Knowledge and practice of breast self-examination among undergraduate students in Bahir Dar University, North-West Ethiopia, 2016: A cross-sectional study

Tilahun Tewabe, Zelalem Mekuria
Bahir Dar University, College of Medicine and Health Science, Bahir Dar, Ethiopia

Abstract

Breast cancer is the second most often occurring cancer among women in Ethiopia. It is estimated that around 10,000 Ethiopian women and men have breast cancer with thousands of more cases unreported as women living in rural areas often seek treatment from traditional healers before seeking help. Women who practice breast self-examination regularly present with smaller tumor and earlier stages of disease. It is estimated that only minority of women (25 to 30%) perform breast self-examination each month.

The objective of this study was to assess the knowledge and practice of breast self-examination (BSE) among health science regular female undergraduate students in Bahir Dar University, Ethiopia.

Materials and Methods

An institution based quantitative cross-sectional study was conducted from April 10 to May 10, 2016. The study was conducted in Bahir Dar University among colleges of health science regular female undergraduate students. Bahir Dar University is located in Bahir Dar town which is located in North West of Ethiopia 565km away from Addis Ababa, capital city of Ethiopia. The University has four colleges, three institutes, three faculties and five schools. The study was conducted among 459 regular female students in college of health sciences.

The sample size was calculated using a single population proportion formula by considering the following assumptions: proportion of breast self-examination = 50%, level of confidence = 95%, margin of error = 5% and after applying correction formula the final sample size was 222.

Data was collected using structured self-administered semi structured questionnaire. The questionnaire was constructed by adopting from previous research done on similar topic and modified accordingly. The data was collected by two third year mid-wifery and two third year nursing students. One day training was given for data collectors. Pretest was done on regular extension female students before the actual data collection started on 5% of sample size. Necessary modification like appropriate wording of questions was taken based on the finding of the pretest.

Operational definition

Knowledge of breast self-examination: was measured by considering those who answered 70% and above of BSE questions as knowledgeable, and those who got <70% non-knowledgeable.

Practice of BSE: defined as performing of BSE at regular and the same time each month using proper technique which is evi-
enced by the result of questionnaire.

Regular BSE: when BSE is performed each month at the same time after some days of menstrual cycle

Occasional BSE: when BSE is 1 to 3 times a year or every 3 months (irregularly at any time).

Clinical breast self-examination: when an experienced health worker examines breasts Statistical Analysis.

The collected data was checked manually for completeness and consistencies, and then it was coded and entered in EPI Info version 3.5.3 and exported to SPSS version 16 for analysis. Descriptive statistics was used to summarize the socio demographic characteristics of the study participants, knowledge and practice of students regarding to breast self-examination.

Results
Socio demographic characteristics

Majority of study participants were single 197 (88.7%) and most of them 174 (78.4%) were orthodox Christian in religion. The age of participants was between 18-40 years and most of our respondents age group is between 18-23 years of age 192 (86.5%). Regarding to ethnicity 134 (60.4%) were Amhara, 37(16.7%) Oromo, 27 (12.2%) Tigre and 10 (4.5%) were Gurage.

Knowledge of participants about BSE

From a total of 222 respondents 190 (85.6%) heard about breast self-examination. Among those who heard BSE, 162 (85.3%) had good knowledge about risk factor of breast cancer and 28 (14.7%) had poor knowledge about risk factor of breast cancer. About 143 (75.3%) of the participants had good knowledge about sign and symptoms of breast cancer. Participant’s level of information on breast self-examination: most of the participants (85.6%) heard about BSE. The awareness level of BSE among students was quite high (80.3%). Most students got first information about BSE: through lecture (53.2%), mass media (22.1%), and from health personnel (18.4%). Regarding participants knowledge on techniques of BSE: 47 (22.1%) said circular technique is the correct one, 24 (12.6%) respond wedge technique (dividing breasts in to quadrants), 9 vertical strip technique and 78 (41.1%) agreed on all techniques (Table 1).

Practice of participants about BSE

From total respondents, 120 (54.1%) performed breast self-examination whereas 102 (45.9%) had never performed breast self-examination. Among those who practiced BSE 36 (30%) of them performed BSE regularly each month whereas 84 (70%) performed BSE occasionally. From all study participants 56 (46.7%) have done BSE before one month, 25 (20.8%) before six months, 31 (25.8%) before one year and eight have never done BSE before the last one year. Ten of study participants have discovered a lump and 7 of them were consulted a doctor (Table 2).

