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Breast Self-Examination: Knowledge, Practice and Attitude Among A Group Of Working Females In Egypt.

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ABSTRACT

Breast cancer is a major public health problem, early detection of breast cancer would be a useful approach for controlling the disease and reducing mortality. To assess the knowledge, attitude and practice of a group of Egyptian women regarding breast self-examination (BSE)**.** It is a cross sectional study. A self administered questionnaire, containing questions about sociodemographic characteristics, knowledge, attitude and practice of BSE was applied. There is higher knowledge score about BSE among participants who are more than 40 years, urban residents, university educated , high social class, married and those with a positive family history of breast cancer . There is significant differences between those who performed BSE and those who did not regarding educational level , occupation and past history of breast problems . The most common barrier against BSE practice was absence of risk (39%) then fears of discovering any breast abnormality (34.5%). The results concluded that the knowledge and the practice of BSE are inadequate among the respondents, but they have positive attitude towards the desire of being taught about BSE practice. A program aiming at dissemination of the appropriate knowledge and practice technique about BSE is highly recommend

Keywords: breast self examination, knowledge, practice , attitude ,Egypt

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INTRODUCTION

Breast cancer (BC) is a major public health problem in both developed and developing countries with more than one million new cases diagnosed annually worldwide [1].

In developed countries, survival rates of breast cancer are better due to early diagnosis and treatment [2].

Breast cancer is the leading cause of female cancer related mortality, with more than 410,000 deaths annually [3].

In the Eastern Mediterranean Region BC is the second ranking cause of cancer deaths, but actually it is largely a preventable disease [4].

In Egypt, BC is the most common cancer among women, representing 18.9% of total cancer cases (35.1% in women) with an age-adjusted rate of 49.6 per 100 000 population[5].

In countries with limited resources, majority of females present with advanced or metastatic breast cancer[6].

Early detection of breast cancer plays an important role in reducing its morbidity and mortality . Survival rate up to 95% could be achieved if this cancer was diagnosed earlier[7].

The available and advisable methods for breast cancer screening worldwide are breast self examination (BSE), clinical breast examination (CBE) and mammogram, however, in most of developing countries the routine screening mammographies are often unavailable due to financial issues and the lack of accurate data on the burden of breast cancer in these countries [3].

BSE alone is believed to be appropriate and effective methods of ensuring early detection of breast cancer. It could detect 40% of breast lesion[8]. Therefore, it is important to empower women on the BSE as a primary tool in screening the breast cancer [9].

It was reported that women who practicing regular BSE were presented more often with clinically early tumors [10].

BSE is very important specially in developing countries which have limited resources. Evaluation of knowledge ,attitude and practice of breast self examination is the 1st step to realize the obstacles facing women in practicing BSE, and try to overcome them as a first step to emphasize the culture of breast cancer screening.

Aim of the Study

To assess the knowledge, the attitude and practice of a sample of Egyptian women regarding breast self-examination.

MATERIALS AND METHODS

Technical design

This is a cross sectional study which was conducted at Benha faculty of Medicine ,Qualiobia governorate ,Egypt . Study subjects comprises 250 female distributed as clerks, administered workers and technicians .

Inclusion criteria

- All working females at Benha faculty of medicine who agree to share in the study.

Exclusion criteria

- Females with personal history of breast cancer.
- Disagreement to share in the study.
- Staff members of different faculty departments.

Data were collected using structured questionnaire (self-administered questionnaire with help of interviewer), its content and construction validity were assessed by a jury of two academic professors the questionnaire was designed including questions about sociodemographic characteristics as: age – residence – level of education- occupation – marital status – level of education and occupation of husband- number of family members – number of bedrooms – type of family and history of breast feeding, assessment of family history of breast cancer, assessment of knowledge about breast self-examination if she knows about it; sources of knowledge, age of starting practice of breast self-examination, frequency of practice of BSE .,proper timing in relation to menstrual period. Assessment of attitude toward BSE through asking about; Its Importance, difficulty, embarrassment, desire to encourage, desire to teach relatives and ideas about religion and traditions. Assessment of practice of breast self-examination through; asking about previous practice of BSE, barriers against BSE practice (5 items)) and If the participant practiced BSE before .There are questions about steps and positions of BSE.

