

A QUASI-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING MODULE ON KNOWLEDGE REGARDING THE TECHNIQUES OF BREAST SELF-EXAMINATION AMONG 30-55 YEARS WOMEN IN SELECTED RURAL AREA, SABROOM, SOUTH TRIPURA.

Nursing

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ABSTRACT

Breast cancer is a significant public health concern among women, particularly in rural areas where awareness and early detection methods like Breast Self-Examination (BSE) are limited. This study aimed to assess the effectiveness of a video-assisted teaching module on knowledge regarding the techniques of BSE among women aged 30–55 years in a selected rural area of Sabroom, South Tripura. A quantitative research approach and quasi-experimental design were adopted. A total of 60 women were selected through convenience sampling and divided equally into experimental (n=30) and control (n=30) groups. A structured knowledge questionnaire was administered as a pre-test and post-test. Results revealed that in the experimental group, 70% of women had inadequate knowledge in the pre-test, while 86.67% attained adequate knowledge in the post-test following the video-assisted intervention. In contrast, the control group showed no significant improvement between pre-test and post-test scores. The experimental group's mean post-test score (23.56 ± 2.03) was significantly higher than the pre-test score (11.4 ± 1.65), whereas the control group showed minimal change (11.67 ± 1.68 to 11.73 ± 1.57). Paired and unpaired t-tests confirmed a statistically significant improvement ($t = 24.63$ and $t = 25.24$ respectively). A significant association was also observed between pre-test knowledge and variables such as education level and use of hormone replacement therapy. The study concludes that video-assisted teaching is an effective method for enhancing knowledge of BSE techniques among women. Regular health education initiatives are recommended to promote early detection and reduce the burden of breast cancer in rural populations.

KEYWORDS

Breast Self-Examination, Video-Assisted Teaching, Knowledge, Rural Women, Health Education

INTRODUCTION

Breast cancer is the most common cancer among women globally and a leading cause of cancer-related deaths. According to the World Health Organization (WHO), in 2022 alone, there were 2.3 million women diagnosed with breast cancer, and approximately 685,000 deaths occurred worldwide due to the disease¹. In India, breast cancer accounts for 27.7% of all new cancer cases among females, with an increasing incidence observed in both urban and rural settings². Despite advancements in diagnostic tools, the lack of awareness and delay in early detection remain significant barriers, especially in rural and low-resource areas.

One of the simplest and most cost-effective methods for early detection of breast abnormalities is Breast Self-Examination (BSE). BSE empowers women to regularly examine their own breasts for lumps or changes, enabling early medical intervention if needed. The Indian Council of Medical Research (ICMR) and Ministry of Health have emphasized BSE as a key strategy in breast cancer awareness programs³. However, research shows that awareness and correct practice of BSE remain inadequate among Indian women, particularly in rural communities where education and healthcare access are limited⁴.

Studies have shown that only 18% to 30% of Indian women have ever practiced BSE, and the majority lack knowledge about proper techniques⁵. Rural women are especially at risk due to limited exposure to mass media, lack of targeted health education, and cultural taboos surrounding breast health discussions⁶.

Hence, there is an urgent need to implement effective educational interventions, such as video-assisted teaching, that are accessible, engaging, and culturally sensitive. Video-based modules can visually demonstrate techniques in a simple and repeatable manner, overcoming barriers posed by low literacy or lack of medical personnel⁷.

Objectives of the Study:

1. To assess the pre-test level of knowledge regarding the techniques of breast self-examination among 30-55 years women in both experimental and control group.
2. To develop and administer video assisted teaching module regarding the techniques of breast self-examination among 30-55 years women in experimental group.
3. To evaluate the effectiveness of video assisted teaching module regarding the techniques of breast self-examination among 30-55 years women in experimental group.

