

## Knowledge, And Practice Among Undergraduate BS Nursing Students Regarding Breast Self-Examination Of Ayub College Of Nursing Abbottabad

Mr Abdullah<sup>1</sup>, Dr Sabiha Khanum<sup>2</sup>, Mr Imran Waheed<sup>3</sup>, Mr Waleed Iqbal<sup>1</sup>, Miss Arshi Zeb<sup>4</sup>, Miss Meerub Yousaf<sup>5</sup>, Mr Rafiullah<sup>2</sup>, Ms Shukria Saleem<sup>6</sup>

### Abstract

**Objective:** To assess the level of Knowledge, and Practice about Breast Self-Examination among BSC Nursing Student of Ayub College of Nursing Abbottabad.

Breast cancer is the most common cancer in female worldwide and its incidence is increasing in Pakistan in past decayed. Breast self-examination (BSE) is a simple and easy way early detection of breast cancer, which is highly recommended in young age started from age of 20 years. Once-a-month breast self-examination (BSE) is an extremely important for all women in every stage of life as a vital tool in the prevention of breast cancer. The purpose of this study was to determine the knowledge and practice of BSE among female students

A cross-sectional descriptive research design was used for collection of data. The accessible students in college of nursing Abbottabad. Data collection was done using a questionnaire, which consisted of three part: bibliographic characteristics, knowledge about BSE and practices of BSE. Data obtained was analyzed using SPSS.

The knowledge level of nursing students regarding SBE showed that majority had good knowledge. Result showed that respondents were knowledgeable about breast cancer early warning signs, symptoms, and BSE. About approximately 90% of the <sup>1</sup>respondents were aware of when to initiate BSE and 77.6% performed BSE, but their practice was not effective. More than 90% of the girls have age between 20-24 years old. All of the respondent were unmarried and 45.7% have family history of breast cancer. Most (87.4%) of the student study in college were student of 3<sup>rd</sup> and 4<sup>th</sup> years in college. Self-breast examination when standing in front of mirror, while bathing or lying down nearly third fourth of students knows this method of BSE. Breast cancer fear is common among students (80%) and increasing rate of breast cancer in

<sup>1</sup>Lecturer Ayub international college of nursing Peshawar

<sup>2</sup>Associate Professor Institute of Nursing Sciences (KMU) Peshawar. Email id:Sabiha.ins@kmu.edu.pk

<sup>3</sup>Demonstrator Institute of Nursing Sciences (KMU) Peshawar. Email: Imran.inskmu.edu.pk

<sup>1</sup>principal & Assistant professor Ayub international college of nursing Peshawar.email:mwalidkhan545@yahoo.com

<sup>4</sup>Lecturer Ayub international college of nursing Peshawar.

<sup>5</sup>Lecturer Ayub international college of nursing Peshawar.

<sup>2</sup>Managing Director Ayub international college of nursing Peshawar.

<sup>6</sup>Trainee Nurse in Khyber teaching Hospital Peshawar.

*Pakistan. Educational materials should be freely available at hospitals and nursing schools to enhance BSE awareness.*

**Key words:** *breast cancer, breast examination, self-breast examination.*

## **INTRODUCTION**

Worldwide, breast cancer is still a major public health concern. Premenopausal women and teens are the groups where it is most prevalent. In underdeveloped nations, breast self-examination, or BSE, is the most practical and successful way to find breast cancer early on.(1) Globally, there is a notable surge in the percentage and quantity of women who have breast cancer. An estimated one million women are expected to receive a breast cancer diagnosis each year, and over 410,000 of them will pass away. (2)The leading cause of mortality for women between the ages of 40 and 45 is breast cancer, which is the most frequent kind of organ cancer in women.(3) Since 90% of women with breast cancer may get treatment, early identification is the best method to keep the illness under control. Breast self-examination (BSE) is the most accessible method of breast cancer screening, which is the greatest method for early diagnosis of the disease. Health may support and enhance healthy objectives for their clients in addition to providing self-care.(4)

Globally, there is a broad range in the survival rate of people with breast cancer: it may be as high as 80% in North America, Sweden, and Japan; it can be as low as 40% in low-income nations and as high as 60% in middle-income ones. According to reports, women with breast cancer who were diagnosed early had a five-year survival rate of 85%, compared to 56% for those who were diagnosed late(5).It is evident that women do not have a good understanding of breast cancer, and if patients are to arrive at the hospital early, education and knowledge are needed.(6) The American Cancer Society did suggest BSE as a means of raising breast cancer awareness and assisting in its early identification(7).For the past 70 years, systematic breast self-examination (BSE) has been advocated, despite the absence of strong data supporting its effectiveness in lowering breast cancer-related mortality. There is no data to support the effectiveness of BSE screening. BSE, however, raises women's awareness of breast health. In the meantime, the only screening technique that has shown promise is mammography screening(8). The nature of the nurse-client connection affords possibilities for health education, and nurses play a significant role in promoting health. In order to establish successful health programs, like self-breast inspection, nursing students need to know as much as they can about women's health habits. Nursing practitioners may provide information or instruction in primary health care services if they are aware of the significance of doing BSE.

