



Research Article

A Study to Assess the Effectiveness of Planned Teaching Programme on Knowledge Regarding Breast Self-Examination Among Adolescent Girls at Port More School Shimla Himachal Pradesh

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Citation: Netali, Gautam D, Kaundal AK, Jyotsna, Sharma H (2025) A study to assess the effectiveness of planned teaching programme on knowledge regarding breast self-examination among adolescent girls at Port More School Shimla Himachal Pradesh Gynecol Obstet Open Acc 9: 246. DOI: <https://doi.org/10.29011/2577-2236.100246>.

Received: 25 August 2025; **Accepted:** 01 September 2025; **Published:** 03 September 2025

Abstract

Breast self-examination (BSE) is a vital preventive measure for the early detection of breast abnormalities. Increasing awareness among adolescent girls can promote early intervention and improve health outcomes. **Aim:** To evaluate the effectiveness of a planned teaching program in enhancing knowledge about breast self-examination among adolescent girls. **Research Methodology:** A quantitative research approach with a non-randomized, one-group pre-test/post-test design was adopted. A non-probability convenience sampling technique was used to select 40 adolescent girls from the Government Girls Senior Secondary School, Port More, Shimla. Data collection involved socio-demographic profiling and a structured questionnaire to assess knowledge of breast self-examination. Statistical and inferential analysis methods were used for data interpretation. **Results:** The study revealed a significant improvement in knowledge levels after the intervention. The mean post-test knowledge score was 90, which was considerably higher than the mean pre-test score of 30.60. The paired t-value was 28.234, which was statistically significant at the 0.05 level, indicating that the planned teaching programme effectively enhanced the participants' knowledge about breast self-examination.

Conclusion: Before the intervention, 29 (72.5%) students demonstrated poor knowledge of BSE. After the teaching program, 38 (95%) students showed good knowledge. These findings suggest that the planned teaching program was effective in improving awareness and understanding of breast self-examination among adolescent girls.

Keywords: Assess, Effectiveness, Planned Teaching Program, Knowledge, Breast Self-Examination (BSE), Adolescent Girls.

Introduction

Health is often regarded as the greatest wealth. It is a fundamental component of a happy and fulfilling life. According to the Neuman Systems Model, health is defined as a state in which all parts and subparts of an individual function in harmony. In alignment with the Alma-Ata Declaration, there is now a strong emphasis on health promotion and preventive care. Encouraging individuals to adopt a healthy lifestyle and develop effective coping strategies remains a primary goal in public health promotion [1].

Cancer remains one of the leading threats to human health worldwide. Among women, breast cancer is the most commonly diagnosed type of cancer [2] Breast cancer remains one of the most significant public health challenges affecting women globally [3].

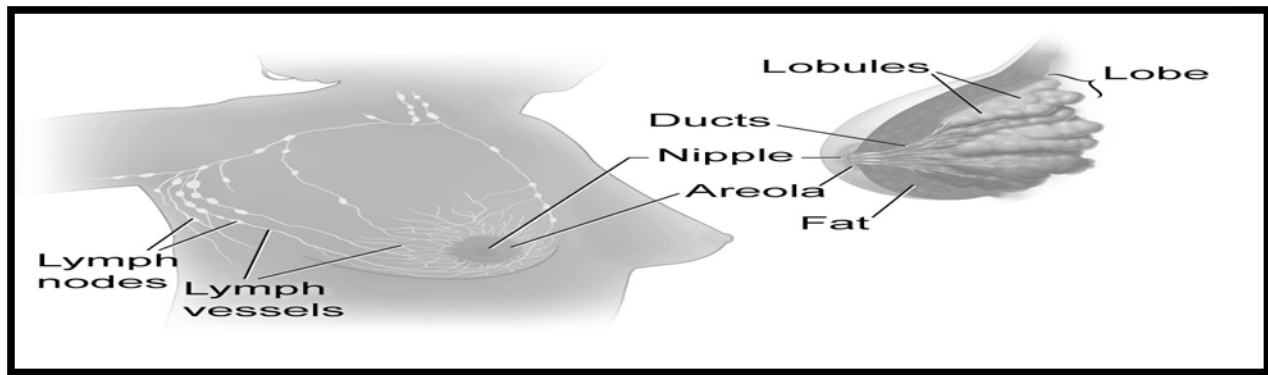


Figure 1: Illustrates the involvement of breast tissue in breast cancer [9]

Among the many methods of early detection, Breast Self-Examination (BSE) is a simple, cost-effective, and essential practice that empowers women to identify potential abnormalities at an early stage [7]. Although advancements in medical screening technologies have occurred, BSE continues to serve as a valuable self-care technique, particularly in resource-limited settings where access to clinical screening tools is restricted [6].

