

Knowledge, attitude and practice of breast self examination among final years female medical students in Sudan

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To cite this article

Saadeldin A. Idris, Aamir A. Hamza, Mohamed M. Hafiz, Mohammed Eltayeb A. Ali, Gamal E. H. A. El Shallaly. Knowledge, Attitude and Practice of Breast Self Examination among Final Years Female Medical Students in Sudan. *International Journal of Public Health Research*. Vol. 1, No. 1, 2013, pp. 6-10.

Abstract

Background: Breast Self Examination (BSE) is a process whereby women examine their breasts regularly to detect any abnormal swellings or lumps in order to seek prompt medical attention. Aim: This study was conducted to determine the knowledge and practice of Sudanese medical students regarding BSE. Patients and methods: This is a descriptive cross sectional study, in which female final year medical students in three governmental universities participated. A questionnaire was used for data collection. Results: Two hundred students participated in the study. Their age ranged from 18 to 29 years, with a mean of 23. Most respondents (86%) were aware of BSE. Mass media such as Newspaper, Television and Radio were the major source of information while information conducted by health workers was the least. Nevertheless, only two thirds of the respondents reported performing BSE. The results point out that final year medical students have a non-satisfactory knowledge regarding BSE, compared to what is expected. Conclusion: The findings showed that the knowledge and practice of BSE is inadequate among young female medical students. BSE should be included in the curricula of both undergraduate and postgraduate medical schools.

Keywords

Breast Self Examination, Knowledge, Practice

1. Introduction

Breast cancer is the most common female cancer in both developing and developed countries, with most cases occurring in the latter regions, where age-standardized rates are three times higher than in developing countries¹. It is also the leading cause of cancer death in women between the ages of 15 and 54 years. Every thirteen minutes a woman dies from it and every three minutes, a new case of breast cancer is diagnosed. The incidence and mortality of breast cancer are increasing in Africa and Asia². Advances in medicine have shown that one-third of all cancers are preventable and a further one-third is potentially curable if

diagnosed early^{2,3}.

Breast cancer is distinguished from other types of cancer by the fact that it occurs in a visible organ. It can, therefore, be detected and treated at an early stage⁴. This observation demands that cancer control should be of increasing priority in health care programmes of developing countries. A primary reason for the increasing mortality is late diagnosis of the disease and a lack of early detection programmes².

Diagnosis at an earlier stage gives different choices of treatment, a greater chance of long-term survival and a better quality of life.^{5,6}

Most successful approach to decrease mortality due to

breast cancer is the application of secondary prevention. Breast Self-Examination (BSE), Clinical Breast Examination (CBE) and mammograms are important, traditionally available, and advisable methods used for detecting breast cancer in the early stage^{7,8}.

The efficacy of breast cancer screening with mammography has been confirmed in a number of randomized studies⁹. But, it is costly, and requires considerable economic and human resources. Hence routine screening mammography is not practicable and often unavailable in developing countries^{7,10}.

BSE is a simple, inexpensive, safe examination method which requires no invasive intervention or any apparatus and protects women's privacy and can be done comfortably alone at home^{2,4,11}.

The role and effectiveness of BSE in the early diagnosis of breast cancer has been reported with different results^{7,12}. It has been accepted that BSE increases the awareness of normal appearance and structure of breasts and the consequent ability to detect subtle changes that don't correspond to the normal features of healthy breasts. Breast health awareness may, therefore, increase the ability of women to find small palpable tumours earlier, leading them to consult their physician immediately after discovering undue changes in their breasts⁹.

Many authorities advocate (BSE) monthly for women aged 20 and over as a screening modality for early detection of breast cancer¹³. Therefore, it is important to train women on the BSE as a primary tool in screening the breast cancer¹⁰.