Discussion

Breast self-examination is a screening method used in an attempt to detect early breast cancer, the method involves the woman herself looking at and feeling each breast for possible lumps, distortions or swelling.

The participants level of awareness of BSE was significantly high (80.3%), implying that students of CHS have good awareness of the disease, although only 102 (45.9%) believed that breast cancer is a curable disease.

This study indicated benefit of performing BSE but only 43 (19.1%) understood for early discovery and treatment of breast lump and other described it as follow: 39 (20.5%) believed that it helps the individual to know the shape and size of breasts, 7 (3.7%) respond that it is to check the change on the color of skin of breasts while 14 (7.4%) did not know the purpose of BSE. A similar study performed in Nigeria reported that only 22% understood that it helps in early detection of breast lump, and other described it as follows: 18% believed that it helps the individual to know the shape and size of her breasts while 24% did not have any idea of what it is. This may be due to the increased awareness about BSE through mass Medias and educational institutions.

The present investigation indicated that although a majority of students know about breast cancer only 54.1% actually practiced BSE. There is a wide gap between knowledge and practice among CHS undergraduate female students regarding BSE. This finding is in concordance with other studies reported from Africa, Asia and America.

In a similar study in Klang Valley, Malaysia, reported that 50% of participants have good knowledge about breast self-examination and only 155 (19.6%) of them practiced BSE. This may be due to lack of facilities for privacy and cultural misconception as doing repeated BSE.

Table 1. Knowledge participants about risk factors and sign and symptoms of breast cancer among Bahir Dar University CHS regular female undergraduate students, Bahir Dar, North West Ethiopia, 2016.

| Variables                                      | Yes/No | Frequency % |
|-----------------------------------------------|--------|-------------|
| Increase in age                                | Yes    | 171 90      |
| High fat diet                                  | Yes    | 126 66.3    |
| Smoking                                       | Yes    | 167 87.9    |
| Working class women                            | Yes    | 80 42.1     |
| Alcohol consumption                           | Yes    | 156 82.1    |
| First child at late age                       | Yes    | 127 66.8    |
| Early onset of menarche                       | Yes    | 111 58.4    |
| Late menopause                                | Yes    | 124 55.3    |
| Stress                                        | Yes    | 128 67.4    |
| Larger breast                                 | Yes    | 72 37.9     |
| Lump in the breast                            | Yes    | 171 90      |
| Discharge from the breast                     | Yes    | 163 85.8    |
| Pain or soreness in the breast                | Yes    | 169 88.9    |
| Change in size of breast                      | Yes    | 164 66.3    |
| Discoloration/dimpling of the breast          | Yes    | 171 90      |
| Ulceration of the breast                      | Yes    | 152 80      |
| Weight loss                                   | Yes    | 130 68.4    |
| Changes in the shapes of breast               | Yes    | 161 84.7    |
| Inversion/pulling in of nipple                | Yes    | 158 83.2    |
| Swelling/enlargement of breast                | Yes    | 170 80.5    |
| Lump under armpit                             | Yes    | 155 81.6    |
| Scaling/dry skin in nipple region             | Yes    | 156 82.1    |
examination increases the risk of acquiring cancer.

Most of the participants in this study had heard about breast self-examination which was comparable with studies conducted in Nigeria. From total study participants, 85.6% of participants heard about BSE which is little higher (82%) than the Nigerian study.12 Regarding the source of knowledge about BSE, similar results were observed in Nigerian study which was 53.2% of students heard of BSE through lectures, which were the main source of information. In other similar study that was conducted in Ghana13 nursing students, the main source of information were mass media (48%), and (16%) were health personnel. In this study 22.1% heard through mass media, (18.4%) from health personnel and (6.3%) heard from pamphlet. The difference may be due poor coverage by mass Medias about prevention of breast cancer and importance of early BSE.

This study indicated that majority of students knowledge regarding risk factors and sign symptoms was found to be good, 162(85.3%) have good knowledge about risk factor of breast cancer which is higher (59%) than the study done on West Gojjam health extension workers.14 Another study which was conducted in Mekelle University15 reported that only 22.1% of participants have good knowledge about the sign and symptoms of breast cancer. This may be due to the differences between the study settings, since study is conducted in academic organization in health-related students.

