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BREAST SELF-EXAMINATION PRACTICES AMONG UNDERGRADUATE NURSING STUDENTS: AN INSTITUTIONAL STUDY

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Abstract

Background: Breast cancer is the most common form of cancer among women in India. Early detection plays a vital role in reducing mortality rates and improving the quality of life. Breast self-examination (BSE) is an easy and economical method for detecting any abnormalities. Nursing students play an important role as future healthcare professionals in educating people about breast cancer.

Objectives: This study was conducted to measure the knowledge and practices of BSE among the first year B.Sc. Nursing students aim to establish the relationship between the two variables.

Methods: A descriptive cross-sectional study was conducted among 80 first-year B.Sc. Nursing students studying at SCB College of Nursing, Cuttack. A convenience sampling technique was used for data collection. A structured questionnaire and checklist were used for data collection. Inferential and descriptive statistics were used for analysis.

Results: Findings revealed that 52.5% of the participants had insufficient knowledge about BSE, and 68.75% had never performed BSE regularly. There exists a positive correlation (r= 0.42) between the scores on knowledge and practices.

Conclusion: There was a wide knowledge-practice gap found among nursing students. Recommendations include conducting workshops and practical sessions for the students.

Keywords: Breast Self-Examination, Breast Cancer, Nursing Students, Knowledge, Practice, Awareness, Early Detection.

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1. Introduction

Breast cancer is a significant public health problem throughout the world. According to the World Health Organization, breast cancer is the most common cancer diagnosed

among women and the leading cause of death across the globe. In India, the number of cases of breast cancer has been increasing due to changes in lifestyles, late age at first childbirth, obesity, physical inactivity, and lack of awareness regarding prevention.

The early detection of breast cancer can play an important role in achieving good results from treatment and minimizing the number of deaths. Of all screening tests available, Breast Self-Examination (BSE) is considered to be one of the easiest and most affordable techniques of detecting breast abnormalities. BSE involves careful self-examination and palpation of breasts, usually done once a month after menstruation.

Although mammography and clinical breast examination are considered effective screening methods, they may not be easily available in resource-poor settings. Hence, BSE becomes especially important in developing countries like India, where the availability of modern facilities for diagnosis may be limited.

Nursing students are uniquely positioned in healthcare systems as future nurses, teachers, and practitioners of preventive health practices. Nursing students must have sufficient knowledge and practice BSE since they are expected to educate women in hospitals, the community, schools, and rural health centers.

Nevertheless, there are reports of insufficient awareness and poor practice of BSE among young women and nursing students despite theoretical knowledge about breast cancer. These barriers include fear, embarrassment, lack of confidence, lack of hands-on experience, and misconceptions regarding breast cancer.

Therefore, this study was conducted to evaluate the knowledge and practice of BSE among first-year B.Sc. Nursing students at SCB College of Nursing, Cuttack, Odisha.

2. Need for the Study

Breast cancer continues to be a significant public health problem in India due to late detection and poor awareness among women. Many women seek medical care at a more advanced stage of the disease, which leads to poor efficacy of treatment and higher death rates.

Several studies conducted in different parts of India show that the level of awareness about BSE among girls and young women is poor. In Odisha, lack of awareness, stigma, fear, and lack of education cause delays in screening procedures.

Since nurses play an important part in educating women about preventive measures, it is necessary to assess their own level of awareness and skills, since this will influence the quality of education provided to the community.

Therefore, there is a need for assessment of the knowledge and practice of BSE among nursing students to help improve nursing education through hands-on experience, workshops, and simulation training.

3. Review of Literature

Several studies, both at national and international levels, have been done on awareness and practice of Breast Self-Examination (BSE) by women and health care students.

Rachna (2021) carried out research on nursing students and concluded that there was moderate satisfaction with respect to awareness about breast cancer, but the rate of practice of BSE was still very low. The researcher emphasized the importance of repeating the exercise and demonstrating.

In their study on breast cancer awareness among nursing students, Chandani et al. (2020) revealed that educational interventions greatly improved the confidence and practice of BSE by these students. The authors highlighted the need for integrating preventive oncology education into undergraduate nursing programs.

Jadhav et al. (2024) found that women from Tamil Nadu had inadequate awareness and poor BSE practice despite a high level of health education. The researchers recommended community awareness campaigns and continuous health education.

Sachdeva et al. (2021) found that although many Indian women had moderate awareness of breast cancer, there was inadequacy in self-examination practices due to cultural barriers, fear of diagnosis, and lack of confidence.

