

Effectiveness of Structured Teaching Program (STP) on Knowledge Regarding Breast Self-examination

Dr. Arpana Das¹, Ritashree Mahanta²

Affiliated by Srimanta Sankardeva University of Health Science, Guwahati and recognized by Indian Nursing Council

Abstract: ***Background:** Breast Self- Examination is a routine examination that should be carried out at the same time each month to physically check for any lumps or other changes. In 2022, breast cancer was the second most common cancer, worldwide with 2.3 million new cases and 6700,000 deaths globally. The statement of the problem is “Effectiveness of Structured Teaching Program on knowledge regarding Breast Self- Examination among the students in a selected Nursing College, Kamrup, Assam. **Objectives:** to assess the pre-test knowledge regarding Breast Self- Examination among in a selected Nursing College, Kamrup, Assam, To assess the post –test knowledge regarding Breast Self – Examination among the students in a selected nursing college, Kamrup, Assam, To assess the effectiveness of Structured Teaching Program regarding Breast Self – Examination among students in a selected nursing college of Kamrup, Assam. To find out the association between pre-test knowledge score regarding Breast Self – Examination with selected demographic variables i.e., age, residing community, mothers’ education, parent’s occupation, source of information. **Methods:** As per the objectives a quantitative approach with pre-experimental one group pre-test post- test research design, 41 samples were selected for the study through probability sampling technique (random sampling technique). Data was collected through structured knowledge questionnaire. **Result:** The present study shows that the pre-test mean score of knowledge of B. Sc. Nursing 1st semester and GNM 1st year students are 11.7 and SD is 3.7 respectively and post- test knowledge mean score of B.Sc. nursing 1st semester and GNM 1st year students are 17.7 and SD score is 4.2 respectively. The major finding of the study shows that the post- test knowledge score of 1st semester B. Sc. and 1st year GNM students regarding Breast Self- Examination found significantly higher after structured teaching program then the pre-test knowledge score. Course (chi-square value 8.22, df-2 where tabulated value is 5.99) was found to be significant. Performed Breast Self –Examination (chi-square value 12.88, df-2 and tabulated value 5.99) was found to be significant. Investigators can conclude that the structured teaching program regarding Breast Self –Examination was effective and it increased the knowledge of 1st semester B.Sc. nursing students of Arya Nursing College and 1st year GNM students of Arya School of Nursing.*

Keywords: Breast self-examination, Structured Teaching Programme, effect, 1st sem B.sc nursing student, 1st year GNM student

1. Background of the Study

Cancer is a generic term for a large group of diseases that can affect any part of the body. Other terms used are malignant tumors and neoplasms. One defining feature of cancer is the rapid creation of abnormal cells that grow beyond their usual boundaries, which can then invade the adjoining part of the body and spread to other organs; the latter process is referred to as metastasis. Widespread metastasis is the primary cause of death from cancer.² Breast Cancer is one of the most common malignant diseases in women originating from breast tissue, most commonly from the inner lining of milk duct or the lobules that supply the ducts with milk.²

Breast Self-Examination is a technique used to assess their own breast to detect breast carcinoma of the earliest.² Breast Self-Examination is a routine examination that should be carried out at the same time each month to physically check for any lumps or other changes.³

2. Need of the Study

Breast cancer is a disease in which abnormal breast cells grow out of control and form tumours. Breast cancer cells begin inside the milk duct and/or the milk producing lobules of the breast. The earliest form is not life-threatening and can be detected in early stages. Cancer cells can spread into nearby breast tissue (invasion). This creates tumour that cause lumps or thickening. In 2022, Breast Cancer was the second most common cancer Worldwide, with 2.3 million new cases and 670,000 deaths globally.⁴ As per Global Cancer observatory, IARC-WHO 2022, the Breast cancer is the most common

type of Cancer globally with estimated mortality cases of 665,255 for the year 2022 among females. India ranks highest in number of estimated Breast Cancer deaths (98,337) for the year 2022 among females. Breast Cancer is the most common Cancer in Indian women, with an age adjusted incidence rate of 25.8 per 1000,000 women. Breast Cancer is the most common Cancer in women in Assam and has a highest incidence in the following districts-⁶

Districts:

- **Kamrup Urban**-The probability of developing Breast Cancer in women is 1 in every 32 women.
- **Dibrugarh**-The probability of developing Breast Cancer in women is 1 in every 63 women.
- **Cachar**-The probability of developing Breast Cancer in women is 1 in every 73 women.

