

## Factors Influencing Mammography Participation in Iraqi Women

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### **Abstract:**

**Objectives:** The main aim of the study was to assess the factors influencing mammography participation in Iraqi women

**Methodology:** A descriptive design was carried out on 100 women volunteer. The data were collected from women referred to the Outpatient Clinic of the Oncology Teaching Hospital and the Iraqi National Cancer Research Center of Baghdad University during the period from June to September 2016.

The questionnaire was composed of two section: 1-demographics and clinical data 2-The Factors influencing mammography which include four categories; 1) women's attitudes toward breast health, 2) knowledge and misconceptions about breast cancer, 3) cultural, religious and societal values, and 4) resources and accessibility of medical services.

**Results:** About 53% of the study population was within age group (40-49) years, (81%) were married, (28%) were College graduates (52%) were housewife while the majority (97%) were income moderate. Approximately of the sample (74%) was had family history, (21%) had breast cancer and (50%) for women not done a mammogram The results of the presented work demonstrated that, over (29%) of sample were willing to undergo a diagnostic mammogram for a breast complaint and (87%) believed survival was increased with early detection. However, (77%) of samples were willing to undergo screening mammography.

Religion and culture were not barriers to mammography for over (86%) only (47%) reported being worried about divorce if diagnosed with breast cancer. Limited resources and lack of access to medical facilities were identified as barriers in lack of resources to treat breast cancer if diagnosed (29%), concern about personal safety during traveling to medical centers (48%), and difficulty in reaching the medical centers (35%). Misconceptions about breast cancer were reported more frequently by sample, including beliefs that breast cancer can be contagious.

**Conclusions:** Our results illustrated that, Iraqi women complain many barrier of mammography screening which include attitude, knowledge and misconceptions about breast cancer, some cultural, religious and societal values, and resources and accessibility of medical services.

**Recommendation:** The study urges promoting public health educational programs to elevate the level of awareness regarding the necessity to support women barrier at screening of breast cancer in Iraq.

**Keywords:** Factors influencing, Barrier, Mammography, Breast Cancer, Iraq

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### I. Introduction

Breast cancer (BC) is a major health problem for the patients and the community. The incidence, mortality, and survival rates for BC vary across the world<sup>1</sup>. The Iraqi Cancer Registry<sup>8</sup> revealed that among an estimated population size of 32,500,000, a total of 21,101 new cases of cancer were registered in 2012<sup>2</sup>. During that year, 4,115 cases of breast cancer were reported, accounting for 19.5% of all newly diagnosed malignancies and 34% of the registered female cancers, with an incidence approximating 22 per 100,000 female populations. The highest frequency was observed in middle-aged women (45-49 years old), whereas the peak age-specific incidence was reported in women 50-54 years old<sup>3</sup>. The World Health Organization (WHO) documented that early detection and screening, when coped with appropriate therapy, could offer a reduction in breast cancer

mortality; displaying that the poor survival in less developed countries, including Iraq, is mainly attributed to the lack of strategic well designed diagnostic policies and inadequate treatment facilities<sup>4,5</sup>. Early detection means finding and diagnosing a disease earlier than might have happened if you'd waited for symptoms to start<sup>6</sup>. Mammography is the only screening tool proven to reduce mortality] with evidence that adherence to yearly screening mammography can reduce BC mortality by 22-35% for women aged 50 years or older<sup>7,8</sup>. In Iraq, although facilities for mammographic screening are available in the major governmental and private hospitals, there is no nationwide systematic program for breast screening at the present time. Various factors have been reported to have an effect on screening rates, including women's socioeconomic status, their knowledge of risk factors, and having a family history of BC<sup>9</sup>. Barriers to BC screening have been identified in a variety of populations<sup>10</sup>. The most common barriers to screening were membership in an ethnic minority and concerns about pain, radiation, and embarrassment. The recommendation of a health care provider for mammography was found to be the most common facilitator for engagement of women in this health behavior<sup>11</sup>.

## II. Methodology

**2.1 Design of the study:** Descriptive analytical.

**2.2 Sample of the study:** One hundred of attending women and age 35 and older, collected during 2016 were invited to voluntarily complete a study.

**2.3 Setting of the study:** The data were collected from women referred to the Outpatient Clinic of the Oncology Teaching Hospital and the Iraqi National Cancer Research Center of Baghdad University during period from June to September 2016

**2.4 Instrument construction:** The questionnaire was organized as following:

**2.4.1.** Demographics and clinical data,

**2.4.2.** The Factors influencing mammography which include four categories; 1) women's attitudes toward breast health (13 items); 2) knowledge and misconceptions about breast cancer (11 items); 3) cultural, religious and societal values (6 items), and 4) resources and accessibility of medical services (5 items).

all items were scored in a 3-point Likert scale (1=yes; 2=no; 3= don't know).

