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Knowledge, attitude and practice of breast self examination among female undergraduate nursing students at University of Gondar College of Medicine and Health Sciences

Abstract

Introduction: BSE is simple, non-invasive, requires little time and cost free practice and it can be perform by both young and old women. By performing BSE can recognize changes, such as thickening, lumps, spontaneous nipple discharge or skin change, and dimpling. However, the women who not perform BSE are high risk for breast cancer. Breast cancer is the second most frequent occurring cancer among women.

Objective: The object of this study to assess the knowledge, attitude and practice of BSE among female undergraduate CMHS, university of Gondar student`s.

Methods: An institution based cross sectional study design was conducted at the University of Gondar, collage of medicine and health science from April to June 2018. A total of 300 students were included in this study. The source population was all female undergraduate nursing students. The study was selected by simple random sampling technique. Self-administered questionnaire was used for data collection. Then data was entered to Epi info version 3.5.4. The enter data was export to SPSS statistical package for analysis.

Result: In this study, a total of 300 undergraduate female nursing students participated in the study and giving a response rate of 100% About knowledge of the female undergraduate students with regard to BSE is found to be 55.7% with 95% CI: (56-61%) had knowledge of breast self examination while 176 (56.7%) with 95% CI: (53–64%) of the female undergraduate students have favorable attitude about BSE. Of the total participants, 34 (11.3%) with 95% CI: (7-15%) of the female undergraduate students had practiced

Conclusion: In general, the KAP of the participants were, 55.7% with 95% CI: (56-61%), 56.7% with 95% CI: (53–64%) and 11.3% with 95% CI: (7-15%) respectively. This finding showed that the participants had poor KAP toward BSE. Therefore, Universities and other stake holders should plan to promote provision of information, education and communication targeting females, and the general community to increase awareness to ward breast self examination.

Keywords: BSE, knowledge, attitude, practice

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Abbreviations: ECA, Ethiopia cancer association; NCDs, non communicable diseases; UOG, University of Gondar

Introduction

Statement of the problem

BSE is one of the most simple procedure could be made for early detection of a breast disease. In the world so many breast diseases are presented, some of those diseases are neoplasm, malignant neoplasm (breast cancer), mastitis, and so on. However, in the world malignant neoplasm (breast cancer) is the most common and sever cancer in women, with nearly 1.7 million new cases diagnosed in 2012.[1] The prevalence of breast disease can be minimize with early detection by breast self examination. However, the awareness of breast self examination in women is low. So far, governmental organizations and nongovernmental organizations like American Society of Clinical Oncology, European Cancer Organization, International Union against Cancer and the Global Health Council have done much to stimulate awareness of the growing cancer burden in developing countries. However, there are still very few examples of cancer initiatives in developing countries that address the full range of needs from prevention, early detection to treatment and painkilling care. However, in some years governmental organizations have start paying attention to the growing problem of breast cancer in Ethiopia. In particular, Ethiopia cancer association (ECA) identify breast cancer is the most common disease among women in Ethiopia (31%).[2]

In Ethiopia breast cancer is the second most frequent occurring cancer among women. Current breast cancer rates in Ethiopia are high. However, there is probably very substantive under reporting in rural women seek help from traditional healers before seeking help from the government system. Many are never diagnosed and will be reported. There is little awareness of breast cancer among healthcare professionals, particularly in the rural areas like Nurses, nurses are in the best position to educate and motivate women on breast disease self

assessment and screening in health care institutions but Nurses to be effective as educators if they must reach the appropriate KAP relating to BSE. Therefore, there is a need to investigate nurse's knowledge, attitude, and practice on self-breast examination. However, some research actually will be conducted to know the level of knowledge, attitude and practice of self-breast examination among female health Sciences university students but stile not sufficient.[3]

Significance of the study

This study was significance because that will show the existing KAP of BSE among nurses at university of Gondar students. It also identifies the major challenges to practice BSE among students. This study found that a breast self examinations can be an important ways to find cancer in young women. Especially young women are a higher risk of developing breast cancer. For years, monthly, weekly and regularly BSE is part of an overall breast cancer screening plan for women of all ages. Suspicious area found by BSE led to many breast cancer diagnosis and successful treatments. Lumps on the breast are the most common signs of breast cancer while there are normal lumps that happen on breast in women following menstrual cycles. Cancerous lumps may also happen with no any pain at the early stage and thus this should be timely seen by a self breast examination. Taking this in to account, the study will provide recommendations. This study may also be used as a starting point for further similar researches in health students. Considering this, the researchers believed that conducting study on this issue is very important.