After observing the above reports and results of previous studies conducted by different researchers it is found that breast cancer is a very big problem in our country. Women with breast cancer can be early diagnosed by performing Breast Self-Examination (BSE). The female student should have adequate knowledge and awareness regarding Breast Self-Examination (BSE) for self-detection on any abnormalities in breast. Thus, Breast Self-Examination (BSE) plays a key role in early detection and management of Breast Cancer. Therefore the researchers interested to conduct the study on “Effectiveness of Structured Teaching Program (STP) on knowledge regarding Breast Self-Examination (BSE) among the students in a selected Nursing College, Kamrup, Assam”.

Objectives:

- To assess the pre-test knowledge regarding Breast Self – Examination among in a selected Nursing College, Kamrup, Assam.
- To assess the post –test knowledge regarding Breast Self – Examination among the students in a selected nursing college, Kamrup, Assam.
- To assess the effectiveness of Structured Teaching Program regarding Breast Self – Examination among students in a selected nursing college of Kamrup, Assam.
- To find out the association between pre-test knowledge score regarding Breast Self – Examination with selected demographic variables i.e., age, residing community, mothers' education, parent's occupation, source of information.

3. Methods and Materials

As per the objectives a quantitative approach with pre-experimental one group pre-test post- test research design, 41 samples were selected for the study through probability sampling technique (random sampling technique). Data was collected through structured knowledge questionnaire.

4. Major Findings

The result on Demographic are shows as below-

It was found that out of 41 sample 24% students belongs to 16-18 years, 61% students belongs to 19-20 years, 15% students belong to 21-23 years, in age of menarche, it was found that out of 41 sample 39% students belong to 10-12 years, 61% students belong to 13-15 years, in course, it was found that out of 41 sample 61% students belong to B. Sc. nursing and 39% students belong to GNM course, in place of residence , it was found that -39% students belong to urban and 61% students belong to rural, in religion , 29% students belong to Muslim religion , 5% students belong to Christian and 5% students belong to others religion. In education of the mother , it was found that out of 41 sample 10% belong to professional degree , 27% belong to graduation , 5% belong to internship / diploma , 61% belong to high school , 2% belong to primary school, in occupation of father , it was found that out of 41 sample , 61% belong to service , 37% belong to self-employed/ business , 2% belong to retired , 10% belong to unemployed , in occupation of mother , it was found that 24% belong to service , 17% belong to self-employed/ business , 59% belong to unemployed , in previous knowledge regarding BSE , it was found that out of 41 sample 34% students have knowledge regarding BSE and 66% students have no knowledge regarding BSE , in source of information, it was found 29% students get their knowledge from school , 7% from health worker and 64% from mass media.

The present study shows that the pre-test mean score of knowledge of B. Sc. Nursing 1st semester and GNM 1st year students are 11.7 and SD is 3.7 respectively and post- test

knowledge mean score of B.Sc. nursing 1st semester and GNM 1st year students are 17.7 and SD score is 4.2 respectively.

The major finding of the study shows that the post- test knowledge score of 1st semester B. Sc. and 1st year GNM students regarding Breast Self- Examination found significantly higher after structured teaching program then the pre-test knowledge score. Course (chi-square value 8.22, df-2 where tabulated value is 5.99) was found to be significant. Performed Breast Self –Examination (chi-square value 12.88, df-2 and tabulated value 5.99) was found to be significant.