Currently there is no population-based mammography-screening programme in place in Sudan. Despite the advent of modern screening methods, more than 90% of cases of cancers of the breast are detected by women themselves, stressing the importance of breast self examination¹⁴. Moreover, it is observed that breast cancer present late in the advanced stages. Hence, in this study, we assessed the knowledge and practice of final year's female medical students regarding BSE, as we think these students will be future doctors that could be regarded as having a positive attitude towards teaching other women in methods of BSE.

2. Patients and Methods

A BSE knowledge questionnaire was constructed to measure the participants' knowledge on BSE technique (Figure 1). It contained 20 items which were related to the source of information, advantages, obstacles, efficacy and practice of BSE. The form was piloted on 25 volunteer students out of the main sample of the study and few modifications were done.

Ethical approval was obtained from the Medical Research Ethics Committee of the Faculty of Medicine and Health Sciences, at each of Alzaeim Alazhari, Bahri, and Alfashir Universities, Sudan. A written consent was taken from each respondent before conducting the survey. The questionnaires were filled by final year's females' medical

students in these three universities. The study included all final year female medical students in the academic year 2012-2013. Statistical analysis was performed using SPSS 21.

3. Results

A total of 225 final year female medical students were targeted in this study. However, 14 students (6.2%) refused to participate, and 11 (4.9%) did not complete the questionnaire. The remainder, (200) female students, were included in this study giving a response rate of (88.9%).

The age of the participants ranged from 18 to 29 years with a mean (SD) of 23.3 (2.1) years.

3.1. Source of Knowledge

Of the 200 students included in the study, 28 (14%) reported that they had not heard about BSE. The rest of the participants (86%) had knowledge of BSE. Media, such as television and radio were identified as the main source of information on BSE by 65.5% of the participants some of them mentioned more than one source. Health workers were mentioned as a source of information by only 7% of the sample (Table 1).

Table 1. BSE Source of information on BSE (n=200)

	Frequency	Percentage
Mass media	131	65.5
Friends	79	39.5
Relatives	42	21.0
Brochure	39	19.5
Health workers	14	7.0
Not heard	28	14.0

3.2. Advantages of BSE

Cumulatively 62.9 % of respondents knew the advantage of BSE, in 74.5% of them they can take care about themselves by BSE, and in 64.5% regular monthly self examination might help in find lumps early (Table 2).

Table 2. The advantage of BSE

	Frequency	Percentage
When I do BSE I'm doing something to take care of myself	149	74.5
Completing BSE each month may help me find breast lumps early	129	64.5
Regular BSE decreases the rate of death from breast cancer	116	58.0
If I find a lump early through BSE, my treatment for breast cancer may not be as bad	109	54.5

3.3. Obstacles of BSE

The obstacles of BSE were variable as respondents reported that it is hard to remember to do breast examination. The proportion of students who thought that BSE is not necessary if they had a routine mammogram, and those who had other problems more important than doing BSE, and those who thought BSE took too much time were 43%, 16.5%, 13.5%, and 8% respectively, (Table 3).

Table 3. The obstacles of BSE (n=200)

	Frequency	Percentage
It is hard to remember to do breast examination	86	43.0
BSE is not necessary if you have a routine mammogram	33	16.5
BSE is not necessary if you have a breast exam by a healthcare provider	30	15.0
BSE is embarrassing to me	29	14.5
I have other problems more important than doing BSE	27	13.5
BSE takes too much time	16	8.0
I don't have enough privacy to do breast exam	15	7.5
My breast too large for me to complete BSE	15	7.5

3.4. Efficacy of BSE

When answering the efficacy part of BSE, in the form of knowledge related to performance BSE, ability to find a breast lump, and using the correct parts of fingers when examining breast, the proportion of students who were confident of their knowledge and skills were 66.5%, 44.0%, and 36.5%, respectively (Table 4).

The study showed no difference in the result from different universities as $p > 0.05$.