Objectives

General objective

To assess the knowledge, attitude and practice of breast self examination among undergraduate female second year and above with including first year post basic nursing students attending at the University of Gondar, collage of medicine and health sciences Northwest Ethiopia, 2018.

Specific objectives

1. To find out the knowledge of BSE among undergraduate female nursing students attending at the University of Gondar, collage of medicine and health science Northwest Ethiopia, 2018.
2. To determine the attitude of BSE among undergraduate female nursing students attending at the University of Gondar, collage of medicine and health science Northwest Ethiopia, 2018.
3. To examine the practice of BSE among undergraduate female nursing students attending at the University of Gondar, collage of medicine and health sciences Northwest Ethiopia, 2018.

Methods

Study area and study period

This study was conducted at University of Gondar, college of medicine and health sciences, which is located in Gondar city, Northwest Ethiopia 748 km far from the capital city of Ethiopia, Addis Ababa. Gondar town has one university the university has five campuses. College of medicine and health science is one of the ancient campuses in Ethiopia. UOG is established in 1954 as a public health college and training center, the university has steadily grown and evolved into one of the top education institutions in the country today.

The data collection period will be conducted from April 1 to May 30, 2018.

Study design

Institutional cross-sectional study design was conducted among under graduate female nursing students.

Population

Source of population

The source population was all female students in school of nursing, CMHS, University of Gondar.

Study population

All under graduate female nursing student`s.

Inclusion and exclusion criteria

Inclusion criteria

All under graduate female students of nursing 2nd year and above with including 1st year post basic nurses are including.

Exclusion criteria

Students who were seriously ill and unable to communicate

Sample size determination

The actual sample size for the study is determine using the formula $n=\frac{(z)^2 pq}{(d)^2}$ for individual population proportion by assuming 5% marginal error(d=0.05) and 95% confidence interval (1.96) and the prevalence is taken 50% because we can`t find similar study was conducted in health students in Ethiopia (Table 1).

Where: P= the prevalence of Knowledge (87.3%). Attitude (95%) and Practice (23%) among students

q=1-p

w = Margin of error 5% (0.05%)

$(z)^2$ = Z-value for 95% confidence is always 1.96

n = the required sample size

By using the above formula we found the maximum sample size of 272. By adding 10% non-response rate the final sample size was found to be 300.

Table 1 Sample size determination

Variables	Sample size determination	Calculated sample size
Knowledge of BSE	$n=\frac{(1.96)^2\times(1-0.873)}{(0.05)^2}$	170
Attitude of BSE	$n=\frac{(1.96)^2\times0.95(1-0.95)}{(0.05)^2}$	72
Practice of BSE	$n=\frac{(1.96)^2\times0.23(1-0.23)}{(0.05)^2}$	272

Sampling procedure

The study was conducted using probability proportionate method to select study subjects from school of nursing 2nd year and above female students and including 1st year post basic nurses. Schools of nursing have 15 class 2nd years and above students including 1st year post basic nurses. Then, the calculate sample size is distributed to each class using probability proportionate to their respective size (Figure1).

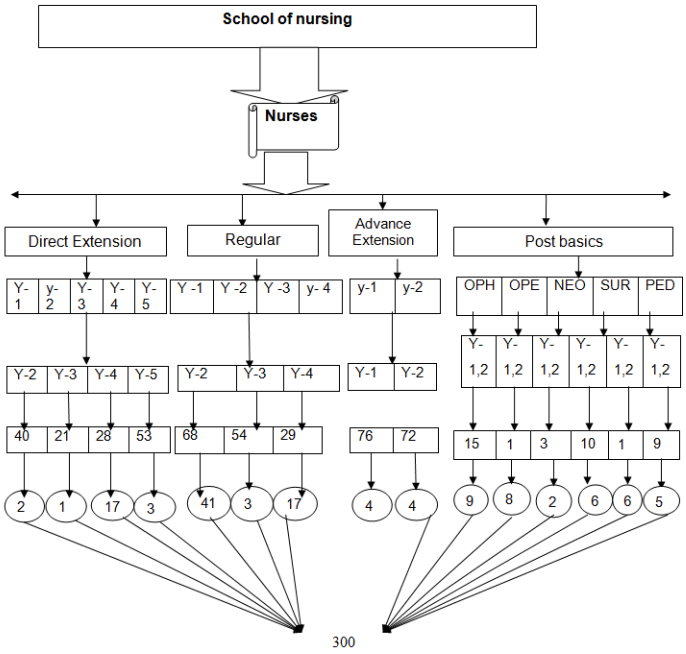

Figure 1 Schematic presentation of sampling procedure of 2nd year and above nursing students in collage of Medicine and Health Sciences, Gondar University. Gondar, 2018.