## **Methodology**

The study was conducted at Ayub College of Nursing, Abbottabad, with a descriptive cross-sectional design over a period of four months. The sample consisted of 80 BScN students, selected using a convenient sampling technique. Data collection was carried out using a pre-existing, adapted questionnaire. The collected data were then analyzed using the Statistical Package for Social Sciences (SPSS), version 22. A structured questionnaire was utilized to assess knowledge and practices related to breast self-examination (BSE), drawing from previous studies. The questionnaire included 15 items evaluating knowledge of BSE and breast cancer signs, and 7 items assessing BSE practices. Knowledge questions were answered using categorical responses (True/False/Don't know), while practice items were rated on a 5-point Likert scale (Never to Always). Scoring involved awarding 2 points for correct responses, 1 point for 'Don't know', and 0 points for incorrect answers on positive knowledge items, with reverse scoring applied to negative knowledge items. For practice items, points ranged from 0

for ‘Never’ to 4 for ‘Always’ on good practice items, with reverse scoring for poor practices. Total scores were calculated for each domain and classified into categories: adequate or inadequate knowledge, favorable or unfavorable attitude, and good or poor practice, using a 70% cut-off for each domain.(1) The study included only those BScN nursing students who were actively enrolled and studying at Ayub College of Nursing. Students who were either unwilling to participate or were absent due to long-term leave were excluded from the study. Ethical considerations were a priority in this study. All participants provided written informed consent, and the objectives and benefits of the study were clearly communicated to them. Participation was entirely voluntary, with no obligation to continue if a participant chose to withdraw at any point. To ensure the ethical principles of beneficence, autonomy, and confidentiality, participants were provided with written information outlining their participation rights and were assured of their ability to withdraw from the study at any time without any negative consequences. This approach helped to maintain the integrity of the study while respecting the autonomy and privacy of the participants.

## Results

### Demographic Information

Of the research participants, 24% were between the ages of 18 and 20, while the bulk (76%) were above 20. Ninety-six percent (92%) did not have any family history of breast cancer. whereas eight percent, or three percent, did. The majority of students—88%—enrolled in the fourth year, followed by 4% in the third, 6% in the sixth, and 2% in the last.

42.6% of survey participants were urban dwellers, while more than half (57.4%) resided in rural regions. Thirteen percent and eighty-seven percent, respectively, got information about BSE. Health care providers and the media as a whole provide the majority of the information. Table One

**Table 1 Demographic details**

| Demographic details                 | Total (n=80) | %    |
|-------------------------------------|--------------|------|
| <b>Age groups</b>                   |              |      |
| 18 to 20                            | 19           | 24   |
| Above 20                            | 61           | 76   |
| <b>Breast cancer Family history</b> |              |      |
| Yes                                 | 6            | 8    |
| No                                  | 74           | 92   |
| <b>Education Level</b>              |              |      |
| Third year                          | 3            | 4    |
| Fourth year                         | 70           | 88   |
| Sixth year                          | 5            | 6    |
| Final year                          | 2            | 2    |
| <b>Marital Status</b>               |              |      |
| Single                              | 22           | 28   |
| Married                             | 58           | 72   |
| <b>Source of information</b>        |              |      |
| Book                                | 22           | 28.0 |

|  |    |      |
|--|----|------|
| Book, Hospital                             | 2  | 2.0  |
| Book, Media, Hospital                      | 2  | 2.0  |
| Book, Media, Hospital, Seminar             | 3  | 4.0  |
| Book, Media, Hospital, Seminar,<br>friends | 3  | 4.0  |
| Book, Seminar                              | 3  | 4.0  |
| friends                                    | 2  | 2.0  |
| Hospital                                   | 22 | 28.0 |
| Media                                      | 5  | 6.0  |
| Media, Hospital                            | 2  | 2.0  |
| Media, Hospital, Seminar                   | 2  | 4.0  |
| Seminar                                    | 11 | 14.0 |
| Book, Hospital                             | 1  | 2.0  |