4. To find out the association between the mean pre-test knowledge scores regarding the techniques of breast self-examination among 30-55 years women in both experimental and control group with their selected demographic variables

HYPOTHESIS:

H1:-There is a significant difference between the mean pre- test and post- test level of knowledge regarding the techniques of breast self-examination among 30-55 years women in experimental group.

H2:-There is a significant difference between the mean pre- test and post- test level of knowledge regarding the techniques of breast self-examination among 30-55 years women in control group.

H3:-There is a significant association between the mean pre-test level of knowledge regarding the techniques of breast self-examination among 30-55 years women in both experimental and control group with their selected demographic variables.

Research Methodology

A quantitative research approach was used for this study to assess the effectiveness of a video-assisted teaching module on knowledge regarding breast self-examination (BSE) techniques among women aged 30–55 years in a selected rural area of Sabroom, South Tripura.

Research Design

A quasi-experimental non-randomized control group design was adopted. The study included two groups (experimental and control), each comprising 30 women. Pre-test knowledge was assessed in both groups, followed by a video-assisted teaching intervention in the experimental group. Post-test knowledge was reassessed after seven days in both groups.

Setting and Population

The study was conducted in Sakbari, Kalachara, Sabroom, South Tripura. The target population included women aged 30–55 years residing in the area. The experimental group was selected from Purna Ch. Para, and the control group from Colony Para.

Sample and Sampling Technique

A total of 60 women were selected using a non-probability convenience sampling technique. The sample was equally divided into two groups (30 each in experimental and control).

Inclusion Criteria

- Women aged 30–55 years
- Residing in the selected rural area
- Able to read/write Bengali or English
- Present during the data collection period

Exclusion Criteria

- Women unwilling to participate
- Women with a history of breast surgery or treatment for breast cancer

Data Collection Tools

1. Demographic Proforma – to collect background information
2. Structured Knowledge Questionnaire – 25 multiple-choice items assessing knowledge of BSE techniques
 - o Scoring: 1 mark per correct response
 - o Interpretation:
 - o Inadequate: 1–12
 - o Moderate: 13–19
 - o Adequate: 20–25

The tool was translated into Bengali and validated by five subject experts. Reliability was established using the test-retest method ($r = 0.84$).

Development of Intervention

A video-assisted teaching module was developed by the researcher with validated content covering:

- Breast anatomy and physiology
- BSE purpose, preparation, positions, steps, and myths
- Summary and conclusion

The module was designed for clarity, simplicity, and cultural relevance.

Ethical Considerations

- Ethical clearance was obtained from the Institutional Ethics Committee of Tripura Institute of Paramedical Sciences.
- Written permission was obtained from the Chief Medical Officer (CMO), Belonia.
- Informed consent was taken from each participant.
- Anonymity and confidentiality were strictly maintained.

Data Collection Procedure

The main study was conducted from January 18 to 27, 2023. Pre-test knowledge was assessed on day 1. The experimental group received a 30-minute video-assisted session, while the control group received no intervention. Post-test assessments were conducted after 7 days using the same structured tool.

Data Analysis Plan

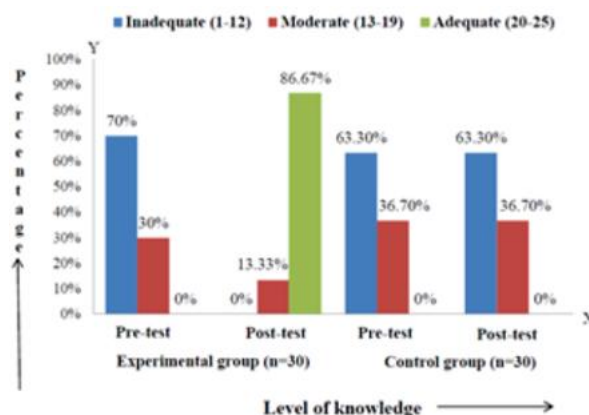
Data were analyzed using SPSS:

- Descriptive statistics: Frequency, percentage, mean, and standard deviation
- Inferential statistics:
 - Paired and unpaired t-tests to compare pre- and post-test scores within and between groups
 - Chi-square test to examine associations between knowledge and demographic variables.