A preliminary pilot study was done on 15 females to assess the language of the questionnaire regarding participant's understanding, the needed time to complete the questionnaire, finding any administrative or technical obstacles and how to deal with it .

Feedback of the pilot study:

- Language of the questionnaire was modified to be easily under stood by the participants.
- The questionnaire sheet took about 10 minutes to be completed
- No administrative obstacles were found.
- The participants who agree to complete the questionnaire were cooperative.

Operational design

- **Preparatory phase**
  - writing of the protocol ,review of the related literatures and designing the different parts of questionnaire
- **Phase of data collection**
- **Analysis and reporting phase**.
- **Writing the paper**

Administrative design:

Ethical considerations were assured throughout the whole study according to Benha Faculty of Medicine ethical committee including a written consent from each participant with an explanation of the purpose of the study and ensuring privacy.

Statistical design

Data were collected and statistically analyzed using SPSS soft ware program version 16. Quantitative data were analyzed using mean and standard deviation, while frequency and percentage were used with qualitative data. The women were categorized into 2 groups: those who reported that they performed BSE and those who did not. Comparison of the knowledge score were performed by Independent *t*-test among the participants regarding different categorical variables. The chi-squared test was used to examine the association between categorical variables and BSE. A logistic regression analysis was conducted to identify the extent to which variables significantly predicted BSE behavior. In all tests, the level of significance was set at $P< 0.05$.

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The scoring system

Social score

According to of Fahmy and El-Sherbini classification of social class(1983) [11]. , subjects were classified into 3 social classes low, middle and high ,according to three parameters; education and work of the female, education of the husband and crowding index with total score 25.

- High social class = Scores from 19-25.
- Middle social class= Scores from 12-18.
- Low social class= Scores from 6-11.
- Very low social class= Scores from < 6.

BSE knowledge score

It consisted of all questions concerning knowledge about breast self-examination.

The right answer rated as (1) and the wrong answer as (0)

The score rated from 0%-100%,right answer of all the questions scored as 100% ,wrong answer of all questions scored as 0%.Satisfactory score (≥60% of total score), and unsatisfactory score (<60% of total score) [12].

RESULTS

58.4% of the sample was belonging to the age group of ≥ 40 years. Most of them were married 91.6%, rural residents 70.8%. The majority of them had a university degree education 74.8% and professional occupation 74%. Among the total sample a family history of breast cancer was recorded by 25 respondents 10%.) The majority of the studied group (61.8%) have unsatisfactory score of knowledge about BSE.

Although (80%) of the participants reported that they had heard about BSE, only (44.5%) of those who heard about BSE had ever performed BSE and (35.6%) of the total sample have ever performed BSE. Figure (1) clarifies that radio and TV (40.70%) are the main source of knowledge about breast self-examination among the studied participants, followed by reading and internet (28.14%), then health care provider (20.60%) and the least sources identified are friends (9.05%) and newspaper (1.51%).

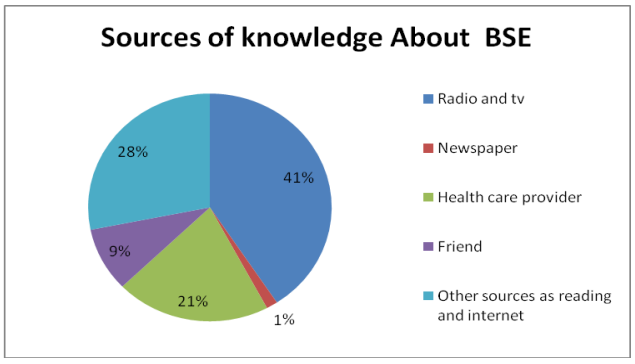

Figure 1: Distribution of sources of knowledge about breast self examination.