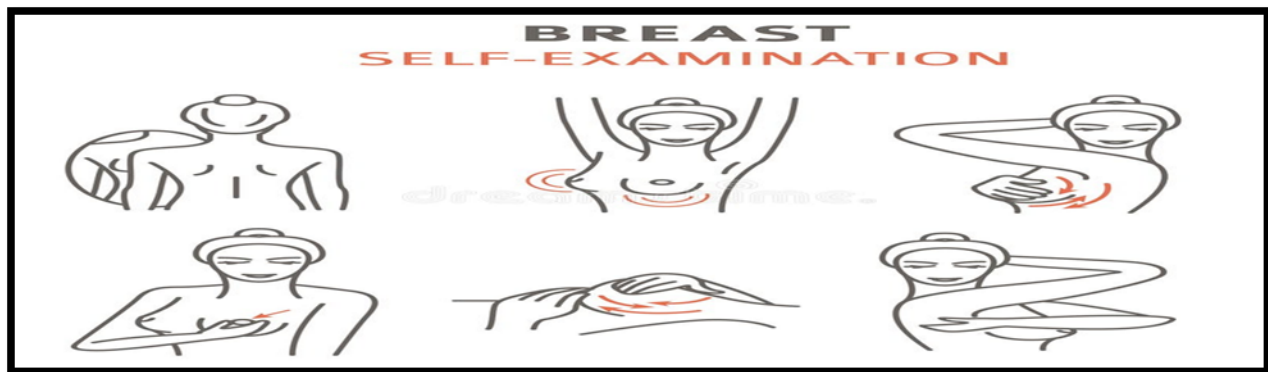


Figure 2: Illustrate pattern for breast self-examination.[10]

Despite its benefits, many women still lack adequate knowledge and do not practice BSE regularly. This gap may be attributed to limited awareness, cultural taboos, and misconceptions surrounding breast health [5]. Nurses, especially those in training, play crucial roles in health promotion and preventive education. Therefore, ensuring that nursing students possess a strong understanding of BSE and the skills to perform and teach it is vital for improving community health outcomes.

This study was designed to assess the impact of an educational intervention on BSE-related knowledge and skills among nursing students. By evaluating their performance before and after the intervention, the study aimed to determine whether structured teaching programs could significantly enhance their competence and confidence in practicing and promoting BSE.

A review of existing literature highlights the importance of educating individuals—particularly healthcare professionals—on BSE as a vital tool for the early detection of breast abnormalities. Numerous studies have underscored that timely identification of breast cancer significantly improves treatment outcomes and survival rates [4][2].

Several researchers have explored the effectiveness of structured educational programs in improving knowledge and practice of BSE. For example, studies report that post-intervention, participants showed marked improvements in understanding and performing self-examination techniques [8]. These outcomes were especially notable among nursing students, demonstrating the success of targeted teaching strategies.

Furthermore, even brief interventions such as video demonstrations or workshops have shown to positively influence attitudes toward breast health [5]. Long-term retention of knowledge and skills requires regular reinforcement and follow-up. Literature also reflects a growing emphasis on integrating breast health education into healthcare curricula, especially in regions with limited screening access due to socio-cultural constraints [6].

Material & Methods

Research Approach and Design

A qualitative research approach with a non-randomized one-group pre-test and post-test design was used for the study.

The sample consisted of 40 adolescent girls selected through a non-probability convenience sampling technique.

Data Collection Tools and Techniques

Part I: The demographic data collected for this study included variables such as the participants’ age, religion, and residential area. Information was also gathered regarding the type of family structure, parental educational qualifications, and occupations of both parents. Additional variables included the monthly family income, any previous knowledge the participants had about Breast Self-Examination (BSE), and the source from which this prior knowledge was obtained.

Part II: Knowledge Assessment Tool

A structured questionnaire consisting of 30 multiple-choice questions was developed to assess knowledge of breast self-examination.

S. No.	Level of Knowledge	Score Range	Percentage (%)
1	Poor	0–10	<33.3%
2	Average	11–20	33.4%–66.6%
3	Good	21–30	66.7%–100%

Scoring: 1 mark for each correct answer and 0 for incorrect ones.
Maximum score: 30; Minimum score: 0

Table 1: Interpretation of Knowledge Scores

Result

Section A: Demographic Profile of Participants

S. No.	Demographic Variables	Frequency (f) & Percentage (%)
Age in years		
- 14–15	38	95%
- 16–17	2	5%
- 18–19	0	0%
Educational Status		
- 9th Standard	20	50%
- 10th Standard	20	50%
Religion		
- Hindu	39	97.5%