Variables

Dependent variable

- Knowledge
- Attitude of BSE
- Practice

Independent variables

- Age
- Ethnicity
- Religion
- Residence
- Information about BSE
- A family history of breast self examination
- Level of education
- Source of information

Data collection

Self-administer questionnaires was design to obtain the KAP of undergraduate female students in CMHS, University of Gondar. The questionnaire consists of the questions related to Socio-demographic, knowledge, attitude and practice of breast self examination. All the group members facilitate the data collection process. All the collected data was check for completeness, accuracy and uniformity by all five investigators.

Data Quality control

Pre-test was done on 5% of the Medicine and Health Science, University of Gondar female nursing undergraduate students prior to the actual data collection to ensure quality, clarity, and understandability of the questionnaires, the time taking of one question.

Depending on the result of the pre-test, correction and modification is done on the questionnaire before actual data collection begins. The questionnaire is originally was prepared in English language. We all five students work in the data collection facilitation and necessary correction is made on time.

Data processing and analysis

After data collection, each questionnaire was checked for completeness and consistency. Then, the data was entered to Epi info version 3.5.4. The enter data was exported to SPSS statistical package for analysis. After all, Different frequency tables, graphs and descriptive summaries were used to describe the study variables.

Operational definitions

Breast self examination**:** is feeling or examining own breast to develop self awareness about own breast of under graduate female students. Breast self examination is performed monthly one week-two week after cessation of menstrual flows.

Knowledge: Knowledge is information or awareness related to breast self examination that an individual have. In this study participant answering mean score and above (4.76) is termed as knowledgeable where as those answering below these value termed as non knowledgeable.

Attitude: Attitude is perception of an individual toward breast self examination. In this study participant answering mean score and above (10.02) is having favorable attitude where as those answering below these values having unfavorable attitude.

Practice: The action or doing of breast self examination at monthly basis after menstruation was be done in standing and lying position via inspection and palpation. To say practice of BSE, students must answer question number 401,402,403 and 404 of the practice questions, whereas students answering these and other questions in wrong way are termed as not practiced BSE.

Ethical consideration

Ethical approval was obtained from the Ethical review Committee of the school of nursing, University of Gondar. Letter permission was written by University of Gondar, CMHS to respective departments. Clear communication was made with respected stakeholders and study participants about the purpose and the procedures of the study written on the information sheet. Informed consent was obtained from each student. Participation was purely on voluntary and they can refuse to be participated at any time.

Result

Socio demographic characteristics of the study participants

As depicted in (Table 2), total of 300 undergraduate female nursing students participated in the study and giving a response rate of 100%. The minimum and maximum ages of the participants are 20 and 37 years respectively. More than half of the respondents age was between 20 and 29 years 260 (86.7%) with mean age of 24 with a SD±3.7 years. More than 3/4th of the respondents 247 (82.3%) were Amhara by Ethnicity. Majority of the respondents 233 (77.7%) were Orthodox follower by their religion. Regarding to their Resident about 190 (63.3%) respondents was urban and regarding to their marital status about 210 (70%) respondents were single. Nearly half 146 (48.7%) of the respondents educational level were Second year. From 300 students included in this study 66 (22%) female nurse students had family history of BSE.

Table 2 BSE Socio-demographic characteristics of under graduate female students of College of medicine and health sciences, University of Gondar, Gondar, Ethiopia, 2018.

Variables	category	Frequency	Percentage
Age	20-30	260	86.7
	31-40	40	13.3
Year of study	Second year	146	48.7
	Third year	88	29.3
	Fourth year and above	66	22
Marital status	Single	210	70
	Married	90	30
Religion	Orthodox	233	77.7
	Protestant	6	2
	Muslim	52	17.3
	Catholic	7	2.3
Ethnicity	Amhara	247	82.3
	Oromo	15	5
	Tigre	15	5
	Gurage	4	1.3
Resident	Rural	110	36.7
	Aruban	190	63.3
Do any of your family members have history of breast self examination?	Yes	66	22
	No	234	78

Knowledge of the study participants toward BSE

As illustrated in (Table 3), the majority 175(58.3%) Female undergraduate nursing students heard about breast self examination and there major source of information were from Health professionals (36.3%). Regarding to their knowledge about benefits of early detection 194 (64.7%) of the study subject knew that early detection of breast disease can increase by BSE. Of the study subjects involved in this study (300), only 59 (19.7%) and 106 (35.3%) knew that at what age of breast self examination has to be begun and How often a women perform BSE respectively. According to participants response in this study 185(61.7%), 173(57.7%) and 123(41%) of female nurse students know the correct position, techniques and pattern of BSE respectively. Regarding to their knowledge the participated in this study only 31(10.3%) of female nurse students know the correct step of BSE.