Table (1) shows that there is higher knowledge score about BSE among participants who are more than 40 years, urban residents, with university educational level, high social class, married, those with a positive family history of breast cancer and those who practice BSE with statistically significant differences regarding age ,educational level ,social class, family history and practicing of BSE.

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Table 1: Comparison of the knowledge score about BSE of participants regarding their sociodemographic characteristics and practicing BSE.

Knowledge score about BSE	$\overline{X}$ ± SD	t-test	P-value
Practice of BSE			
Performers	74.35±10.97	3.606	P<0.05
Non performers	68.36±12.42		
Age			
<40	40.11 ± 33.02	3.345	<0.05
≥40	55.83 ± 33.24		
Residence			
Urban	47.5 ± 32.9	0.092	>0.05
Rural	46.98 ± 33.63		
Education			
Illiterate or read and write	47.18 ± 29.99		
School	60.06 ± 30.12	3.98	< 0.05
University	83.33 ± 14.43		
Social class			
Middle	40.54 ± 33.39	3.649	<0.05
High	66.36 ± 30.34		
Marital status			
Single	50.23 ± 33.56	1.325	> 0.05
Married	58.50 ± 26.22		
Family history			
Positive	55.00 ± 30.56	2.294	<0.05
Negative	37.98 ± 35.22		

Table 2: Some sociodemographic factors associated with performing breast self-examination (BSE) among the studied group.

Practice of BSE / Characteristic	PERFORMERS (111)		NON PERFORMERS (139)		X2	P
	No	%	%	No		
Age						
More than 40	66	59.5%	80	57.6%		
Less than 40	45	40.5%	59	42.4%	.0922	p>.055
Residence						
urban	85	76.6	92	66.2		
Rural	26	23.4	47	33.8	3.222	p>0.05
Education						
Illiterate & read and write	0	0.0	4	2.9		
School	16	14.4	43	30.9		
University	95	85.6	92	66.2	13.43	P<0.05
Occupation						
Unskilled worker	0	0.0	6	4.3		
Clerk	16	14.4	43	30.9		
Professional	95	85.6	90	64.7	15.55	P<0.05
Marital status						
Married	105	94.6	124	89.2	2.327	p>0.05
Not married	6	5.4	15	10.8		
Family history						
Presence	13	11.7	12	8.6		
Absence	98	88.3	127	91.4	.650	p>0.05
Past history						
Presence	23	20.7%	10	7.2%	9.855	P<0.05
Absence	88	79.3%	129	92.8%		

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Table 3: Distribution of the studied group according to their attitude about breast self examination

Performance of BSE / Variables		Performers (111) NO	%	Non performers (139) No	%	X2	p
BC can be cured if detected early by BSE	Yes	106	95.5	117	84.2	8.293	p>0.05
	No	1	0.9	3	2.2		
	Un certain	4	3.6	19	13.7		
BSE is difficult to be done by oneself	Yes	9	8.1	57	41.0	44.52	P<0.05
	No	98	88.3	67	48.2		
	Un certain	4	3.6	15	10.8		
BSE is Impressing	Yes	26	23.4	50	36.0	4.871	P>0.05
	No	74	66.7	75	54.0		
	Un certain	11	9.9	14	10.1		
I need to know how to do BSE	Yes	104	93.7	122	87.8	2.833	p>0.05
	No	3	2.7	5	3.6		
	Un certain	4	3.6	12	8.6		
BSE need to be Encouraged	Yes	111	100	130	93.5	7.455	P<0.05
	No	0	0.0	0	0.0		
	Un certain	0	0.0	9	6.5		
I will try to educate my friends and relatives	Yes	97	87.4	91	65.5	19.984	P<0.05
	No	13	11.7	28	20.1		
	Un certain	1	0.9	20	14.4		
No Religious barriers against BSE practice	Yes	110	99.1	121	87.1	13.355	P<0.05
	No	1	0.9	4	2.9		
	Un certain	0	0.0	14	10.1		
No Traditional barriers against BSE practice	Yes	106	95.5	113	81.3	11.460	P<0.05
	No	2	1.8	10	7.2		
	Un certain	3	2.7	16	11.5		