Table 1: Assessment of pre-test and post-test knowledge was done by mean and standard deviation, N=41

Test	Level of knowledge	Frequency	Percentage (%)	Mean	Standard deviation
Pre-test	Inadequate	8	14.60	11.7	3.7
	Moderate	31	75.60		
	Adequate	4	9.80		
Post-test	Inadequate	5	12.20	17.7	4.2
	Moderate	31	75.60		
	Adequate	5	12.20		

Table 1 shows the level of knowledge in the pre-test and post-test with the frequency, percentage, mean and standard deviation. The table depicts that in the pre-test knowledge the mean is 11.7 and the standard deviation is 3.7, and in the post-test knowledge the mean is 17.7 and the standard deviation is 4.2.

Section III: Effectiveness of Structured Teaching Program (STP) was done by paired t-test.

H1: There will be significant difference on the knowledge regarding Breast Self-Examination (BSE) among the students of selected nursing college after Structured Teaching Program (STP).

Table 2: Mean, Standard Deviation and paired t-test of 1st semester B.Sc. Nursing and 1st year GNM Nursing students.

TEST	Mean Knowledge Scores	SD	t-test Calculated value	t-test tabulated value
Pre-test	11.7	3.7	13.04	2.02
Post-test	17.7	4.2		

***Significant at 0.05 level**

Table 2 shows that there is an increase in mean post-test knowledge scores (17.7) as compared to mean pre-test knowledge score (11.7) and calculated paired t-test value (13.04) which is more than the tabulated value (2.01) at 0.05 significant. There is a significant difference on the knowledge regarding Breast Self-Examination among the students. Therefore, the H1 is accepted.

Section IV: Association between pre-test knowledge score with selected demographic variable was done by using chi square test.

Table 3: Association between pre-test knowledge score with selected demographic variable was done using chi square test.

Demographic variables	Inadequate knowledge	Moderate knowledge	Adequate knowledge	Total	Cal. value	Tab. value	df	Remarks
Course								
B.Sc nursing	1	19	5	25	8.22	5.99	2	S
GNM	5	11	0	16				
Previous knowledge								
Yes	0	9	5	14	12.89	5.99	2	S
No	6	21	1	27				

*S-significant at 0.05%

*NS-non significant at 0.05%

Table 3 depicts the result of association between pre-test knowledge score with selected demographic variables was found to be significant in the course (χ^2 value 8.22, df 2, p value 0.05) and previous knowledge (χ^2 value 12.89, df 2, p value 0.05).

5. Discussion

1) Discussion on findings related to demographic characteristic of the sample:

The finding of the present study shows that out of 41 subjects, majority (61%) of the participants belong to the age group of 19-20 years of age. 24% of the participants were of the age group 16-18 years and 15% of the participants were of the age group of 21-23 years in Arya Nursing College and Arya School of Nursing, Changsari, Kamrup, Assam. Majority (61%) of the participants to the age of menarche were 13-15 years, 39% of the participants were experience age of menarche at 10-12 years of age. It was found that majority of participants (61%) were from B. Sc Nursing course and 39% participants from GNM course. 61% participants were belonged from rural area and 39% were from urban area. Majority of the participants (63%) were belonged to Hindu religions, 27% were from Muslim religion, 5% were from Christian and 5% were belonged to others religion. It was found that 61% of participants mothers have education till high school, 27% of the mother have education till graduation, 10% of the participants mothers have education till professional degree and 2% of participants mothers have education till primary school. 51% of the participants father's occupation are in service, 37% of the fathers are self-employed/business, 2% of the fathers are retired and 10% of the fathers are unemployed. 59% of the mothers are unemployed, 24% of mothers are in service and 17% of the mothers are self-employed/business. It was found that majority (66%) of the participants did not have previous knowledge regarding Breast Self-Examination and 34% were having previous knowledge regarding Breast Self-Examination among them 64% had acquired the information through mass-media, 39% from school and 7% from health workers. Majority of the participants (95%) did not perform Breast Self-Examination and 5% performed Breast Self-Examination.

