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Original Article

## Knowledge and practice of breast self-examination among sample of women in Shatra/Dhi-Qar/Iraq

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### ABSTRACT

**Objectives:** The knowledge and practice of breast self-examination (BSE) and breast cancer (BC) warning signs for the prevention purpose among females in Technical Institute of Shatra, Dhi-Qar Province, Iraq were investigated.

**Methods:** A cross-sectional survey by self-administered questionnaire prepared and 200 participants surveyed from January to March 2017 included 122 students, 45 teaching staff, and 33 employees.

**Results:** The results showed that 73% of students, 88% teaching staff, and 85% employees heard of BSE. About 55.7% of students, 44% teaching staff, and 45.4% employees know how to do BSE.

Only 25.4% students, 24.4% teaching staff, and 21.2% employees actually practiced BSE.

Fifty-four percent of students, 42% teaching staff, and 37% employees know that a mammography is a tool for screening of BC. Most of the participants had knowledge about warning signs of BC but only half of all the participants know that the best time for BSE is 5th to 7th day after menstrual cycle and only 31% know that the correct age to do BSE is >18 year age.

TV and internet were the main sources of knowledge about SBE for 47% of all participants.

There was a low awareness of BC and BSE among the participants and there are a need for continuing medical education programs by TV and the internet about BC warn signs, BSE and risk factors.

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### 1. Introduction

Breast cancer (BC) is the first kind of cancer among women and the second most common cancer worldwide with about 1.67 million new cases in 2012 (25% of all cancers). It is the fifth cause of death from all cancers (522,000 deaths) and there were 6.3 million women alive with BC at the five years before 2012.<sup>1</sup>

Breast cancer became the first cause of cancer death in the third world countries, because of the shift in lifestyle which causes an increase in incidence, and the lack of clinical advances to fight the disease.<sup>2</sup>

It is the most common cancer in Iraq; it ranks the first in all the years from 1986 to 2009, in 2009 there were (2906) cases among females accounting for 19.5% of all newly diagnosed cancer cases with an incidence rate of about (18.45) per 100,000 female populations.<sup>3</sup>

The age-specific incidence rate of BC was about 99.2 per 100,000 in the age (45–49) years, followed by 92.3/100,000 female in the age (60–64) years.<sup>4</sup>

The study of Saadat<sup>5</sup> showed that the rising in incidence in the Middle East might be because of the change to the western lifestyle like; dietary habits, lack of exercise, late marriage, delay of first pregnancy to the late 20 s and 30 s and a decrease in breastfeeding duration.

In Dhi-Qar Province, it was the first with 115 cases, 12.3% the number of casualties and 6.34 per 100,000 women.<sup>6</sup>

Early detection of BC has an important part in decreasing mortality and morbidity and breast self-examination (BSE) is an important screening way for early detection, but, women in the third world countries do not practice BSE for many reasons.<sup>7,8</sup>

Mammography is the best diagnostic tool to detect BC but it is not always practiced in Iraq because of the low awareness, high cost, high technology and expertise needed. False negative for mammography is higher at a younger age in Iraq where cases in young women are common.<sup>9,10</sup>

Most of the early breast tumors are self-discovered and most of the early discoveries are by BSE.<sup>10,11</sup>

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Young women have delayed diagnosis of BC because of lack of awareness, social customs and bad level of health care.<sup>5</sup>

A survey<sup>12</sup> about BSE among a sample of educated Iraqis women showed that half of them had a low knowledge score (<50%). Although 90.9% had heard of BSE, only 48.3% performed it. These findings justify the demand for increasing efforts to support the breast cancer control programs in Iraq.

A recent study carried by<sup>13</sup> found that there was bad knowledge and practice towards BC among women in Baghdad and a total of 61.2% of the participants' women had a low knowledge, only 30.3% practice BSE and 41.8% said that they did not know how to practice it. The purpose of the present study is to evaluate the knowledge and practices of breast BSE and the early signs of the disease among Iraqi women in Dhi-Qar province.

## 2. Methods

A cross-sectional study was carried out among females in Technical Institute of Shatra, Dhi-Qar Province, Iraq to know the knowledge and practice of BSE among a total of 200 women, consisting, 45 teaching staff, 122 students, and 33 employees.

Consecutive sampling technique was used by closed-end in Arabic questionnaire to collect data developed by the researchers and based on a review of the literature. The questionnaire contained questions on socio-demographic features, knowledge, and practice towards breast BC and BSE.

Necessary permission was obtained from the dean of the institute and the purpose of the study was explained to each woman, the women who refused to participate were excluded, data collected between January and March 2017.

## 3. Results

The greater percentage of women surveyed 126 (63%) live in a city and 74 (37%) live in a town or a village, 122 (61%) were students had age range of lower than 25 years, there were 45 (22.5%) of teaching staff and 33 (16.5%) of employees have age range of more than 25 years. Most of the sample, (59%) were unmarried and (41%) were married (Fig. 1) (Table 1).

In the sample of this study, 88% of teaching staff, 84% of employees and 72% of students had information about BSE, 24% teaching staff, 21% employees and 26% students said that they practice BSE (Table 2).

The majority of teaching staff, 72% employees 70% and 37% students had the right information that the best time for BSE is 5th to 7th day after the menstrual cycle.

Television and internet were the main sources of knowledge about SBE for 47% of all participants, health centers and family

**Table 1**

Demographic features of the participants.

Features	NO (%)
<i>Age</i>	
<25	122 (61%)
25–30	9 (4.5%)
30–35	19 (9.5%)
35–40	32 (16%)
>40	18 (9%)
<i>Live in</i>	
In a city	126 (63%)
Town or village	74 (37%)
<i>Job</i>	
Teaching staff	45 (22.5%)
Students	122 (61%)
Employees	33 (16.5%)
<i>Marriage</i>	
Yes	82 (41%)
No	118 (59%)

were the main sources for 27% and 26% of participants respectively.