Table 4: Logistic regression analysis for factors related to performing breast self-examination (BSE)

Factors		B	S.E.	Wald	Sig.	Exp(B)
	Age	.019	.062	.094	.759	1.019
	religion	-.026	1.432	.000	.985	.974
	Residence	.190	.317	.358	.550	1.209
	Educational level	-.365	.775	.221	.638	.694
	Occupation	-.637	.875	.531	.466	.529
	Past history 0f breast problems	1.197	.427	7.852	.005	3.310
	Family history of breast cancer	.059	.454	.017	.896	1.061
	BSE can help to prevent cancer	.124	.155	.643	.423	1.132
	BSE can help to cure cancer	.161	.288	.313	.576	1.175
	Constant	1.051	3.076	.117	.733	2.861

Table (2)shows that there is significant differences between those who performed BSE and those who did not regarding educational level, occupation and past history of breast conditions but there were no significant differences between the 2 groups regarding age, residence, marital status, family history of breast cancer. Also it illustrates that performers of BSE presented themselves more among those who were more than 40 years, urban residents, university educated, with professional education and married. Also among those with family history of breast cancer, performers constitute higher percentage (11.7%) compared with the non-performers (8.6%).

Concerning attitude and performing BSE, significant differences between groups were observed for absence of difficulty about BSE, religious or traditional barriers, trial to educate others and the need to

encourage others ($P < 0.05$). But there were no significant differences between the two groups for beliefs about that it is impressing, the need to know, how to do and that it will be cured if detected early. (Table 3)

Table 4 : this table shows that there was a significant association between past history of breast problems and performing BSE .

Figure (2) reveals that the most common barrier against BSE practice was absence of risk (39%) then fears of discovering any breast abnormality (34.5%). The least identified barrier is that the female were not convinced with BSE (3.5%).

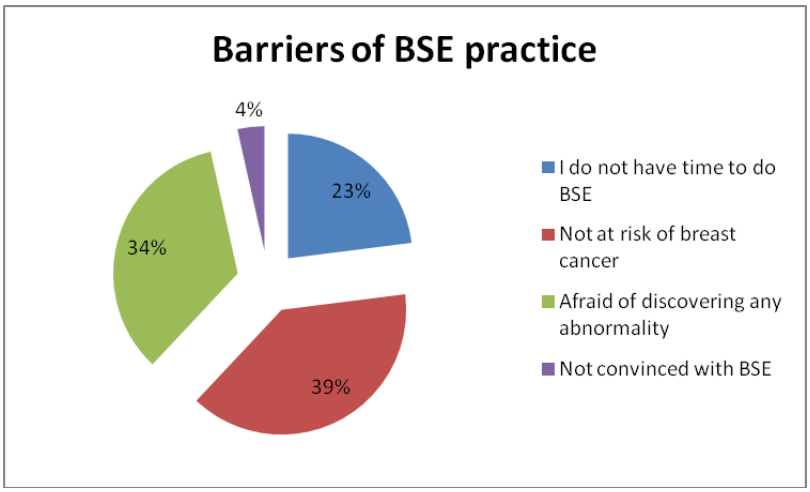

Figure 2: Distribution of barriers against the practice of breast self examination among non performers.

DISCUSSION

Health education about BSE can help women to learn about the structure and composition of their normal breasts, thereby enhancing their sensitivity to any abnormality as soon as it appears.