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- Muslim	1	2.5%
Type of Family		
- Nuclear	17	42.5%
- Joint	23	57.5%
Residential Area		
- Urban	14	35%
- Rural	16	40%
- Sub-urban	10	25%
Mother's Educational Status		
- Matriculation	19	47.5%
- Higher Secondary	7	17.5%
- Graduate	12	30%
- Postgraduate	2	5%
Father's Educational Status		
- Matriculation	16	40%
- Higher Secondary	8	20%
- Graduate	12	30%
- Postgraduate	4	10%
Mother's Occupation		
- Housewife	33	82.5%
- Government Employee	1	2.5%
- Private Employee	3	7.5%
- Others	3	7.5%
Father's Occupation		
- Government Employee	13	32.5%
- Private Employee	5	12.5%
- Own Business	9	22.5%
- Others	13	32.5%
Monthly Family Income		
- Less than ₹10,000	16	40%
- ₹10,001–₹20,000	12	30%
- ₹20,001–₹30,000	4	10%
- More than ₹30,000	8	20%
Previous Knowledge (Pre-test)		
- Yes		0%
- No	40	100%
Source of Knowledge (Pre-test)		
- Mass Media, Books, Newspaper, Friends/ Family	0	0%
- None	40	100%
Source of Knowledge (Post-test)		

- Mass Media	40	100%
- All Others	0	0%

Table 2: Frequency and Percentage Distribution of Demographic Variables (n = 40)

Section B: Pre- and Post-Test Knowledge Scores

Level of Knowledge	Score Range	Frequency (f)	Percentage (%)
Poor	0–10	29	72.5%
Average	11–20	11	27.5%
Good	21–30	0	0%

Before the planned teaching programme, the majority (72.5%) had poor knowledge of BSE.

Table 3: Pre-test Knowledge Score Distribution (n = 40)

Level of Knowledge	Score Range	Frequency (f)	Percentage (%)
Poor	0–10	0	0%
Average	11–20	2	5%
Good	21–30	38	95%

After the intervention, most students (95%) achieved good knowledge scores.

Table 4: Post-test Knowledge Score Distribution (n = 40)

SECTION C: Comparison of Pre- and Post-Test Knowledge Scores

Level of Knowledge	Score Range	Pre-test f (%)	Post-test f (%)
Poor	0–10	29 (72.5%)	0 (0%)
Average	11–20	11 (27.5%)	2 (5%)
Good	21–30	0 (0%)	38 (95%)

The comparison indicated a significant increase in knowledge after the planned teaching programme.

Table 5: Knowledge Level Comparison

Section D: Association Between Knowledge and Demographic Variables

No statistically significant association was found between knowledge levels and demographic variables such as education, religion, type of family, residential area, parental education and occupation, and family income. The calculated chi-square values were lower than the critical values at the 0.05 significance level.

The mean post-test knowledge score (90) was significantly higher than the mean pre-test score (30.60). The paired t-value was 28.234, which was statistically significant at the 0.05 level. This demonstrates the effectiveness of the planned teaching program in improving the knowledge and awareness of adolescent girls regarding breast self-examination.

Discussion

The study revealed a significant improvement in knowledge and practical skills regarding Breast Self-Examination (BSE) following the structured teaching program. Pre-test scores indicated limited understanding, while post-test results showed a marked shift to higher knowledge levels. Initially, students lacked proficiency in BSE technique, but post-intervention assessments demonstrated improved accuracy, adherence to steps, and confidence. The paired t-test confirmed these improvements were statistically significant, highlighting the effectiveness of targeted educational interventions.

Conclusion

This study affirms that structured educational interventions can significantly enhance nursing students' knowledge and practical ability related to Breast Self-Examination (BSE). The positive shift in post-intervention performance demonstrates that even short-term focused teaching programs can lead to meaningful improvements. These gains are crucial not only for personal health maintenance but also for preparing nursing students to serve as health educators within their communities. By equipping students with the right information and skills, we enable them to contribute more effectively to early detection initiatives and breast cancer awareness campaigns. The findings also suggest that a supportive learning environment, along with practical training, fosters greater confidence and readiness among students to advocate preventive health measures.

Acknowledgement

We are deeply grateful to God Almighty for granting us the strength and opportunity to complete this study. We sincerely thank **Mrs. Netali** and **Ms. Dixit Gautam** of AIIMS Gorakhpur for their academic guidance and supervision. Our thanks extend to **Mr. Amit Kumar Kaundal** for his support in research design and analysis, and to **Ms. Jyotsna** and **Ms. Himanshi Sharma** for their contributions in fieldwork and data collection. We also acknowledge the **Head and Principal** of Government Girls Senior Secondary School, Portmore, Shimla, for their kind cooperation. Lastly, we thank our families for their unwavering support and encouragement.

Ethical Considerations

Ethical clearance for this study was obtained from the Institutional Ethics Committee. Informed consent was taken from parents/guardians, and assent was obtained from all adolescent participants.

Participation was voluntary, with assurance of confidentiality and the right to withdraw at any stage without penalty. Data were anonymized and used solely for research purposes. The study posed minimal risk and was conducted in a culturally sensitive and age-appropriate manner. Respect for institutional policies and participants' dignity was maintained throughout.

Conflict of Interest

The authors declare no conflict of interest with respect to the research, authorship and publication of this article. This research was conducted independently, without any financial or personal relationships that could inappropriately influence or bias the findings and interpretations.

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