In this study 45.9% participants had never practiced BSE and 30% practiced it regularly. The main reasons for not doing BSE was mainly due to negligence 62 (60.8%), forgetfulness 24 (23.5%) and lack of knowledge 15 (14.7%). Most of the students in this study did not perform BSE despite having knowledge which was contrary to the reported studies from Nigeria. In a similar study in Klang Valley, Malaysia,11 reported that only 155 (19.6%) of them practice BSE. Another study that was conducted in Ghana nursing students,12 reported that 76% of study participants practice BSE. The difference may be due: socio cultural differences between countries, lack information dissemination about BSE and breast cancer through mass Medias.

A limitation of this study is that only the quantitative aspects of breast self-exam assessed. Since is the study is descriptive it has a limitation to find additional determinant factors. Also results may overestimate the practice of breast self-exam since it is done on health science students.

### Conclusions

Overall this finding indicated that the practice of BSE while perceived as being important is not frequently practiced by the students of Bahir Dar university CHS. So much has to be done in educating BSE and their technique. CHS collaborating with regional health bureau and ministry of health shall work on creating awareness to the students regarding advantage of BSE through leaflet, mass media and health education. Further studies are needed to explore what intervention could be best used to improve the uptake and practice of BSE and other methods for early breast cancer detection.

### References

1. Mc Guire S. World cancer report 2014. Adv Nutr 2016;7:418-9.
2. Bilimoria KY, Stewart AK, Winchester DP, Ko CY. The National Cancer Data Base: a powerful initiative to improve cancer care in the United States. Ann Surg Oncol 2008;15:683-90.
3. Ferlay J, Soerjomataram I, Ervik M, et al. GLOBOCAN 2012 v1.1. Cancer Incidence and Mortality Worldwide; IARC Cancer Base No. 11[Internet],
4. American Cancer Society. Cancer facts and figures. Available from: https://www.cancer.org/research/cancer-facts-statistics.html. Accessed on 17/4/2016

5. Akarolo-Anthony SN, Ogundiran TO, Adebamowo CA. Emerging breast cancer epidemic: evidence from Africa. Breast Can Res 2010;12:S8.

6. Alkhasawneh IM, Akhu-Zaheya LM, Suleiman SM. Jordanian nurses’ knowledge and practice of breast self-examination. J Adv Nurs 2009;65:412-6.

7. Odusanya OO. Knowledge, attitudes, and practices of female schoolteachers in Lagos, Nigeria. Breast J 2001;7:171-5.

8. Solomon LJ, Mickey RM, Rairiker CJ, et al. There year prospective adherence to three breast cancer screening modalities. Prev Med 1998;27:781-6.

9. Gidey B. Knowledge and Practice of Breast Self-Examination among summer and extension nursing female students in Jimma university, Ethiopia. PhD dissertation 2014.

10. Pengpid S, Peltzer K. Knowledge, attitude and practice of breast self-examination among female university students from 24 low, middle income and emerging economy countries. Asian Pac J Cancer Prev 2014;15:8637-40.

11. Akhtari-Zavare M, Latiff LA, Juni MH, et al. Knowledge of Female Undergraduate Students on Breast Cancer and Breast Selfexamination in Klang Valley, Malaysia. Asian Pac J Cancer Prev 2015;16:6231-5.

12. Ameer K, Abdulie SM, Pal SK, et al. Breast cancer awareness and practice of breast self-examination among female medical students in Haramaya University, Harar, Ethiopia. Int J Interdiscipl Multidiscipl Stud 2014;2:109-19.

13. Sarfo LA, Awuah-Peasah D, Acheampong E, Asamoah F. Coping strategies used by people living with HIV at Tetteh Quarshie Memorial Hospital. Med Sci 2013;3:20-3.

14. Azage M, Abeje G, Mekonnen A. Assessment of factors associated with breast self-examination among health extension workers in West Gojjam Zone, Northwest Ethiopia. Int J Breast Cancer 2013;2013:814395.

15. Gebrehiwot H, Hailu T, Giday G. Knowledge on breast cancer and its prevention among women household heads in Northern Ethiopia. PhD dissertation 2013.