2) Discussion on findings related to assessment of pre-test and post-test knowledge regarding Breast Self-Examination among the students in a selected Nursing College, Kamrup, Assam:

Data of the present study findings showed that on pre-test assessment of knowledge of Breast Self-Examination 14.60% of participants had inadequate, 75.60% had moderate and 9.80% had adequate knowledge on Breast Self-Examination.

It has been observed from the present study that on post-test assessment of knowledge of Breast Self-Examinations 12.20% had inadequate knowledge, 75.60% had moderate knowledge and 12.20% had adequate knowledge on Breast Self-Examination.

3) Discussion on findings related to effectiveness of Structured Teaching Program regarding Breast Self-Examination among students in a selected Nursing College of Kamrup, Assam:

The present study finding reveal mean and standard deviation of post-test knowledge score 17.7 and 4.2 was higher than mean and standard deviation of pre-test knowledge score 11.7 and 3.7 among the participants regarding Breast Self-Examination. The tabulated t-value is 2.02 and calculated t-value is 13.04 and significant at 0.05 level.

4) Discussion on findings related to association between pre-test knowledge score regarding Breast Self-Examination with selected demographic variables i.e. age, residing community, mother's education, parent's education, source of information:

The findings of the study reveal that there was a significant association between knowledge and course, previous knowledge.

6. Conclusion

From the findings present study, it was concluded that majority of the participants had adequate knowledge after Structured Teaching Program. The findings of the study also shows that there was a significant association between knowledge with demographic variables.

References

- [1] Famous Mahatma Gandhi Quotes January 30, 2025. JAGRAN Josh. Available from: Mahatma Gandhi Quotes: Get here the top and best inspirational quotes by Mahatma Gandhi on Education, Life, Passion, Motivation, Positive Thinking, and Success ... Source: Jagranjosh.com <https://search.app/YQUMnZuwmaqJLWEP9>
- [2] Cancer 3 February 2025. World Health Organization. Available from: <https://www.who.int/news-room/fact-sheets/detail/cancer>
- [3] World Health Organization. Breast Self-Examination. Available from: <https://screening.iarc.fr/breastselfexamination.php>
- [4] Breast Cancer 13 March 2024. World Health Organization. Available from:

- <https://www.who.int/news-room/fact-sheets/detail/breast-cancer>
- [5] India Scenario. Government of India 9th February 2024. Available from: <https://sansad.in/getFile/loksabhaquestions/annex/1715/AU1227.pdf?source=pqals>
- [6] ICMR- National Centre for Disease Informatics and Research. Profile of Cancer and Related Health Indicators in the Northeast Region of India. Available from: <https://search.app/3c5NhkHp6Yx7nFnw7>
- [7] Gudlanur P.K., Bhatakhande A.H. A study to evaluate the effectiveness of Structured Teaching Programme (STP) on knowledge regarding Breast Self-Examination (BSE) among bed students of selected colleges in Hubballi. International Journal of Midwifery and Nursing Practice 2019 [cited 18 June 2019]. Available from: <https://www.nursingpractice.net/article/view/41/2-2-7>
- [8] Ms. Nongsiej M. et. al. Effectiveness of Structured Teaching Programme on Breast Self-Examination among Adolescent Girls in Selected College, Guwahati, Assam. International Journal for Multidisciplinary Research 2023 [cited 2023 19 December]. Available from: <https://www.ijfmr.com/research-paper.php?id=10548>
- [9] Breast Self-Examination January 6, 2025. Available from: <https://www.nationalbreastcancer.org/breast-self-exam/>
- [10] Sharma S. K. Nursing Research and Statistics 3rd ed. New Delhi. Elsevier; 2023.p.79.
- [11] Sharma S. K. Nursing Research and Statistics 3rd ed. New Delhi. Elsevier; 2023.p.79.
- [12] Dr. Karpagavalli G, Jayamalli. Effectiveness of Structured Teaching Program on knowledge regarding Breast Self- Examination among adolescent girls at selected college, Chengal Pattu District. International Journal of Advanced Multidisciplinary Research and Studies. [cited 2024] Available from: <https://www.multiresearchjournal.com/arclist/list-2024.4.2/id-2513>
- [13] Gethcia I, Uma V. Effectiveness of Structured Teaching Programme on knowledge regarding Breast Self-Examination among women at a selected hospital, Kolar. IJAR. [cited 2024 June 30] Available from: <https://www.journalijar.com/article/49077/a-study-to-assess-the-effectiveness-of-structured-teaching-programme-on-knowledge-regarding-breast-self-examination-among-women-at-a-selected-hospital,-kolar/>
- [14] Sharan dip K, Jaspal K. Effectiveness of a Structured Teaching Programme on Breast Self-Examination knowledge among adolescent girls in rural school; a study in Jalandhar, Punjab. Educational Administration: Theory and Practice. [cited 2024 April 29] Available from: <https://kuvey.net/index.php/kuvey/article/view/2641>
- [15] Dr Puneet G, et al. A study to assess the effectiveness Structured Teaching Programme on knowledge regarding Breast Self-Examination among undergraduates' students of Shree Sahajanand girls institute at Bhuj-Kachchh, Gujarat. International Journal of Advance Research in Nursing. [cited 2023] Available from: <https://doi.org/10.33545/nursing.2023.v6.i2.B.348>
- [16] Pushpanjali M, Effect on Structure Teaching Program on knowledge regarding Breast Self-Examination among B.Sc. Nursing Students. European Journal of Molecular & Clinical Medicine. [cited 2023] Available from: https://www.researchgate.net/publication/374587186_Effect_Of_Structured_Teaching_Programme_On_Knowledge_Regarding_Breast_Self-Examination_Bse_Among_B_Sc_Nursing_Students
- [17] Juhi G, et al. Effectiveness of Structural Teaching Programme on knowledge and practice regarding Breast Self-Examination among female students. South Asian Research Journal of Nursing and Healthcare. [cited 2023] Available from: https://sarpublication.com/media/articles/SARJNHC_54_56-60_5ID5033.pdf
- [18] Manjula T, Reena T Effectiveness of Structured Teaching Programme on attitude regarding Breast Self-Examination among adolescent girls in selected school of Indore M.P. IP Journal of Paediatrics and Nursing Science. [cited 2022] Available from: <http://dx.doi.org/10.18231/j.ijpns.2022.021>
- [19] Santhipriya M, et al. Effectiveness of Structured Teaching Programme on Breast Self-Examination. IJCRT. [cited 2022 November 11] Available from: https://ijcrt.org/viewfull.php?&p_id=IJCRT2211452
- [20] Dr. Joseph V. M. Knowledge, Attitude and Practice of Breast Self-Examination among the Nursing students, UAE. Gulf Medical University 2024 [cited 2024 May 30th] Available from: https://www.researchgate.net/publication/381001951_Knowledge_Attitude_and_Practice_of_Breast_self-examination_among_the_Nursing_students_UAE
- [21] Choudhary M.et. al. Breast Self-Examination: Knowledge, awareness, and practices among females of reproductive age group. International Journal of Research in Medical Sciences 2024 [cited 2024 June] Available from: <https://www.msjonline.org/index.php/ijrms/article/view/13517>
- [22] Pandita S.et. al. Knowledge, Attitude and Practice of young women (age 18-25) in Bangalore city with regards to Self-Breast Examination. THE PREPRINT SERVER FOR HEALTH 2024 [cited 2024 June 28] Available from: <https://www.medrxiv.org/content/10.1101/2024.06.26.24309399v1.full>
- [23] Jadhav B.N et. al. Knowledge, Attitude and Practice of Breast Self-Examination is associated with general self-care and cultural factors: a study from Tamil Nadu, India. National Library of Medicine 2024 [cited 2024 March 2] Available from: <https://pubmed.ncbi.nlm.nih.gov/38431649/>
- [24] Asmare K. et. al. Knowledge, Attitude, Practice towards Breast Self-Examination and associated factors among women in Gondar town, Northwest Ethiopia, 2021: a community-based study. National Library of Medicine 2022 [cited 2022 May 14] Available from: <https://pubmed.ncbi.nlm.nih.gov/35568846/>