Table 4. The efficacy of BSE (n=200)

	Frequency	Percentage
I know how to perform BSE	133	66.5
I can perform BSE correctly	93	46.5
I could find a breast lump by performing BSE	88	44.0
I am able to tell something is wrong with my breast when doing BSE	88	44.0
I am able to tell something is wrong with my breast when I look in the mirror	79	39.5
I can use the correct part of my fingers when examining my breast	73	36.5
I am sure of the steps to follow for doing BSE	72	36.0

4. Discussion

Breast cancer presents a very formidable health threat to all females. Informing young females about this serious disease is both a challenge and important investment in the health of future generations of women¹⁵.

The role of BSE in the early detection of breast cancer has been studied by several authors^{7,12}. This study showed that less than expected respondents had knowledge of BSE. This was not expected considering the fact that they were final year's medical students and should have acquired this knowledge during their educational training. Literature showed that formal education is more effective than non-formal education in health related issues^{12,16}.

BSE was heard of by most of the respondents in this study (86 %). Nevertheless, this proportion is less than that reported in studies conducted in Nigeria among female secondary school teachers 95.6%³ and female health workers 100%¹². These figures from Nigeria contrast to those from a study in Turkey which showed that less than half of a university students had knowledge on BSE¹⁷, a study in Egypt showed that about one quarter of working women had heard about BSE¹³, and study in Jordan revealed 52% of female nurses perform BSE¹⁸.

According to Seif and A. Aziz¹³ in Egypt, BSE is recommended monthly for women aged 20 and over as a screening modality for early detection of breast cancer (BC).

With regard to the frequency of performing BSE, 64.5% of respondents were practicing it regularly on a monthly basis. This result is in consistent with the reports obtained in studies in Iranian women¹⁹ and nurses in United Arab Emirates²⁰ as 64% and 61.5 % of respondents respectively practicing it regularly on a monthly basis.

This level is however higher than that reported in previous studies in Malaysia², Nigeria¹², Jordan¹⁸, and Nigeria²¹.

Only 58% of respondents believed that regular BSE decreased the rate of death from breast cancer.

Our study revealed that 46.5% of participants can perform BSE correctly. In the study conducted in Nigeria by Agwu *et al.*²¹ reported that 87% of participants did not adopt the correct steps.

The knowledge of the final year female medical students in the present study on the frequency and ideal time to perform BSE is found to be non-satisfactory.

Regarding obstacles in the current study, 43% of respondents reported that it is hard to remember to do breast examination. In study in Iran by Ebrahimi M *et al.*²², the most frequent barrier for BSE was forgetfulness (52%).

About 14.5% of respondents reported that the BSE was embarrassing to them. This is in agreement with the result obtained by Agboola AOJ *et al.* in Nigeria among female health workers where it was embarrassing in 19.1%¹².

Regarding the sources of information about BSE among the participants in this study, the majority mentioned that mass media (radio and TV, etc.) were their main sources of information, followed by friends, relatives, brochure, and then the health workers. Studies in nurses in Poland, high

school students in Turkey, and university students in Turkey reported that the main sources of their information were the media^{17,23,24} and their academic education²³. Another study on nurses and teachers in Turkey reported that the most important information sources about BSE were written materials (books, magazines and booklets), academic education and other health professionals²⁵.

Although 66.5% of respondents had knowledge of BSE, only 44% were confident that they had the skills to find a lump in their breast.

In a study among female secondary school teachers in Nigeria a similar result (42%) was obtained³.

This shows the importance of including BSE physical examination skills in the curriculum.

5. Conclusion

The findings showed that knowledge and the practice of BSE is inadequate among young female medical students. The finding that some of them did not practice BSE, suggests that there is a need for continuing education programmes to change attitude and behavior towards BSE.

BSE should be included in the curricula of both undergraduate and postgraduate medical schools.

Acknowledgments

Authors would like to express their gratitude to Dr. Abdelrahman Alhindi, and Dr. Marwa Jah Elrasul for their endless help in data collection.

It is also a privilege to express our deep gratitude to all participants who accepted to enrol in this study, without them this work wouldn't have been done.

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