Paulsamy et al. (2021) noted some of the barriers to BSE practice among female college students, which include embarrassment, fear of finding any abnormality, ignorance of techniques, and misconceptions about breast cancer.

Mulyani et al. (2021) proved that the use of demonstration-based teaching methods led to a significant improvement in BSE-related behavior among female students.

From the above studies, it is evident that awareness alone does not guarantee the practice of BSE regularly. Therefore, demonstrations and repeated reinforcement are key to improving screening behavior among young women.

4. Objectives of the Study

1. To assess the level of knowledge regarding breast self-examination among B.Sc. Nursing 1st year students.
2. To assess the level of practice regarding breast self-examination among B.Sc. Nursing 1st year students.
3. To find out the relationship between knowledge and practice scores concerning BSE.
4. To find out the relationship between selected demographic factors and BSE knowledge.

5. Methodology

Research Approach: A quantitative research approach was adopted for the present study.

Research Design: A descriptive cross-sectional research design was used.

Setting of the Study: The study was conducted at SCB College of Nursing, Cuttack, Odisha.

Population: The target population comprised first-year B.Sc. Nursing female students.

Sample Size: A total of 80 students participated in the study.

Sampling Technique: A convenience sampling technique was used for participant selection.

Inclusion Criteria:

- Female students enrolled in the first-year B.Sc. Nursing.
- Students willing to participate in the study.

Exclusion Criteria:

- Students absent during data collection.
- Students unwilling to participate.

Data Collection Tool:

Section A: Demographic Variables

This section included age, source of information regarding breast cancer, family history of breast cancer, and previous exposure to awareness programs.

Section B: Structured Knowledge Questionnaire

The questionnaire assessed knowledge regarding:

- Breast cancer risk factors
- Symptoms and warning signs
- Importance of early detection
- Timing and procedure of BSE
- Frequency of BSE practice

Section C: Practice Checklist

The checklist assessed:

- Frequency of BSE practice
- Confidence regarding BSE
- Correct performance of BSE steps
- Barriers to regular practice

Validity and Reliability:

Expert validation and review were done for the instrument used by nurses and medical scientists. Reliability testing involved the use of Cronbach's alpha. The reliability score obtained is 0.82, which is acceptable.

Pilot Testing:

A pilot study was carried out on a few nursing students to examine the feasibility and clarity of the tool. Modifications were made to the tool before the actual data collection process.

Ethical Considerations:

Permission was sought from the authority of the institution prior to carrying out the study. Objectives of the study were explained to participants, and informed consent was obtained. Confidentiality and anonymity were guaranteed during the entire course of the study.

Data Collection:

Self-administered questionnaires were used for data collection. Participants were informed of the objectives of the study. They were provided enough time to fill out the questionnaire.

Plan for Data Analysis:

Descriptive and inferential statistical techniques were applied.

• Demographic characteristics were analysed using frequency distribution and percentages.

• Scores on knowledge and practice were presented using mean and standard deviation.

• Relationships between variables were tested using the chi-square test.

• Correlation between scores on knowledge and practice was determined using the Pearson Correlation Coefficient.

6. Results and Interpretation

The majority of participants were between 18 – 20 years of age. Most students had heard about breast cancer through textbooks and social media.

Knowledge analysis revealed that 52.5% of participants had inadequate knowledge regarding Breast Self-Examination. Only 18.75% demonstrated adequate knowledge.

Practice analysis showed that 68.75% of students had never practiced BSE regularly. Common reasons included lack of confidence, lack of knowledge regarding correct technique, and fear of finding abnormalities.

A moderate positive correlation was observed between knowledge and practice scores, indicating that higher knowledge levels were associated with better BSE practices.

Table 1: Distribution of Participants According to Age (N = 80)

Category	Frequency	Percentage
Age 18-19	45	56.25%
Age 20-21	35	43.75%

Table 2: Distribution of Participants According to Knowledge Level

Category	Frequency	Percentage
Adequate	15	18.75%
Moderate	23	28.75%
Inadequate	42	52.5%

Table 3: Distribution of Participants According to Practice Level

Category	Frequency	Percentage
Regular Practice	25	31.25%
Never Practiced	55	68.75%

