# Knowledge Regarding Breast Self-Examination Among Reproductive Age Women

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## Abstract

**Introduction:** Breast cancer (BC) is the most common cancer and the fourth-leading cause of cancer mortality worldwide. Breast self-examination (BSE) plays an important role in the early detection of breast cancer. In developing countries like Nepal, breast cancer is diagnosed at late stages due to inadequate knowledge. Thus, this study assessed the knowledge regarding BSE among reproductive-age women.

**Method:** Descriptive cross-sectional study among 100 reproductive-age women of Khairahani Municipality, Chitwan. A purposive sampling technique was used to select the sample and a face-to-face interview was conducted using a structured interview schedule to collect information related to the knowledge of BSE. Descriptive and inferential statistical analysis was done using SPSS version 22.

**Results:** The mean age was 32.45 years and 82% were married. Likewise, 40% of women had completed primary and 35% secondary level education. Nearly half (47%) of women were homemakers and 13% had a family history of breast cancer. Out of 100 women, 72% knew the meaning and 96% knew the purpose of BSE. However, 21% of women knew the appropriate timing to perform BSE and only 20% technique of perming BSE. The majority of women had poor (48%) to moderate (36%) levels of knowledge and only (16%) had a good level of knowledge regarding BSE.

**Conclusion:** The knowledge regarding BSE among reproductive-age women was found poor to moderate level. Whereas, they had good knowledge on purposes and observation during procedure but had poor level of knowledge on appropriate timing and technique of BSE.

**Keywords:** Knowledge, Breast Self-Examination, Reproductive Age Women

## Introduciton

Female breast cancer is the second-leading cancer and fourth-leading cause of cancer mortality worldwide.[1] In Nepal, breast cancer is the second most common cancer among women after cancer of the cervix.[2] Breast Cancer is

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curable if detected in the early stage. Around 60% of breast cancers are diagnosed and treated as early-stage.[3] Breast Self-Examination (BSE) is still considered an effective method for the early detection of breast cancer in developing countries like Nepal. [4] The method involves the woman looking at and assessing each breast for possible lumps, distortions, or swelling.[5] Knowledge of BSE plays an important role in the early detection of breast cancer. [6, 7]

Previous studies revealed various levels of knowledge on BSE among women. Fifty-six percentage in Northwest Ethiopia, 8 South East Nigeria 38.9% 9 and India 59.43% of women had adequate knowledge of BSE respectively.[8-10] In Nepal in Dhanusha (94.2%) of women Butwal sub-metropolitan city (85.5%) and Pokhara (67.6%) of women had inadequate knowledge on BSE. [11-13] This study aimed to assess the knowledge regarding BSE among reproductive-age women in Khairani Municipality Chitwan, Nepal.

## Methods

A descriptive cross-sectional study design was used to assess the knowledge regarding BSE among 100 reproductive-age women between 21 and 49 years of age. The study was conducted in Khairahani Municipality-8 of Chitwan District in March 2022. Ethical clearance was obtained from the Institutional Review Committee of B.P. Koirala Memorial Cancer Hospital (BPKMCH). A purposive sampling technique was used to select the sample. Women's knowledge was measured by a self-developed structured interview schedule having information in terms of meaning, purpose, appropriate time, technique, and observation during BSE. The instrument was constructed in English and translated into the Nepali language by reviewing previous studies and consulting subject experts. The instrument was pretested in 10 women. Verbal informed consent was obtained from each respondent. All gathered data were coded, organized, and entered into the Statistical Package for Social Sciences (IBM SPSS) version 22, then analyzed using descriptive statistics. Each correct answer was given a score of 1, and incorrect answers received a score of 0. The overall score was converted into a percentage, and the level of knowledge was classified into three categories based on Bloom's cut of points: good knowledge (>80%), moderate knowledge (60-80%), and poor knowledge (<60%).

## Results

This study was conducted to identify knowledge regarding breast self-examination among reproductive-age women. Altogether 100 women were included in the study.

**Table 1** reveals the socio-demographic characteristics. Out of 100 reproductive-age women, the mean age was 32.45 years, and 82% were married. Regarding educational status, 40% of women had completed primary and 35% secondary level. Nearly half (47%) of women were homemakers. Similarly, 13% had a family history of breast cancer. Regarding the source of

knowledge, the majority (82%) of women gained from social media followed by peer groups 80% and only 15% had received knowledge from health personnel.