Table 01

### Knowledge regarding the breast Self-Examination

Responses concerning the age at which breast cancer began, categorized into three age groups: "From 30 years," "From 20 years," and "From puberty." The data shows that 8.0% of respondents reported the onset at 30 years, while 42.0% indicated it began at 20 years. The largest group, 50.0%, stated that the Breast cancer started from puberty. The cumulative percentages demonstrate that 50.0% of respondents experienced the onset by 20 years, and all participants fell within these three age categories, with no missing data, confirming a complete response rate. Table 1.2

|              | Percent | Valid Percent | Cumulative Percent |
|--------------|---------|---------------|--------------------|
| From 30years | 8.0     | 8.0           | 8.0                |
| From 20years | 42.0    | 42.0          | 50.0               |
| From puberty | 50.0    | 50.0          | 100.0              |
| Total        | 100.0   | 100.0         |                    |

Table 1.2

### Knowledge and practices of BSE

Students were asked a variety of questions in this part on their knowledge and experience with breast self-examination. In terms of self-breast inspection, 86% of respondents state they check their breasts once a month for signs and symptoms. 10% think that the week following a period is the ideal time. Table 1.3

|  | Perc<br>ent | Valid<br>Percent | Cumulative<br>Percent |
|--|-------------|------------------|-----------------------|
|--|-------------|------------------|-----------------------|

|       |         |       |       |       |
|-------|---------|-------|-------|-------|
| Valid | Daily   | 4.0   | 4.0   | 4.0   |
|       | Monthly | 86.0  | 86.0  | 90.0  |
|       | Weekly  | 10.0  | 10.0  | 100.0 |
|       | Total   | 100.0 | 100.0 |       |

Table 1.3

### Level of practice towards BSE

Nearly one-third of the students reported learning the proper technique for BSE and receiving instruction from the school's medical personnel, while more than half of the students routinely conducted BSE. Most of the participants said they spoke to their peers about the importance of BSE. More than 90% of students who detect any irregularities go to the doctor. But two-thirds of the students never told their parents about BSE, and just one-third of them never told their peers about it. Table 2 indicates that one-third of the pupils did not regularly conduct BSE. Table 1.4

| S.No | Items   | Always | Never | Sometimes | Often | Rarely |
|------|---|--------|-------|-----------|-------|--------|
| 1    | Breast self-examination should been done every 2 month.   | 62%    | 4%    | 8%        | 20%   | 6%     |
| 2    | Palpate on the right breast while left sided lying when doing the BSE (BREAST SELF-EXAMINATION)   | 62%    | 10%   | 12%       | 12%   | 4%     |
| 3    | Need to press on the nipple to check any unusual discharge  | 62%    | 11%   | 11%       | 12%   | 4%     |
| 4    | Self-breast examination should be done only if you feel abnormal around your breast               | 40%    | 32%   | 12%       | 10%   | 6%     |
| 5    | Posture for self-breast examination are standing in front of mirror, while bathing or lying down. | 68%    | 12%   | 10%       | 8%    | 2%     |

Table 1.4

### Discussion

It is imperative that women are aware of breast cancer since it affects them more often than any other kind of cancer. Evaluating female nursing students' BSE knowledge, attitudes, and behaviors is crucial and recommended for those who will eventually work in the healthcare industry. Breast self-examination is an easy, affordable, and useful practice. Surprisingly, BSE can increase women's awareness of breast cancer, encourage the adoption of preventive health practices, and strengthen their sense of personal accountability for their own health.(20) According to this survey, health care providers provide the majority of the information, followed by the mass media, radio, and newspapers. According to the study, the media was the

main source of knowledge on breast cancer and breast self-examination, followed by pamphlets, friends, physicians, and nurses. According to a different survey, female students at Namk Kemal University in Turkey mostly learned about breast cancer and BSE from radio and television. Similar research also showed that over half of the students' primary sources of information on BSE and breast cancer came from the media. However, other studies indicated that literacy was strongly linked to a greater understanding of breast cancer and that literate women were far more likely to perform breast self-exams.(21) this study found that participants had generally good understanding. The results of this survey showed that although 87% of students knew about BSE, fewer than half of them regularly practiced it. This result is consistent with another study that found that 97% of participants had heard of breast cancer, but only 26% had actually practiced breast self-examination (BSE). Another study that found that 97% of participants had heard of BSE but only 36.7% had actually practiced it among them also supports this finding. The low level of knowledge found in this study is in keeping with reports of other investigators (22–24). In a survey of breast cancer knowledge, Uche (24) noted that only 32% of the respondents knew that a breast lump was a warning sign for breast cancer, 58.5% were unaware of most warning signs and only 9.8% knew of methods of detecting breast cancer. According to our research, only 21.4% of women who lived in the community knew that a painless breast lump was a common sign of breast cancer. Even fewer of these women could recognize symptoms of breast cancer that did not involve a lump, and only 43.2% were aware that BSE could be used as a screening tool for the disease. About 4% of participants in the present research said they had family members who had breast cancer. Additional research revealed 9.8% and 9.8%, respectively (30-31). The study (30), which found that most participants had a good attitude about BSE, supports the majority of study participants' positive sentiments of breast cancer education and screening. While 42.8% of respondents thought it was necessary to perform a breast self-examination, the results of another research (32) showed that the majority of respondents (98.5%) thought BSE was vital.

