

Effect of Video-Assisted Programme on Knowledge Regarding Awareness of Breast Cancer Among Working Women

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Abstract

Introduction: Breast cancer remains a major health concern globally and is the second leading cause of cancer-related deaths among women. Despite efforts to promote awareness, a significant number of women, particularly those in the working population, lack essential knowledge regarding the early signs, risk factors, and preventive measures of breast cancer. This study was conducted to evaluate the effectiveness of a video-assisted educational programme aimed at increasing awareness and improving knowledge about breast cancer and breast self-examination (BSE) among working women in a multinational company in Jaipur.

Materials & Methods: A quasi-experimental one-group pre-test post-test design was used. A total of 60 working women above 20 years of age were selected using a non-probability convenience sampling technique. A structured questionnaire assessed their knowledge before and after the intervention. The video intervention included educational content about breast cancer, its risk factors, symptoms, early detection methods, and step-by-step instructions on performing BSE.

Results: The results showed a significant increase in knowledge scores post-intervention, indicating the effectiveness of the video-assisted programme.

Conclusion: The findings highlight the potential of workplace-based health education strategies to empower women with life-saving knowledge.

Keywords: Breast cancer, Awareness; Working women; Breast self-examination; Video-assisted teaching; Health education

Introduction

Breast cancer is one of the most prevalent cancers affecting women globally and ranks as the second leading cause of cancer-related deaths among females. While heart disease remains the leading cause of death overall in women, cancers collectively contribute significantly to female mortality, with breast cancer alone claiming hundreds of thousands of lives each

year. According to the National Center for Health Statistics and other global health agencies, breast cancer remains a critical public health challenge, especially in developing countries where awareness and early screening measures are often lacking or inaccessible.

Awareness of breast cancer is crucial for early detection, timely diagnosis, and effective treatment.

Educational interventions, particularly those focusing on early warning signs and preventive strategies like breast self-examination (BSE), have the potential to reduce mortality and improve survival rates. One of the primary obstacles to early detection in many communities have lack of knowledge about the disease and how to identify it in its early stages.

Working women, especially those in urban corporate environments, often face high-pressure jobs, long working hours, and busy lifestyles. These factors can contribute to neglecting their health and ignoring warning signs of diseases like breast cancer. The workplace, however, provides a unique opportunity for healthcare interventions, as it offers a concentrated population of adults who may otherwise be hard to reach through conventional public health channels.

This study aimed to assess the effectiveness of a video-assisted educational programme designed to improve knowledge about breast cancer and BSE among working women. The intervention was designed to be engaging and informative, offering visual and auditory content that could appeal to adult learners and fit into their busy schedules. The primary objective was to evaluate changes in knowledge before and after the intervention and to analyse the influence of demographic factors on baseline awareness levels.

Materials and Methods

Research Design and Approach

This study adopted a quantitative research approach with a quasi-experimental, one-group pre-test and post-test design. The intervention focused on evaluating the effectiveness of a video-assisted programme in improving breast cancer awareness and knowledge of BSE among working women.

Objectives

The study aimed to:

1. Assess the knowledge regarding breast cancer prevention before and after the video-assisted programme.
2. Evaluate the knowledge and understanding of BSE practices before and after the intervention.
3. Examine the relationship between selected demographic variables and pre-test knowledge scores.

Hypotheses

Two null hypotheses were formulated:

- **H₀₁:** There is no significant difference in

knowledge scores regarding breast cancer awareness before and after the video-assisted programme.

- **H₀₂:** There is no significant association between selected demographic variables and pre-test knowledge scores.

Population and Sample

The target population included working women above the age of 20 years, employed at various schools, and offices at Jaipur Rajasthan. The sample size consisted of 60 participants who met the inclusion criteria. Participants were selected using a non-probability convenience sampling technique, based on their availability and willingness to participate in the study.

Inclusion and Exclusion Criteria

Inclusion criteria were:

- Women aged 20 years and above.
- Currently employed and available during the study period.
- Willing to provide informed consent and participate in the intervention.

Women who were pregnant, undergoing treatment for cancer, or who had participated in similar awareness programmes in the past six months were excluded to avoid bias.

Data Collection Tool

A structured questionnaire was developed for data collection, comprising three main sections:

- **Section A:** Demographic details including age, marital status, religion, number of children, history of abortion, and breastfeeding experience.
- **Section B:** Knowledge questions related to breast cancer, including causes, symptoms, risk factors, and prevention.
- **Section C:** Questions related to knowledge and practice of BSE, such as steps, frequency, and identifying abnormalities.

The tool was validated by subject matter experts, and a pilot test was conducted with five participants to ensure clarity and reliability.

Intervention

The educational intervention consisted of a video-assisted teaching session. The video included information about:

- Definition and incidence of breast cancer.

- Symptoms and clinical manifestations.
- Risk factors and preventive measures.
- Step-by-step demonstration of BSE, including when and how to perform it, signs to look out for, and when to seek medical advice.

Participants completed the pre-test questionnaire, watched the educational video, and then completed the post-test using the same questionnaire. The entire process was conducted in a controlled environment within the workplace, ensuring minimal distraction and maximum engagement.