The current data reported that radio and TV (40.7%) are the main source of knowledge about breast self examination of the studied participants. This can be attributed to the wide availability and popularity of this source in Egypt and easy access of the participants.

These results are consistent with results of many studies [13-19] Inconsistent with the present study results, Demirkiran et al. [20] reported that the most important information sources about BSE were written materials (books, magazines and booklets), academic education and other health professionals and Gilani et al., [2] found that the main sources of participant information were relatives, friends, and neighbors. Also Al-Dubai et al.,[1] mentioned that newspapers and magazines were found the most common source of information on breast-self-examination (BSE) followed by information from medical health personnel.

In the current study, although (80%) of participants have heard about BSE; the majority of the sample (61.8%) have unsatisfactory level of knowledge about BSE. This can be attributed to the un availability of specialized information centers about BSE as well as poor awareness about the value of self care and health promotion.

This is in agreement with the results of Seif and Aziz[21] in an Egyptian study conducted on group of working women in medical and nursing faculties , they reported that 89% of the participants have un satisfactory level of knowledge about BSE. Similarly two studies on Saudi women showed low knowledge level about risk factors, screening and breast self examination[22], [23].

In contrast to the present study results, Okolie [24] in his study on females in Nigeria, found that breast self-examination awareness among the respondents was relatively high. This finding was also discovered by other researchers in their studies[1], [12], [13], [25 -27] .

In this study, although 80% know BSE, practice rate is relatively low. Only (44.5%) of those who heard about BSE had ever performed BSE and (35.6%) of the total sample have ever performed BSE.

This could be explained by that it is not enough to have information about BSE but it is also of vital importance to provide BSE instructions with an emphasis on long-term practice.

Results of many studies [25], [28-30] were consistent with our results also other studies in Iran and Egypt showed low practice rate of BSE [31] [32] .

On the other hand , results of a study conducted on urban women in Malaysia by Al-Dubai et al.,[1] reported that more than half of respondents in the study practiced BSE (55.4%). Also Parsa et al., [19] reported that (54%) of the participants had ever performed BSE. The higher rate of BSE performance in this study may be attributed to the high awareness about the risk of breast cancer among females in Malaysia due availability of specialized mass media information about breast cancer and screening methods.

Regarding results of the current study, better knowledge score was associated with old aged females (≥40 years), and married one which could be explained by that older and married females have more chances to be educated about BSE during routine antenatal visits.

Alharbi et al., [33] reported the same results and proved that among the predictors of satisfactory knowledge levels, older age, marriage, were the strongest significant variables .

However Abdel Aziz et al., [34] study results were inconsistent with the present study results .They reported that there was a clear association between the mean knowledge score of BSE and women's young age. Also Grunfeld et al.,[35] found that older women had poor knowledge score, and Okabia et al., [28] reported that age and marital status were not significantly related to knowledge score about BSE.

In this study, high educational level was associated with better knowledge about BSE which may be attributed to the fact that as educational levels increase, self reliance, self respect and willingness to know one's own body and the desire to practice preventive health measures increases .Although this agree with the results of many studies [1],[18], [28], [36] , [37], other studies found no relationship between knowledge of BSE and level of education[38].

Regarding the relation between knowledge score about BSE and practice of it, this study approved a significant relationship.

This is consistent with the results of Parsa et al.,[19] who reported that women with higher levels of knowledge about breast screening demonstrated higher performance rates of BSE. This is also consistent with previous findings suggesting that knowledge of breast cancer screening is an important facilitator for breast cancer screening behaviors[39].

The present study revealed that the most common barrier against BSE practice among those who know BSE, was feeling not at risk of breast cancer (39%).Similar findings were reported by others [9], [17], [19], [40].

Also in the current study fears of discovering any breast abnormality acts as barrier against BSE practice in (34.5%) of non performers.

These results agreed with the results of Al-Naggar et al.,[17] who reported that 'scared of being diagnosed with breast cancer is one of the barriers towards practice of BSE, also these findings are consistent with the results of other researchers in Iran [41] and Jordan [29].