### **Conclusion**

The majority of students were aware of BSE's purpose and definition, and their positive views of the technology were heartening. Over 50% of the participants engage in it on a regular basis. They could hinder screening initiatives and obstruct early breast cancer identification. Therefore, in order to monitor nursing students' current level of BSE and breast cancer knowledge, more comprehensive awareness efforts are needed.(25)

### **Recommendation**

The study's findings suggest that female nursing students should be made aware of the importance of BSE in order to enhance its use. Furthermore, health care professionals should promote BSE whenever they deal with female customers and use the media to educate the public about its importance. To effectively promote breast cancer control through early diagnosis, nurses and nursing students need to have the necessary understanding of the illness and its early identification, as well as the suitable attitude and practice. In order to set an example for the community, nurses should adopt preventative screening procedures. The practical implications encompass pinpointing hurdles that are unique to a given culture and enhancing health education initiatives to encourage the use of breast self-examination.

### **Application in nursing practices**

By raising awareness of BSE, the Health Beliefs Model can aid in the early diagnosis of breast cancer. Women should thus be encouraged to self-monitor their breasts in order to spot anomalies. It takes effective educational initiatives to provide women the ability to engage in everyday BSE.

### Application in nursing Education

Women in impoverished countries often seek medical attention for cancer after it has progressed to an advanced stage. There might be a few reasons why this practice is being delayed: The most common excuses given for not paying attention to screening measures are ignorance of the necessity of the procedures and lack of awareness of their value.

### Limitations of the study

This study has several limitations, including the use of a convenient sampling technique, which may introduce bias and limit the generalizability of the findings. The small sample size of 80 BScN students, drawn from a single institution (Ayub College of Nursing, Abbottabad), further restricts the applicability of the results to other settings. Additionally, reliance on self-reported data through a questionnaire may lead to response bias, and the exclusion of students unwilling to participate or those on long leave may result in a non-representative sample. The short study duration of four months may not capture long-term trends, and despite efforts to ensure informed consent, ethical concerns regarding potential participant coercion remain, particularly in an educational setting.

### References

1. Polishwala S, Patankar S. The Assessment and Comparison of the Knowledge of Breast Self-Examination and Breast Carcinoma Among Health Care Workers and the General Population in an Urban Setting. *Cureus*. 2023;15(3).
2. Gupta R, Gupta S, Mehrotra R, Sodhani P. Risk factors of breast cancer and breast self-examination in early detection: systematic review of awareness among Indian women in community and health care professionals. *J Public Health*. 2020;42(1):118–31.
3. Huang J, Chan PS, Lok V, Chen X, Ding H, Jin Y, et al. Global incidence and mortality of breast cancer: a trend analysis. *Aging*. 2021;13(4):5748.
4. Zheng G, Hemminki A, Försti A, Sundquist J, Sundquist K, Hemminki K. Second primary cancer after female breast cancer: Familial risks and cause of death. *Cancer Med*. 2019;8(1):400–7.
5. Shang C, Xu D. Epidemiology of Breast Cancer. *Oncologie*. 2022;24(4).
6. Lennon J. Patients who decide to forgo Breast Cancer Treatment: Perspectives and Experiences of Cancer Professionals. 2023;
7. Pashayan N, Antoniou AC, Ivanus U, Esserman LJ, Easton DF, French D, et al. Personalized early detection and prevention of breast cancer: ENVISION consensus statement. *Nat Rev Clin Oncol*. 2020;17(11):687–705.
8. Mandrik O, Zielonke N, Meheus F, Severens J, Guha N, Herrero Acosta R, et al. Systematic reviews as a ‘lens of evidence’: determinants of benefits and harms of breast cancer screening. *Int J Cancer*. 2019;145(4):994–1006.
9. Barba D, León-Sosa A, Lugo P, Suquillo D, Torres F, Surre F, et al. Breast cancer, screening and diagnostic tools: All you need to know. *Crit Rev Oncol Hematol*. 2021;157:103174.
10. Udoh RH, Tahiru M, Ansu-Mensah M, Bawontuo V, Danquah FI, Kuupiel D. Women’s knowledge, attitude, and practice of breast self-examination in sub-Saharan Africa: a scoping review. *Arch Public Health*. 2020;78(1):1–10.
11. Rahman SA, Al-Marzouki A, Otim M, Khayat NEHK, Yousef R, Rahman P. Awareness about breast cancer and breast self-examination among female students at the University of Sharjah: a cross-sectional study. *Asian Pac J Cancer Prev APJCP*. 2019;20(6):1901.
12. Kalliguddi S, Sharma S, Gore CA. Knowledge, attitude, and practice of breast self-examination amongst female IT professionals in Silicon Valley of India. *J Fam Med Prim Care*. 2019;8(2):568.
13. Maallah M, Needle JJ, Alwan N. Barriers Impeding Early Detection of Breast Cancer in Iraq: A Critical Analysis. *Azerbaijan Med J*. 2022;62(07):2845–63.
14. Daly AA, Rolph R, Cutress RI, Copson ER. A review of modifiable risk factors in young women for the prevention of breast cancer. *Breast Cancer Targets Ther*. 2021;241–57.