The Overall knowledge of the female undergraduate students with regard to BSE is found to be 167(55.7%) with 95% CI: (56-61%).

Table 3 BSE knowledge of under graduate female students of College of medicine and health sciences, University of Gondar, Gondar, Ethiopia, 2018

Variables		Frequency	Percentage
Did you heard about breast self examination?	Yes	175	58.3
	No	125	41.7
If your answer is yes?	Electronic Media	76	25.3
What is your source of information	Health professionals	109	36.3
	Books	7	2.3
	Lectures	78	26
	Other	30	10
Who should perform BSE	Yes	31	10.3
	No	265	89.7
Can BSE help for early detection of breast disease?	Yes	194	64.7
	No	106	35.3
At what age do you think that breast self examination has to be begun	Yes	59	19.7
	No	241	80.3
How often should you perform BSE?	Yes	106	35.3
	No	194	64.7
When should a woman with regular menstruations do BSE?	Yes	72	24
	No	228	76
What will be the correct position of body while performing BSE	Yes	185	61.7
	No	115	38.3
What are the techniques of regular breast self-examination	Yes	173	57.7
	No	127	42.3
Position of your hand during inspection	Yes	123	41
	No	177	59
What are the patterns that you use during palpation of the breast	Yes	165	55
	No	135	45
What are the following characteristics of a breast mass are least suggestive of malignancy	Yes	48	16
	No	252	84
How many steps do you know for performing BSE	Yes	31	10.3
	No	269	89.7

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Attitude of the study participants toward BSE

More than 3/4th of the respondents 268 (89.3%) of the informant perceived that performing of BSE is very necessary And More than 3/4th of the respondents 253 (84.3%) believed that BSE is can give a benefit (s). Another 218 (72.7%) of participants said that when performing BSE if they found lump they prefer to get treatment from a health institution and another 195 (65%) of participants said that they perform BSE one monthly, they feel comfortable. About three forth 228 (76%) of the participants agrees that all women should do BSE.

Sixty percent of the female undergraduate students agree that they performed BSE because of they afraid of breast cancer similarly 183 (61%) of female undergraduate students reported that they perform BSE because of worry about having breast cancer. Overall 176 (56.7%) with 95% CI: (53–64%) of the female undergraduate students have favorable attitude (Table 4).

Table 4 BSE attitude of under graduate female students of College of medicine and health sciences, University of Gondar, Gondar, Ethiopia, 2018

Variables		Frequency	Percentage
Breast self examination is necessary	Yes	268	89.3
	No	32	10.7
Do you think breast self examination can give you a benefit (s)	Yes	253	84.3
	No	47	15.7
During BSE makes me feel so funny	Yes	137	45.7
	No	163	54.3
BSE is not embarrassing to me	Yes	149	49.7
	No	151	50.3
Doing BSE is not wasting time	Yes	198	66
	No	102	34
After doing BSE makes me feel satisfying	Yes	167	55.7
	No	133	44.3
If there is lump, I prefer to get treatment from a health institution	Yes	218	72.7
	No	82	27.3
if I can do BSE once in a month, I Feel comfortable	Yes	195	65
	No	105	35
All women should do BSE	Yes	228	76
	No	72	24
I really care about my breasts	Yes	188	62.7
	No	112	37.3
I'm afraid to think about the breast cancer	Yes	180	60
	No	120	40
Because I always worry about having breast cancer, I want to do BSE	Yes	183	61
	No	117	39
I am Interested in doing regular BSE	Yes	227	75.7
	No	73	24.3
I am interested in searching for information regarding BSE from the internet, magazine, newspaper, and friends	Yes	202	67.3
	No	98	32.7
I am discuss with my friends about BSE	Yes	214	71.3
	No	86	28.7

Practice of the study participants toward BSE

Regarding to their practice of female undergraduate students towards BSE only 34 (11.3%) with 95% CI: (7-15%), 55 (18.3%) of students reported that, they perform once monthly. concerning to their practice of female undergraduate students only 46 (78%) and 43 (72.9%) of students know the correct method and the three techniques of BSE respectively. According to the response of those study subjects who did practice BSE, the technique used while they are performing BSE are concentric circles (52.5%) and Parallel lines (23.7%). Students also asked their reason why they start to perform BSE, 67.8% reported that they start with fear of breast cancer. Similarly students also asked their reason why they fail to practiced BSE, the major 245 (81.7%) reason was no one recommend us to do and even we couldn't get from curriculum. Overall 34 (11.3%) with 95% CI: (7-15%) of the female undergraduate students had practiced BSE (Table 5).