RESULTS:**Table 1: Frequency and Percentage of Demographic Variables**

Demographic Variables	Experimental (f)	Experimental (%)	Control (f)	Control (%)
Age in years				
30-39 years	11	36.7	12	40
40-49 years	10	33.3	9	30
≥50 years	9	30	9	30
Education				
No formal education	4	13.3	4	13.3
Primary education	9	30	8	26.7
Secondary education	8	26.7	10	33.3
Higher secondary	5	16.7	5	16.7
Graduate and above	4	13.3	3	10
Occupation				
Government employee	4	13.3	3	10
Private employee	5	16.7	3	10
Home maker	9	30	10	33.3
Business	6	20	5	16.7
Self-help group	6	20	9	30
Marital status				
Unmarried	3	10	4	13.3

Married	16	53.3	18	60
Divorced	2	6.7	2	6.7
Widow	9	30	6	20
Family history of breast cancer				
Yes	7	23.3	5	16.7
Grandmother	1	14.2	2	40
Mother	3	42.8	1	40
Mother-in-law	3	42.8	2	20
No	23	76.7	25	83.3
Use of hormone replacement therapy				
Yes	9	30	11	36.7
Mala-N	7	77.78	9	81.82
Ovral L	2	22.2	2	18.1
No	21	70	19	63.
Aware about the techniques of breast self-examination				
Yes	5	16.7	6	20
If yes, do you practice breast self-examination regularly?				
Yes	5	100	6	100
No	0	0	0	0
No	25	83.3	24	80

**Figure 1: Percentage of Women According to Pre-test and Post-test Level of Knowledge.****Table 2: Mean and SD of Knowledge Regarding the Techniques of Breast Self-examination Among Women in Experimental and Control Group.**

Group	Test	Min. Score	Max. Score	Range	Mean	Mean Difference	SD
Experimental	Pre-Test	8	14	6	11.4	12.16	1.7
	Post-Test	18	25	7	23.6		2
Control	Pre-Test	9	14	5	11.7	0.06	1.7
	Post-Test	9	14	5	11.7		1.6

The experimental group showed a statistically significant improvement in knowledge after the video-assisted teaching module ($t = 24.63$, $df = 29$, $p < 0.001$), whereas the control group showed no significant change ($t = 0.19$, $df = 29$, $p = 0.85$).

Pre-test comparison showed no significant difference between the experimental and control groups ($t = 0.70$, $df = 58$, $p = 0.49$). However, the post-test comparison showed a statistically significant difference ($t = 25.24$, $df = 58$, $p < 0.001$).

In the experimental group, pre-test knowledge was significantly associated with education ($p = 0.04$) and use of hormone replacement therapy ($p = 0.01$). In the control group, none of the selected demographic variables showed a significant association with pre-test knowledge ($p > 0.05$).

DISCUSSION

The study found that the video-assisted teaching module (VATM) significantly improved knowledge regarding breast self-examination (BSE) among women aged 30–55 years. The experimental group showed a significant improvement in post-test knowledge ($t = 24.63$, $p < 0.05$), whereas the control group showed no significant change ($t = 0.19$, $p = 0.85$). The post-test comparison between groups was also statistically significant ($t = 25.24$, $p < 0.001$). Education and use of hormone replacement therapy were significantly associated with pre-test knowledge in the experimental group. These findings support the

usefulness of video-based health education in improving BSE knowledge among rural women.

CONCLUSION

The study concluded that the video-assisted teaching module was effective in improving knowledge regarding breast self-examination techniques among women aged 30–55 years. Video-based health education may therefore be useful for strengthening awareness and promoting BSE practices, particularly among women in rural and underserved areas.

Conflict of Interest: The authors declare no conflict of interest.

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