Table 1: Sociodemographic Characteristics of the Women (n=100)

| Variables | Number | Percentage |
|---|---|---|
| **Age group** | | |
| < 30 | 41 | 41.0 |
| 31- 40 | 41 | 41.0 |
| ≥ 41 | 18 | 18.0 |
| **Marital Status** | | |
| Unmarried | 18 | 18.0 |
| Married | 82 | 82.0 |
| ***Mean 32.45 years*** | | |
| **Ethnicity** | | |
| Brahmin/Chhetri | 43 | 43.0 |
| Janajati | 27 | 27.0 |
| Dalit | 16 | 16.0 |
| Muslim | 7 | 7.0 |
| Madhesi | 7 | 7.0 |
| **Education Level** | | |
| Illiterate | 13 | 13.0 |
| Primary level | 40 | 40.0 |
| Secondary level | 35 | 35.0 |
| Bachelor and above | 12 | 12.0 |
| **Occupation** | | |
| Agriculture | 10 | 10.0 |
| Home maker | 47 | 47.0 |
| Business | 23 | 3.0 |
| Others | 14 | 14.0 |
| **Family history of breast cancer** | | |
| Yes | 13 | 13.0 |
| No | 87 | 87.0 |
| **Sources of Knowledge** | | |
| TV/Radio | 49 | 49.0 |
| Social media | 82 | 82.0 |
| Peer group | 80 | 80.0 |
| Health personnel | 15 | 15.0 |

**Table 2** represents women's knowledge of BSE, almost three-fourths (72%) of the women knew the meaning of BSE as an examination of their breasts to check for any abnormalities. Less than half (46%) of the women stated that breast self-examination is the method of diagnosing breast cancer in the early stage. Likewise, the majority (96%) of women correctly answered the purpose of BSE is to identify breast lumps, followed by 79% discharge from the breast and 62% abnormalities of the breast. Out of 100 women, only 32% knew the appropriate age to start BSE, whereas, 86% of women knew BSE also needs to do after menopause. However, only 21% of the women answered that the appropriate time to perform BSE is 7- 10 days after menstruation. Out of 100 women, only 20% knew the palpation of the breast in a circular motion using three middle finger pads. A similar percentage of women also knew the direction of palpation. The majority (97%) of women knew to observe for enlarged breast lumps, followed by 87% changes in shape and size, 78%, abnormal discharge.

**Table 3** shows the level of knowledge of reproductive-age women. Only 16% of women had a good level of knowledge, whereas, 36% had a moderate level and 48% had a poor level regarding BSE.

Table 3: Levels of Knowledge Regarding Breast Self-Examination (n=100)

| Level of Knowledge | Number | Percentage |
|---|---|---|
| Poor | 48 | 48.0 |
| Moderate | 36 | 36.0 |
| Good | 16 | 16.0 |

## Discussion

This study reveals knowledge regarding breast self-examination among reproductive-age women. Out of 100 women, the mean age was 32.45 years. Regarding education, 40% of women had completed the primary level, 35% had completed the secondary level, and only 13% were illiterate. Nearly half (47%) of women were homemakers, followed by 23% of businesses.

Table 2: Women's Knowledge on Breast Self-Examination (n=100)

| **Knowledge Variable** | **Correct Response** | |
|---|---|---|
| **Meaning of BSE** | **Number** | **Percentage** |
| Examination of own breast to find out any abnormalities | 76 | 76.0 |
| BSE is the method of diagnosing breast cancer | 46 | 46.0 |
| **Purposes of BSE** | | |
| To find out any abnormalities of breast | 62 | 62.0 |
| To find out discharges from the breast | 79 | 79.0 |
| To identify breast lump | 96 | 96.0 |
| **Appropriate Time for BSE** | | |
| Appropriate age to start BSE is 20 years | 32 | 32.0 |
| Performs BSE once a month | 34 | 34.0 |
| The appropriate time to perform BSE is 7- 10 days after menstruation | 21 | 21.0 |
| BSE also needs to be performed after menopause also | 86 | 86.0 |
| **Technique of BSE** | | |
| Three middle finger pads are used to palpate the breast in a circular motion | 20 | 20.0 |
| The direction of palpation is from the outer edge of the breast towards the nipple | 20 | 20.0 |
| **Observation during BSE** | | |
| Changes in shape and size of breast | 87 | 87.0 |
| Abnormal discharge from the nipple | 78 | 78.0 |
| Enlarged breast lump | 97 | 97.0 |