Table 5 practice of BSE of under graduate female students of College of medicine and health sciences, University of Gondar, Gondar, Ethiopia, 2018

Variables		Frequency	Percentage
Do you practice breast self examination	Yes	55	18.3
	No	245	81.7
Do BSE once a month	Yes	55	18.3
	No	245	81.7
Do you know the correct method of BSE	Yes	46	15.3
	No	254	84.7
Do you know the three BSE techniques	Yes	43	14.3
	No	257	85.7
If your answer is yes for the above equation, what technique you used?	Concentric circles	31	52.5
	Parallel lines	14	23.7
	Consecutive clock times	4	6.8
	I don't know what technique I used	10	16.9

Table Continues...

Variables		Frequency	Percentage
Have you ever seen palpable lump or mass in you breast	Yes	23	7.7
	No	277	92.3
What made you to start performing BSE	Fear of breast cancer	40	67.8
	Media	19	8.5
When was the last time you perform breast self examination	Weeks ago	19	32.2
	Month ago	36	61
	Year ago	4	6.8
	Never practice BSE	0	0
Discuss the importance of BSE with friends	Yes	57	19
	No	243	81
If you don't ever practice breast self examination what was your reason	I don't know the techniques	61	25.3
	I afraid to touch my breast	32	13.3
	Fear of outcome	15	6.3
	too young to practice	16	6.6
	No symptom of breast cancer	52	21.6
	No one recommend	65	27

Discussion

Breast self examination is one of the most simple procedure that could be made for early detection of a breast disease. In the current study the overall knowledge of female undergraduate students with regard to BSE is found to be 167 (55.7%). This finding is is much lower than study conducted in United Arab Emirates (96.1%),[4] Nigeria (85.1%),[5] Malaysia (81.9%),[6] and Ghana (75%).[7] The possible difference could be due to the effort of some organization like United Arab Emirates Cancer Association who is doing toward improving awareness of BSE. Similarly another difference could be due to the effect of their source of information coverage and learning setup and also could be due to the fact that more concern is given to communicable diseases than the non communicable diseases (NCDs). Similarly the current finding is also much lower than the study conducted in Ethiopia (Haramaya) University (87.3%).[8] in our context this difference could be related with sample size difference and the information of health education about BSE was not uniform in the country and still due to the reality that NCDs were neglected.

This study found that overall 176 (56.7%) of the female undergraduate students have favorable attitude about BSE. The current research finding is much lower than study conducted in Iraq (89.7%),[9] Brazil (69.2%),[10] India (68.5%),[11] Poland (63.9%),[12] and Iran (63%).[13] The possible difference could be due to inaccessibly to health information and uncared for NCDs. Similarly the current finding is also much lower than the study conducted in Ethiopia (Haramaya) University (95%).[8] The possible difference could be related with that information of health education about BSE was not uniform in the country and still due to the fact that non-communicable diseases were neglected. With regard to practice of BSE, the current finding revealed that only 34 (11.3%) of female undergraduate students practice perfectly. The current research finding is lower than study conducted in Poland (37.1%),[12] Malaysia (51.1%),[6] United Arab Emirates (84.4%),[4] Iraq (42.6%),[9] Nigeria (57%),[5] Kenya (72.9%),[14] Brazil (20.5%),[10] and similarly the current finding is also lower than the study conducted in Ethiopia (Haramaya) University (23%) Ethiopia,[8] The possible difference could be due related with the information that NCDSs like breast cancer are not getting appropriate attention by stakeholder of health care system and for the reason that there is no active screening program. And also health education about BSE was not uniform across Ethiopia.[15–19]

Conclusion

Generally the Collage of medicine and health sciences, University of Gondar female undergraduate nurse Students knowledge, attitude and practice on breast self examination was poor.

Recommendations

Based on the finding of the study the following recommendations are forwarded:-

Our study participants reported that the major reason why female undergraduate students were not performed BSE was they don't know when and how BSE has to do it. For this context we recommend university of Gondar, school of nursing teachers should include this issue in the curriculum and appropriately teach student to perform regular BSE. The students should read and communicate with in friends for increasing of their knowledge about BSE. In Ethiopia, media center information translation about BSE was poor. Therefore we recommend the media center must have setting specific program for health information to increase the knowledge of students in particular and the population in general.

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Conflicts of interest

The authors declare no conflict of interest.

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