- [25] Muhsin M. et. al. Knowledge, Attitude and Practice Regarding Breast Self-Examination Among Female Health Sciences Final Year Students. Centre for Medical Imaging Studies 2022 [cited 2022 October] Available from:
https://www.researchgate.net/publication/368416692_Knowledge_Attitude_and_Practice_Regarding_Breast_Self-Examination_Among_Female_Health_Sciences_Final_Year_Students
- [26] Mrs. Maurya N., Mrs. Pandey P. A Descriptive Study to Assess the Knowledge Regarding Breast Self-Examination among Female Population (20-40 years) in Selected Rural Area in Varanasi (UP) 2022 [cited 2022 September-October] Available from:
<https://www.ijtsrd.com/papers/IJTSRD52033.pdf>
- [27] Mekonnen M., Asefa T. Knowledge, Attitude and Practice of Breast Self-Examination among female undergraduate nursing students at university of Gondar, college of medicine and health sciences 2019 [cited 2019 November 5] Available from:
<https://medcraveonline.com/HPMIJ/knowledge-attitude-and-practice-of-breast-self-examination-among-female-undergraduate-nursing-students-at-university-of-gondar-college-of-medicine-and-health-sciences.html>
- [28] Research Methodology: An Introduction. University of Kashmir, South Campus. Available from:
<https://southcampus.uok.edu.in/Files/Link/DownloadLink/RM%20U1%20P1.pdf>
- [29] Taherdoost H. Different Research Approach. Journal of Management Science and Engineering Research 2022 [cited March 2022] Available from:
<https://hal.science/hal-03741840/document>
- [30] Sharma S. K. Nursing Research and Statistics 3rd ed. New Delhi. Elsevier; 2023.p.112.
- [31] Sharma S. K. Nursing Research and Statistics 3rd ed. New Delhi. Elsevier; 2023.p.112.
- [32] Burke R. Population. Population Aging Research Center 2024 [cited November 11 2024] Available from:
<https://www.aging.upenn.edu/bio/robert-burke#:~:text=Burke%20is%20the%20first%20Director%20of%20Research,the%20hospital%20to%20post%20acute%20care%20in%20vulnerable>
- [33] Ajithakumari G. Sample Size Determination and Sampling Technique. International Journal of Science and Research (IJSR) 2024 [cited September 2024] Available from:
https://in.docworkspace.com/d/sIOGKzKeSAoK_lb8G?lg=en-US&sa=601.1074&ps=1&fn=ES24924103353.pdf
- [34] Alele F and Aduli B M. Sampling Techniques in Quantitative Research. James Cook University, Australia 2023. Available from:
[https://jcu.pressbooks.pub/intro-res-methods-health/chapter/3-4-sampling-techniques-in-quantitative-research/#:~:text=Sampling%20in%20quantitative%20research%20is,techniques%20based%20on%20probability%20theory.&text=The%20goal%20of%20sampling%20is,cluster%20sampling%20\(shown%20below](https://jcu.pressbooks.pub/intro-res-methods-health/chapter/3-4-sampling-techniques-in-quantitative-research/#:~:text=Sampling%20in%20quantitative%20research%20is,techniques%20based%20on%20probability%20theory.&text=The%20goal%20of%20sampling%20is,cluster%20sampling%20(shown%20below)
-).&text=The%20key%20feature%20of%20probability,part%20of%20the%20study%20sample.&text=While%20quantitative%20research%20often%20uses,be%20utilised%20in%20healthcare%20research.&text=Non%20probability%20sampling%20methods%20are,in%20detail%20in%20chapter%204.
- [35] Sharma S. K. Nursing Research and Statistics 3rd ed. New Delhi. Elsevier; 2023.p.30.
- [36] Sharma S. K. Nursing Research and Statistics 3rd ed. New Delhi. Elsevier; 2023.p.30.
- [37] Sharma S. K. Nursing Research and Statistics 3rd ed. New Delhi. Elsevier; 2023.p.30