These fears and worries of being diagnosed with cancer may be due to wrong perceptions about BC curability. Therefore, teaching the realistic risks of developing breast cancer and the importance of BSE can reduce these fears and raise awareness of better survival rates when breast cancer is detected early and

treated promptly. Health program planners have to consider these barriers in designing effective interventions to improve BSE.

The current study shows that the performers of BSE presented themselves more among those who are more than 40 years and those who are married. This can be explained by that, older age groups may have more worries about breast cancer which act as a high motive to practice BSE and the married women have more opportunities to be exposed to health care facilities and health care professionals during follow up at pregnancy and delivery. Also, amongst younger age the low suspicious risk may make this group less likely to practice BSE.

The results of studies conducted by others [9] ,[17], [37] [42] agree with our study, they revealed that age significantly influenced the practice of BSE among the participants.

Parsa et al., [19] contrasted with previous findings suggesting that younger and well-educated women are more likely to practice breast cancer screening.

Also this study reveals that among those with family history of breast cancer, performers constitute higher percentage (11.7%) compared with the non performers (8.6%).

This agreed with results of Al-Naggar et al., [17] who reported that family history of cancer significantly influenced the practice of BSE, also other studies showed a relationship between family history of breast cancer and regular BSE performance[43], [44].

On the other hand , there are studies which reported no relationship between a family history of breast cancer and BSE performance[41], [45] also Parsa et al.,[19] reported that women's family history of breast cancer was not a predictor for performing BSE.

Regarding attitude of the respondents, this study showed that (89.2%) of the respondents mentioned that breast cancer can be cured if detected early by breast screening.

This came in agreement with the results of other studies [28], [46] but were inconsistent with another studies which reported that a higher percentage of the women disagreed with this concept , and believed that breast cancer early detection does not make a differences[47].

In this study, the majority of the studied group have positive attitude towards BSE practice .This agreed with Sait et al .,[48] who found that the studied group was very enthusiastic to learn more about breast cancer. So an awareness program has to be developed including lectures, seminars, workshops to improve the medical knowledge of young women seeking education. Also Bala and Gameti,[49] found that nearly 2/3 (65.4%) of the respondents believed that it is necessary to perform breast self examination.

Rosmawati, [10] approved the same results .His results showed that the attitude seemed to be good in a higher proportion of the respondents (73.3%). This is an indicator of positive medical help-seeking behavior among the respondents.

Gilani et al.,[2] also found that there is generally a positive attitude which provides a fertile ground for awareness dissemination in order to improve knowledge and practices.

But the overall positive attitudes about breast cancer were more encouraging than results from Saudi Arabia and Nigeria [50], [23], which found that fifty percent of the participants had pessimistic ideas about curability of breast cancer, while only 29% agreed with screening for early detection.

CONCLUSION

This descriptive study provides valuable information that could be utilized by both researchers and those involved in public health action. The results concluded that the knowledge and the practice of BSE are inadequate among the respondents, but they have positive attitude towards the desire of being taught about BSE practice. The most common barrier against BSE practice was absence of risk (39%) then fears of discovering any breast abnormality (34.5%).

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RECOMMENDATIONS

A program aiming at dissemination of the appropriate knowledge and practice technique about BSE is highly recommended .

Different strategies should be implemented:

1- Breast self-examination training program should be adopted as an element of the services offered generally to the working females aided by provision of effective updated audiovisual aids and breast examination facilitation device as breast models.
2- Establishment of specialized centers in different governorates of Egypt, rural and urban areas to promote and integrate BSE training programs to all females especially high risk groups and the removal of barriers for performing BSE.
3- All channels of the national mass media could efficiently be utilized to disseminate an efficient knowledge and practice toward BSE by presenting specific programs associated with women's health.
4- Further researches should be encouraged to include different population groups to determine any differences

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