	**7.35**		**11.73**	
SD	**2.94**		**2.43**	

Table 3: Level of Attitude Pre Test and Post Test of Women Regarding Breast Self-Examination

Level of Attitude	Pre Test		Post Test	
	Frequency (*f*)	Percentage (%)	Frequency (*f*)	Percentage (%)
Negative Attitude	39	65	4	6.67
Positive Attitude	21	35	56	93.33
Mean	**15.10**		**22.63**	
SD	**3.35**		**2.92**	

Table 4: Effect of Demonstration on Knowledge of Women Regarding Breast Self-Examination

Effectiveness Knowledge	Mean	SD	t value	p value	Remark
Pre Test	7.35	2.94	8.83	<.00001	S
Post Test	11.73	2.43			

The study found a significant improvement in the knowledge and attitude of women regarding Breast Self-Examination (BSE) after the demonstration. Before the intervention, 26.67% of women had poor knowledge and 68.33% had average knowledge. Post-intervention, 85% of women demonstrated good knowledge, and only 3.33% had poor knowledge. The mean knowledge score increased from 7.35 to 11.73. Similarly, attitude improved significantly—before the demonstration, 65% of participants had a negative attitude toward BSE, which reduced to 6.67% after the demonstration. The percentage of women with a positive attitude increased to 93.33%. Paired t-test analysis showed statistically significant improvements in both knowledge ($t = 8.83$, $p < 0.00001$) and attitude ($t = 14.61$, $p < 0.00001$). No significant association was found between demographic variables and the post-test knowledge or attitude scores.

Discussion

This study aimed to evaluate the effectiveness of a demonstration on improving knowledge and attitude regarding Breast Self-Examination (BSE) among women in a selected rural area. The findings revealed a

significant improvement in both knowledge and attitude post-demonstration, which aligns with prior studies that highlight the value of educational interventions in promoting preventive health behaviors.

Before the intervention, the majority of women had average to poor knowledge about BSE, and only 35% exhibited a positive attitude. These findings are consistent with studies by Thakur et al. (2022) and Shaista & Madhavi (2016), which reported poor awareness and negative attitudes toward BSE among rural women. After the demonstration, 85% of participants had good knowledge, and 93.33% showed a positive attitude, indicating a strong effect of the demonstration-based education.

The structured demonstration provided hands-on, visual instruction, making it easier for participants to understand and retain the correct steps of BSE. This result mirrors findings from Siraj et al. (2020), who found that demonstration-based teaching significantly improved knowledge scores among nursing students. The study also supports the application of General System Theory, as input (pre-existing knowledge), process (demonstration), and output (improved knowledge and attitude) were effectively linked.

Interestingly, no statistically significant associations were observed between demographic variables and the outcome, suggesting that the demonstration was uniformly effective across different ages, education levels, and socio-economic backgrounds. This highlights the inclusive impact of demonstration as a teaching strategy in health promotion.

In conclusion, the discussion reinforces that practical, demonstration-based education is a powerful tool for improving women's awareness and proactive health behaviors. Incorporating such methods in rural health programs could lead to earlier detection of breast abnormalities and potentially reduce breast cancer mortality rates. The study advocates for regular community-based educational interventions to sustain these improvements.

Conclusion

The present study assessed the effectiveness of demonstration on knowledge and attitude regarding Breast Self-Examination (BSE) among women in a selected rural area. The findings clearly indicate that demonstration-based education significantly improves both knowledge and attitude toward BSE. Prior to the intervention, a large proportion of women demonstrated poor to average knowledge and held negative perceptions about the importance of BSE. After receiving a structured demonstration, there was a remarkable shift, with the majority of participants exhibiting good knowledge and a positive attitude. The statistical analysis confirmed that these changes were highly significant.

The lack of association between demographic variables and the outcomes suggests that demonstration is an effective method regardless of age, education, or background. This underlines the importance of using simple, visual, and engaging methods of health education to reach diverse populations, especially in rural and underserved communities.

Regular implementation of such teaching strategies in community health programs can play a vital role in encouraging early detection and timely intervention for breast cancer. The study emphasizes the importance of empowering women through health education and supports the integration of demonstration-based learning into public health policies and nursing practice. Continued efforts in this direction can ultimately contribute to reducing breast cancer-related morbidity and mortality.

Conflict of Interest

The authors certify that they have no involvement in any organization or entity with any financial or non-

financial interest in the subject matter or materials discussed in this paper.

References

1. Dutta DC. *Textbook of Obstetrics and Gynecology*. 8th ed. New Delhi: Jaypee Brothers; 2015.
2. Thakur M, Reena T. Effectiveness of Structured Teaching Program on BSE. *Indian Journal of Health Sciences*. 2022;14(1):45–49.
3. Malvia S, Bagadi SA. Epidemiology of breast cancer in India. *Asia Pac J Clin Oncol*. 2017;13(4):289–295.
4. Mohamed AOA, Nori MMM. Awareness of BSE among detainees. *Sudan Med J*. 2018;56(2):112–118.
5. Nik Rosmawati NH. Breast cancer awareness study. *J Community Health*. 2010;12(2):20–25.
6. Dadzi R, Adam A. Knowledge of BSE in rural Ghana. *Int J Cancer Educ*. 2019;34(3):589–595.
7. Shaista A, Madhavi M. Rural Indian women's awareness on BSE. *Int J Reprod Contracept Obstet Gynecol*. 2016;5(2):345–351.
8. Singh R et al. Knowledge and Practice of BSE. *Indian J Community Med*. 2017;42(4):222–226.
9. Franco G et al. Urban vs rural BSE awareness. *Public Health Rev*. 2022;43(1):1–10.
10. Khan A et al. BSE knowledge among Indian women. *Asian Pacific J Cancer Prev*. 2021;22(9):2933–2938.