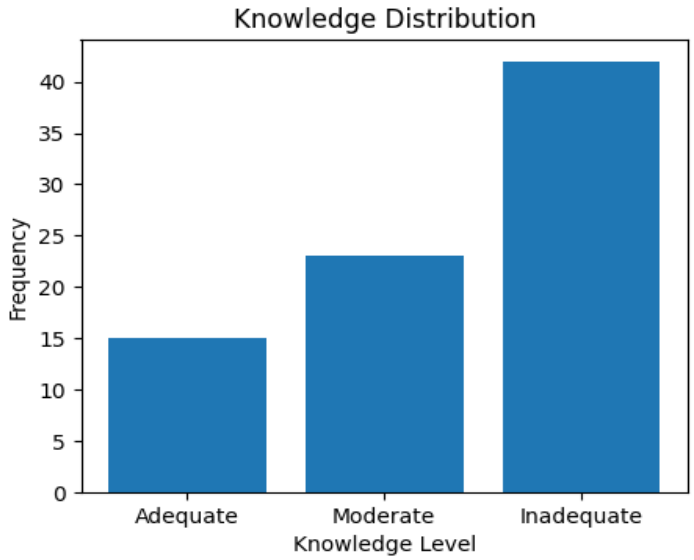

Fig. 1. Distribution of Knowledge

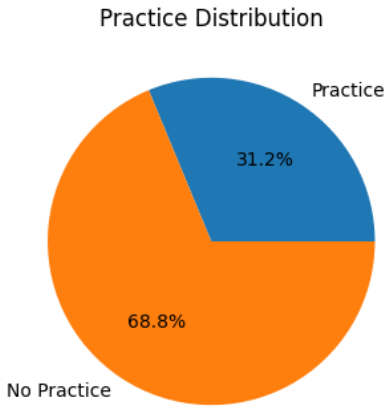

Fig. 2. Distribution of Practice

Common barriers identified by participants included:

- Lack of confidence
- Lack of practical knowledge
- Fear of finding abnormalities
- Uncertainty regarding the correct technique

Correlation Between Knowledge and Practice

A moderate positive correlation (r = 0.42) was observed between knowledge and practice scores. This finding indicates that students with higher knowledge levels were more likely to practice BSE regularly.

7. Discussion

This study explored the level of knowledge and practice of BSE among B.Sc. Nursing 1st year students at SCB College of Nursing, Cuttack, Odisha.

From the findings of the study, it can be deduced that a majority of the subjects had inadequate knowledge of BSE. This conclusion is consistent with the findings of Sachdeva et al. (2021), who observed low awareness about breast cancer screening practices among Indian women.

The study also found low practice levels of BSE among the participants. This conclusion is consistent with the findings of Paulsamy et al. (2021), where fear, embarrassment, and lack of confidence emerged as important barriers to BSE practice.

There was a moderately positive relationship between the knowledge and practice scores, suggesting that improved awareness could result in improved screening practice. The same relationships were reported by Chandani et al. (2020) and Mulyani

et al. (2021), both of which emphasized the importance of educational intervention and demonstration.

The current study highlights the gap between theoretical knowledge and practical skills among nursing students. Although nursing students may have some basic knowledge regarding breast cancer, they often lack confidence and the skill to perform self-examinations regularly.

Educational interventions such as workshops, simulation-based learning, peer education, and demonstration could significantly increase awareness and confidence levels among nursing students. Including preventive oncology education within the nursing curriculum would be useful for the improvement of screening practices.

8. Implications for Nursing

Education in Nursing:

The undergraduate curriculum in nursing education needs to include practical demonstrations as well as simulated training about Breast Self-Examination (BSE).

Practice in Nursing:

Nurses are encouraged to participate in active community outreach activities to encourage breast cancer screening among the people.

Administration in Nursing:

Nursing administrators must regularly conduct workshops, seminars, and awareness programs to improve preventive health education.

Research in Nursing:

More research is needed which uses larger samples and interventional designs to assess the effectiveness of structured teaching programs.

Limitations

- The study was limited to one nursing institution only.
- The sample used was rather small.
- There could be issues of generalizability due to the use of convenience sampling.
- Self-reports may have introduced response bias.
- The sample consisted of only first-year nursing students.

Recommendations

- Similar research needs to be conducted using larger samples.
- Interventions involving structured teaching programs are recommended.
- Comparisons can be made using different years of academic students.

• Studies related to community awareness can be done.
• Practical training on BSE needs to be included in undergraduate nursing education.

9. Conclusion

The study concluded that although first-year nursing students possessed baseline awareness regarding Breast Self-Examination, regular practice remained inadequate. A significant knowledge–practice gap exists among nursing students.

The findings emphasize the importance of structured educational interventions, practical demonstrations, workshops, and simulation-based learning programs to improve awareness and promote regular BSE practice among future healthcare professionals.

Strengthening preventive oncology education in nursing curricula can contribute significantly to early detection and reduction of breast cancer-related morbidity and mortality.

Conflict of Interest: *Authors are declared that there is no conflict of interest regarding this study.*

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