Eighty-two percent of women stated that their main source of knowledge on BSE was social media, followed by peer groups (80%), and only 15% had received knowledge from health personnel. This finding was consistent with the study conducted in Wolaita Sodo, Ethiopia, which showed that the majority (62%) of the participants had gained information from social media, and only 14.7% gained information from health personnel.[14] Another study conducted by Shrestha, Chhetri, and Napit showed incongruous findings with the present study in which the majority (60%) of the respondents stated that health workers were the main source of information about BSE.[15]

The present study reveals that a majority (72%) of the women knew the meaning of BSE, and 46% had knowledge that BSE is the method of diagnosing breast cancer in the early stage. However, the findings were inconsistent with Prakash, Khadka, Silwal, and Chandra, which showed that only 40% of respondents knew the meaning of BSE.[11] Almost all (96%) of women answered correctly that the purpose of BSE was to detect breast

lumps, followed by 79% discharge from the breast, 62% abnormalities, and 46% finding breast cancer in an early stage. This finding is supported by the findings of Shrestha, Chhetri, and Napit, which showed that the majority (72%) of respondents knew the purpose of BSE was to check for abnormalities, followed by 66% to detect breast lumps. [15]

Regarding the appropriate time for BSE, out of 100 women, only 32% knew the age to start BSE was 20. Likewise, 34% knew that BSE is done once a month, and only 21% of the women knew the appropriate timing to perform BSE was 7-10 days after menstruation. But, the majority (86%) of women knew that the BSE needed to continue after menopause as well. This finding is inconsistent with the study conducted by Shrestha, Chhetri, and Napit, which revealed that the majority (74%) of respondents knew the starting age, timing, and frequency of BSE.· [15] The present study shows only 20% of women knew the technique of palpating the breast in a circular motion using three middle finger pads, and a similar percentage of women also knew the direction of palpation was from the outer edge of the breast towards the nipple. This finding was inconsistent with the study conducted among female adolescents in Dhanusha, Nepal, which showed that the majority (66.7%) of participants had knowledge of palpation of the breast in a circular motion and 40% had knowledge of the three middle fingers used to palpate the breast. [11]

The current study revealed that the majority (97%) of women knew observing for an enlarged breast lump, followed by (87%) changes in shape and size and (78%) abnormal discharge from the nipple. This finding was inconsistent with the study conducted among female adolescents in Dhanusha, Nepal, where 59% of respondents observed breast lumps, 54% observed any changes in shape and size, and 93% observed any abnormal discharge from the nipple. [11]

This study found that almost half of the women (48%) had a poor level of knowledge, 36% had a moderate level, and only 16% had a good level. This finding was supported by the findings of Giri and Paudel, which showed only 14.5% of women had adequate knowledge of BSE. [16] A similar finding was also found in the study conducted by Prakash, Khadka, Silwal, and Chandra among female adolescents in Dhanusha, Nepal, which showed that the majority (94.2%) of respondents had a poor level of knowledge, and only 5.8% had a moderate level. [11] Likewise, another study conducted by Koirala, Silwal, Pokhrel, and Adhikari in Pokhara among Female Community Health Volunteers (FCHV) also had similar findings, where around two-thirds (67.6%) had an inadequate level of awareness. [17]

## Conclusion

The knowledge regarding BSE among the reproductive age women is found to be poor to moderate in level. Whereas, they had good knowledge on purposes and observation during procedure but had poor level of knowledge on appropriate timing and technique of BSE. So awareness program for breast

cancer screening is essential in community setting.

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**References**

1. Bray F, Laversanne M, Sung H, Ferlay J, Siegel RL, Soerjomataram I, Jemal A. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA: a cancer journal for clinicians. 2024 May; 74(3):229-63. https://acsjournals.onlinelibrary.wiley.com/doi/pdf/10.3322/caac.21834

2. Pun CB, Pradhananga KK, Siwakoti B, Subedi K, and Moore MA. Malignant neoplasm burden in Nepal- Data from the seven major cancer service hospitals for 012. Asian Pac J Cancer Prev. 2015; 16: 8659-63. DOI: http://dx.doi.org/10.7314/APJCP.2015.16.18.8659

3. WHO. who-launches-new-roadmap-on-breast- cancer. Retrieved from https://www.who.int/news/item/03-02-2023

4. Sathian B, Nagaraja SB, Banerjee I, Sreedharan J, De A, Roy B, Rajesh E, Senthilkumaran S, Hussain SA, Menezes RG. Awareness of breast cancer warning signs and screening methods among female residents of Pokhara valley, Nepal. Asian Pacific journal of cancer prevention. 2014;15(11):4723-6. DOI: http://dx.doi.org/10.7314/APJCP.2014.15.11.4723