Ethical Considerations

Ethical approval was obtained from the institutional review board. Informed consent was obtained from all participants, and confidentiality was maintained throughout the study. Participants were informed of their right to withdraw at any stage without any consequences.

Results

Demographic Characteristics

Out of the 60 participants, 54% were in the age group of 25–30 years, while the remaining were above 30. A majority (67%) were unmarried, while 33% were

married. Most participants had no children, and among the married participants, a minority had experienced abortion or had a history of breastfeeding. The sample predominantly included women from urban and semi-urban backgrounds, working in various roles in government, private offices and school.

Knowledge Before and After Intervention

The comparison of pre-test and post-test knowledge scores showed a significant improvement after the video-assisted programme. Prior to the intervention, participants demonstrated limited understanding of breast cancer symptoms, risk factors, and BSE techniques. For example, many were unaware that changes in breast shape, skin dimpling, and nipple discharge could be signs of breast cancer. Furthermore, very few participants had practiced BSE or were aware of the correct technique and timing.

Following the intervention, there was a noticeable increase in correct responses across all knowledge categories. Participants were able to identify early symptoms of breast cancer, describe preventive practices, and explain the proper method and frequency for BSE. The average post-test scores were significantly higher than the pre-test scores, confirming the effectiveness of the educational video.

Table 1 Analysis of knowledge regarding prevention of Breast Cancer

Knowledge score	mean	SD	SE	t _{cal}	t _{tab}	P value	
Pre-test		9.3	2.76	0.8	4.66	0.381	0.05%
Post-test		13.03	3.46				

Table 1 shows that at 0.05% level of significance 't' calculated (t_{cal}) value is 4.66 and t tabulated (t_{tab}) value is 0.381 since t_{cal} value is more than t_{tab} value, H₀₁(null hypothesis) is rejected. Therefore there is an increase in knowledge of women regarding breast cancer and breast self examination after video assisted awareness programme.

Analysis of BSE Knowledge

Before the intervention, most participants were unfamiliar with the term BSE, let alone the procedure itself. Only a handful reported having attempted it before. After the video session, participants were able to outline the correct steps of BSE, including visual inspection in front of a mirror, palpation while lying down, and examining different areas of the breast using the pads of the fingers.

The majority also understood the importance of performing BSE monthly, preferably a few days after the menstrual cycle ends, and the need to report any abnormalities to a healthcare provider. The improved

understanding was evident from the increased post-test scores in Section C of the questionnaire.

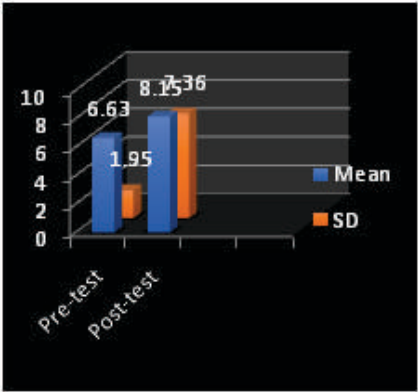


Figure 1: Distribution of Samples based on their Awareness About Breast Cancer.

Association with Demographic Variables

Chi-square tests were used to examine the association between demographic variables and pre-test knowledge scores. Results indicated no statistically significant association between most variables, including age, marital status, and number of children. For example, the chi-square value for marital status was 0.07, which was well below the tabulated value of 3.84, indicating no significant relationship. This suggests that baseline knowledge about breast cancer was uniformly low across demographic groups, reinforcing the need for universal awareness interventions.

Discussion

The results of this study demonstrate the positive impact of video-assisted education on improving knowledge about breast cancer and BSE among working women. The significant increase in post-test scores supports the hypothesis that visual learning tools are effective in enhancing health literacy. These findings align with previous research indicating that multimedia approaches can improve knowledge retention and engagement, especially among adult learners with limited time.

The workplace presents an ideal setting for such interventions, as it provides access to a large and often under-informed segment of the population. In this study, the convenience of the video format allowed participants to engage with the content without needing to attend lengthy seminars or workshops. Furthermore, the visual nature of the content made complex procedures like BSE easier to understand and remember.

The lack of association between demographic variables and baseline knowledge highlights the widespread nature of the information gap regarding breast cancer, even among educated and professionally employed women. This underscores the need for broader, inclusive public health campaigns that target all women, irrespective of age, marital status, or education level.

The study also emphasizes the importance of

integrating regular health education programmes into corporate wellness initiatives. Such efforts could be supported by healthcare providers, NGOs, and government agencies, ensuring that women across various industries are empowered to take charge of their health.

Conclusion

This study concludes that video-assisted educational programmes are effective tools for increasing awareness and improving knowledge of breast cancer and breast self-examination among working women. The significant improvement in knowledge scores post-intervention highlights the potential of such methods in preventive health education. Given the high prevalence of breast cancer and the importance of early detection, it is imperative to promote similar interventions across different work environments.

Healthcare institutions and policymakers should consider incorporating multimedia-based awareness campaigns into national health strategies. Moreover, corporate organizations can play a vital role by facilitating regular health screenings and educational sessions for their employees. Future research could focus on long-term retention of knowledge and the impact of repeated interventions over time.

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