Statistical methods: The data were analyzed by using the SPSS, version 22. The descriptive and inferential statistical data analysis approaches were used in the analysis.

## III. Results

**Table 1.** Distribution of the sample by their demography and clinical characteristics

Variables	Number	Percentage
<b>Age (years)</b>		
Less than 40	19	19
40-49	53	53
50-59	22	22
More than 60	6	6
Total Mean=44.95±9.38	100	100
<b>Religious</b>		
Muslim	98	98
christen	2	2
Total	100	100
<b>Marital status</b>		
Married	81	81
Single	15	15
Widowed	2	2
Divorced	2	2
Total	100	100
<b>Educational Level</b>		
Not read and write	5	5
Read and write	2	2
Primary school	15	15
Intermediate	16	16
Secondary	19	19
College graduate	28	28
Postgraduate	15	15
Total	100	100

<b>Occupation status</b>		
Employed	44	44
Housewife	52	52
student	4	4
Total	100	100
<b>Children</b>		
Not married	15	15
No	13	13
1-3	37	37
4-6	31	31
More than 6	4	4
Total	100	100
<b>Income</b>		
High	9	9
Moderate	79	79
Low	10	10
Unknown	2	2
Total	100	100

Regarding the demographic characteristics of the participants, (53%) of the study population was within age group (40-49) years (mean44.95). The majority of women (81%) were married, were Muslim, and had college education; (52%) were housewife and had children (1-3). Almost 79% of the women belonged to the moderate income category.

**Table 2.** Distribution of the sample by their clinical characteristics

Variables	Number	Percentage
<b>Had breast cancer</b>		
Yes	21	21
no	79	79
Total	100	100
<b>other cancers</b>		
Yes	6	6
no	94	94
Total	100	100
<b>family history of breast cancer</b>		
Yes	25	25
No	74	74
Don't know	1	1
Total	100	100
<b>used contraceptives (85)</b>		
Yes	24	24
no	61	61
Total	85	100
<b>smoke cigarettes</b>		
Yes	3	3
no	97	97
Total	100	100
<b>Breastfeeding (76) *</b>		
Yes	64	64
no	12	12
Total	76	100
<b>Age first menstrual period</b>		
<11	12	12
11-12	29	29
≥13	59	59
Total of mean=11.95	100	100
<b>Number of times the Mammogram</b>		
Not	50	50
Once/year	3	3
One time	22	22
2-3 times	25	25
Total	100	100

Responses to risk factor questions included information about personal history of breast cancer (21%), family history of breast cancer (74%). Only 6% had other cancers, (61%) no oral contraceptive/hormone use, (97%) no smoking, (64%) breastfeeding. The average age of menarche was (11.95) years for sample and (50%) for women not done a mammogram.

**Table 3.** Attitude about Breast Care and Breast Cancer

List	Items	Yes	No	Don't know	Mean
1.	Willing to have screening mammography	77	11	12	1.35
2.	Willing to have mammogram if breast complaint	29	64	7	1.78
3.	Had mammogram at least once	26	69	5	1.79
4.	Prefer to have mammogram abroad	21	68	11	1.90
5.	Embarrassed to have a mammogram	37	52	11	1.74
6.	Screening is not a priority	24	55	21	1.97
7.	Had prior clinical breast exams (CBE)	78	7	15	1.37
8.	Interested in lowering risk for breast cancer	93	3	4	1.11
9.	Interested in learning about breast cancer	90	6	4	1.14
10.	Interested in supporting breast cancer research	91	5	4	1.13
11.	Dissatisfaction of breast healthcare (equipment)	34	44	22	1.88
12.	Willing to seek medical advice for breast complaint	93	3	4	1.11
13.	Willing to have diagnostic breast workup	76	13	11	1.35

This table shows that, 29% of the sample were willing to undergo a mammogram for a breast complaint, 77 % were willing to have a screening mammogram and only 26 % reported having had a mammogram at least once. Only (21%) of the sample preferred to have a mammogram abroad, and 37% reported they were embarrassed to have a mammogram. Breast cancer screening was not a priority for 24% of the sample, and 78% reported having had a prior clinical breast examination (CBE). Below half (44%) of women were satisfaction of breast health care equipment) The vast majority of the participant were interested in lowering their risk for breast cancer (93%), learning about breast cancer (90%) and to a lesser extent, supporting breast cancer research (91%). Almost all (76%) women reported they were willing to have a diagnostic breast workup; and 93% were willing to seek medical advice for a breast complaint.