5. National breast cancer foundation. Breast self-exam. 2024, Retrieved from: https://www.nationalbreastcancer.org/breast-self-exam

6. Sathian B, Asim M, Mekkodathil A, James S, Mancha A, Ghosh A. Knowledge regarding breast self-examination among the women in Nepal: a meta-analysis. Nepal journal of epidemiology. 2019 Jun;9(2):761. doi: 10.3126/nje.v9i2.24684

7. Giri M, Puri A, Upreti B. Current status of breast cancer in Nepal. Int J Res Med Sci. 2019 Jun;7(6):2463-69. DOI: http://dx.doi.org/10.18203/2320-6012.ijrms20192547

8. Asmare K, Birhanu Y, Wako Z. Knowledge, attitude, practice towards breast self-examination and associated factors among women in Gondar town, Northwest Ethiopia, 2021: a community-based study. BMC Women's Health. 2022 May 14;22(1):174. https://doi.org/10.1186/s12905-022-01764-4

9. Obaji NC, Elom HA, Agwu UM, Nwigwe CG, Ezeonu PO, Umeora OU. Awareness and practice of breast self. Examination among market women in Abakaliki, South East Nigeria. Annals of medical and health sciences research. 2013 Apr 23;3(1):7-12. Retrieved from: https://www.ajol.info/index.php/amhsr/article/view/87713

10. Gore S, Yelake V, Dudhe M. Knowledge and practice of breast self-examination among women in Yavataml, India, a cross-sectional study. Asian Pacific Journal of Cancer Care. 2022 Mar 13;7(1):61-4. DOI: 10.31557/APJCC.2022.7.1.61 Retrieved from: https://www.waocp.com/journal/index.php/apjcc/article/view/546/1936

11. Prakash P, Khadka S, Silwal M, Chandra A. Assessment of knowledge on breast self-examination among female adolescent: a cross-sectional study. Clinical Journal of Obstetrics and Gynecology. 2022 Mar 23;5(1):036-41. DOI: 10.29328/journal.cjog.1001104 https://www.obstetricgynecoljournal.com/articles/cjog-aid1104.php

12. Marahatta SB, Sharma S. Knowledge and practice of breast self-examination among women of reproductive age in Butwal Sub Metropolitan City. Journal of Manmohan Memorial Institute of Health Sciences. 2018 Sep 22;4(1):117-29. Retrieved from https://nepjol.info/index.php/JMMIHS/issue/view/1510

13. Koirala D, Silwal M, Pokhrel S, Adhikari R. Awareness of Breast Self-Examination among Female Community Health Volunteers of Pokhara. DOI: 10.33314/jnhrc.v20i4.4341 Retrieved from http://103.69.126.140/bitstream/20.500.14356/2306/1/4341-Manuscript-32177-1-10-20230720.pdf

14. Lera TA, Beyene A, Bekele B, Abreha S. Breast self-examination and associated factors among women in Wolaita sodo city, Ethiopia: Community based cross sectional study. doi: 10.1186/s12905-020-01042-1 Retrieved from https://www.researchsquare.com/article/rs-5632/v2

15. Shrestha S, Chhetri S, Napit J. Awareness on breast self-examination among reproductive age women. Journal of College of Medical Sciences-Nepal. 2017 Dec 20;13(4):425-9 DOI: http://dx.doi.org/10.3126/jcmsn.v13i4.1873 Retrieved from https://pdfs.semanticscholar.org/fd33/6cd179a5e13038569455ed4933a9e78af1f7.pdf

16. Giri R, Poudel M. Knowledge and practice of breast self-examination among female patients attending general outpatients in BPKIHS. International Journal of Research in Medical Sciences. 2023 Mar;11(3):1. DOI: https://dx.doi.org/10.18203/2320-6012.ijrms20230296

17. Thapa K, Rai G, Shrestha M, Pokharel N. Knowledge and Practice of Breast Self-Examination among Female Community Health Volunteers in Dharan Sub-Metropolitan City, Province No. 1, Nepal. Journal of BP Koirala Institute of Health Sciences. 2022 Dec 31;5(2):10-5. Retrieved from https://www.nepjol.info/index.php/jbpkihs/article/view/44376