Only 42% of teaching staff, 37% of employees and 45% of the students know that mammography is the best tool for BC screening.

## 4. Discussion

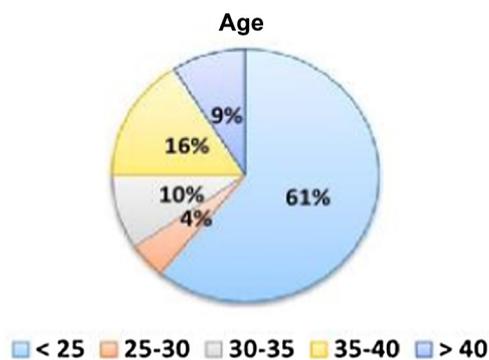
Breast self-examination is an ideal approach to notice breast changes and the change from the ordinary appearance could be an indication of illness, knowledge about signs, risk factors, and prevention factors are important so ladies can recognize any symptoms as early as possible.<sup>10</sup>

The main findings of this study were that the participants have a good idea about the significance of BSE, about 79% of all women had heard of the importance of BSE for BC screening, know the warning signs and 53% of them know how to do it but only small number 49 (24%) actually practice BSE and only 43% know that the mammography is the best diagnostic tool to detect BC, Table 1, these percentages were lower than in a study done in Kirkuk University, Iraq<sup>14</sup> where 42.6% perform BSE and lower than other study among educated Iraqis affiliated to two Iraqi universities done by<sup>15</sup> in Baghdad where 48.3% perform BSE and this result is slightly lower compared to a study among sample of educated Iraqi women affiliated to 6 major Iraqi universities in Baghdad who found that all 93.9% of the women had heard about BSE, the main source of knowledge was television 39.9% and 53.9% of the women practiced BSE.<sup>12</sup>

This study agrees with Ali<sup>16</sup> who indicated that majority of a female in Al-Mansur Institute of Medical Technology /Baghdad/ Iraq, had good knowledge about BC and BSE but with bad practice. TV and radio were the first sources of information and 42% of the respondents had good knowledge of symptoms of BC and 78% know well about BSE but only 33% respondents practice BSE.

In this study there was no relationship between practice and age, in which older age group (teaching staff and employees) had poor practice compared to younger age group (students) which is different to other studies that found association<sup>17,18</sup> while similar from studies done in United Arab Emirate, they found no association between age and performing BSE.<sup>7,11</sup>

If we compare the results of this study about practicing BSE with other studies in neighboring countries, we shall find that it is better than in Bushehr city (Iran), where only 7.6% performing BSE<sup>19</sup> and better than Al-Sharbatti study<sup>10</sup> where 22.7% practiced BSE and better than Al-Azmy results<sup>20</sup> in Kuwait where 21% practiced BSE.



**Fig. 1.** Age range percentage for the participants.

**Table 2**  
Knowledge and practice of BSE among women in this study.

Knowledge and Practice	Teachers (45) No (%)	Students(122) No (%)	Employees(33) No (%)	All(200) No (%)
Do you hear of BSE? (Yes)	40 (88)	89 (73)	28 (85)	157 (79)
How did you get the knowledge about BSE?				
From TV and Internet	24 (53.3)	53 (43.4)	17 (51.5)	94 (47)
Health Centers	7 (15.5)	42 (34.4)	5 (15.2)	54 (27)
Friends and family	14 (31.1)	27 (22)	11 (33.3)	52 (26)
Do you know the correct age to do BSE?				
After 18 years	17 (37.7)	33 (27)	12 (36.4)	62 (31)
25–30 years	11 (24.4)	14 (11.5)	7 (21.2)	32 (16)
30–35 years	9 (20)	19 (15.6)	8 (24.2)	36 (18)
After 40 years	8 (17.7)	56 (46)	6 (18.2)	70 (35)
Do you know how to do BSE? (Yes)	20 (44)	68 (55.7)	15 (45.4)	103 (52)
Do you practice BSE? (Yes)	11 (24.4)	31 (25.4)	7 (21.2)	49 (25)
Do you know the best time for BSE?				
During menstrual cycle	4 (8)	49 (40)	3 (9)	47 (24)
5–7th day after menstrual cycle	32 (72)	45 (37)	23 (70)	100 (50)
10–15 days after the cycle	9 (20)	28 (23)	7 (21)	44 (22)
Do you know the mammography? (Yes)	19 (42)	55 (45)	12 (37)	86 (43)
If yes, when should mammography be done?				
>30 year age	4 (21)	18 (32)	0	22 (26)
>35 year age	1 (5.3)	5 (9)	3 (25)	9 (10.4)
>40 year age	6 (31.6)	24 (44)	4 (33)	34 (41)
>50 year age	8 (42.1)	8 (15)	5 (42)	21 (24)
Do you know the warning signs of BC? (Yes)				
Painless lump in the breast or the underarm	29 (64)	101 (83)	21 (64)	151 (75)
Change the color or swelling of the breast.	22 (49)	111 (90)	26 (79)	159 (80)
Change shape or size of the breast.	37 (82)	99 (81)	28 (85)	184 (92)
Skin puckering.	29 (64)	91 (75)	21 (64)	141 (70)
Nipple pulling.	33 (73)	96 (79)	26 (79)	155 (78)
Suddenly discharge from the nipple.	37 (82)	89 (73)	27 (82)	153 (77)

## 5. Conclusion and recommendations

The knowledge of women in this study about BC was poor. In addition, the BSE practice was very low and more efforts are needed to promote BSE and teach women the right technique to perform CBE, and mammography by using media such as TV and the internet as these constitute the main sources of information for most women.

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