15. Putri DMA. Association between Knowledge and Practice of Breast Self-examination (BSE) for Raising Awareness in Women about Breast Cancer: A Literature Review. *KnE Life Sci.* 2021;380–90.
16. Davidson KW, Kemper AR, Doubeni CA, Tseng CW, Simon MA, Kubik M, et al. Developing primary care-based recommendations for social determinants of health: methods of the US Preventive Services Task Force. *Ann Intern Med.* 2020;173(6):461–7.
17. Arbyn M, Weiderpass E, Bruni L, de Sanjosé S, Saraiya M, Ferlay J, et al. Estimates of incidence and mortality of cervical cancer in 2018: a worldwide analysis. *Lancet Glob Health.* 2020;8(2):e191–203.
18. Alagizy H, Soltan M, Soliman S, Hegazy N, Gohar S. Anxiety, depression and perceived stress among breast cancer patients: single institute experience. *Middle East Curr Psychiatry.* 2020;27(1):1–10.
19. Atrooz F, Aljararwah SM, Acquati C, Khabour OF, Salim S. Breast Cancer Beliefs and Screening Practices among Syrian Refugee Women and Jordanian Women. *Int J Environ Res Public Health.* 2023;20(4):3645.
20. O. Odusanya OOT Olumuyiwa. Breast cancer knowledge, attitudes and practice among nurses in Lagos, Nigeria. *Acta Oncol.* 2001;40(7):844–8.
21. Odusanya O, Fmcph. Breast cancer: knowledge, attitudes, and practices of female schoolteachers in Lagos, Nigeria. *Breast J.* 2001;7(3):171–5.
22. Uche E. Cancer awareness among a Nigerian population. *Trop Doct.* 1999;29(1):39–40.
23. Winters S, Martin C, Murphy D, Shokar NK. Chapter One - Breast Cancer Epidemiology, Prevention, and Screening. In: Lakshmanaswamy R, editor. *Progress in Molecular Biology and Translational Science* [Internet]. Academic Press; 2017. p. 1–32. Available from: <https://www.sciencedirect.com/science/article/pii/S1877117317301126>
24. Albeshan SM, Hossain SZ, Mackey MG, Brennan PC. Can breast self-examination and clinical breast examination along with increasing breast awareness facilitate earlier detection of breast cancer in populations with advanced stages at diagnosis? *Clin Breast Cancer.* 2020;20(3):194–200.
25. De Bock G, Bonnema J, van Der Hage J, Kievit J, Van de Velde C. Effectiveness of routine visits and routine tests in detecting isolated locoregional recurrences after treatment for early-stage invasive breast cancer: a meta-analysis and systematic review. *J Clin Oncol.* 2004;22(19):4010–8.
26. Kashyap D, Pal D, Sharma R, Garg VK, Goel N, Koundal D, et al. Global increase in breast cancer incidence: risk factors and preventive measures. *BioMed Res Int.* 2022;2022.
27. Lennon J. Patients who decide to forgo Breast Cancer Treatment: Perspectives and Experiences of Cancer Professionals. 2023;
1. Jadhav BN, Abdul Azeez E, Mathew M, Senthil Kumar A, Snegha M, Yuvashree G, 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. *BMC Women's Health.* 2024;24(1):151.