**Table 4.** Knowledge and misconceptions

no	items	Yes	No	Don't know	Mean
1.	Mammography is helpful in early detection of breast cancer	85	4	11	1.26
2.	Mammogram may cause cancer	21	28	51	2.30
3.	Mammogram treats cancer	18	34	39	2.21
4.	Mammography is painful	12	52	36	2.24
5.	Breast cancer affects women of all racial and economic classes	86	4	10	1.24
6.	Breast cancer is common	83	4	13	1.30
7.	Breast cancer affects old women only	15	67	18	2.03
8.	Breast cancer is not contagious	79	11	10	1.31
9.	Breast cancer is treatable	80	6	14	1.43
10.	Increased survival if breast cancer is detected early	87	4	9	1.22
11.	Increase risk of breast cancer with positive family history	79	9	12	1.33

The majority of the sample (85%) were aware that mammography is helpful in early detection of breast cancer, however, (21%) thought mammography may cause cancer, 18% thought that mammography can treat breast cancer and 12% thought mammography was painful & 11% thought breast cancer is contagious

**Table 5:** Cultural, religious and social barriers

no	items	yes	no	Don't know	Mean
1.	Mammography is against religious belief	5	86	9	2.04
2.	Mammography is against culture and traditions	4	91	5	2.01
3.	Family encourage screening mammography	83	6	11	1.28
4.	Friends encourage screening	80	8	12	1.32

mammography					
5.	Disgrace to family when diagnosed with breast cancer	26	66	12	1.82
6.	Worried about divorce if diagnosed with breast cancer	47	26	27	1.85

Almost sample (86%) agreed that mammography was NOT against religious beliefs and only 4% thought it was against culture or tradition. 83% of sample reported being encouraged by family and 80% reported being encouraged by friends to get a mammogram. Only 26% of women thought it would be a disgrace to family to be diagnosed with breast cancer and below half 47% reported being worried about divorce if diagnosed with breast cancer.

**Table 6:** Sources and access to medical services

no	items	yes	no	Don't know	Mean
1.	Availability of mammography	70	6	24	1.53
2.	No personal resources to treat breast cancer	29	43	28	1.98
3.	Worried about safety to reach medical facilities	48	40	12	1.63
4.	Difficulty to reach medical facilities	35	54	11	1.75
5.	Lack of options to treat breast cancer abroad	48	37	15	1.66

This table shows that, response to resource-related barriers to breast care included lack of availability of mammography only (6%), and lack of resources to treat breast cancer if diagnosed (29%), the sample also reported access barriers to breast health care services including: concern about personal safety during traveling to medical centers (48%), difficulty in reaching the medical centers (35%), and inability to travel abroad to manage breast disease and treat breast cancer (48%).

#### IV. Discussion

Breast cancer is the most common cancer in Arab women<sup>12</sup>. As breast cancer is usually diagnosed in late stages in countries with limited resources or primarily rural areas<sup>13</sup>, an intervention aimed at detecting breast cancer in earlier stages may likely improve outcomes from the disease<sup>14</sup>. In Iraq, breast cancer is the most common cancer in women. Our study showed that most participating women had college education (28%) of sample, however. This may contribute to the more encountered knowledge and misconceptions about breast cancer among the women which may be a barrier for early detection for breast cancer. A study in Saudi Arabia in 2009 to assess knowledge about breast cancer among female students showed limited knowledge about breast cancer among high school and college female students, however, the students were very enthusiastic to learn about breast cancer and its prevention<sup>15</sup>. Iraq study in 2012 found that, about half of the participants had a low knowledge score (< 50%); only 14.3% were graded as “Good” and above<sup>16</sup>. In Gaza, efforts to improve early detection of breast cancer should also be directed at learning and understanding the barriers to breast cancer screening, empowering women to seek health care, and providing infrastructure for appropriate screening, diagnosis and treatment<sup>17</sup>. Our study identified numerous barriers for early detection which can be used as a base for interventional educational programs to increase awareness about the role of mammography and breast cancer. Specifically, the results of our survey suggest that any cultural based intervention should focus on providing knowledge about the treatability of breast cancer, the benefits of early detection, and dispelling misconceptions that breast cancer is contagious.

Although, 29% of the samples were willing to undergo a mammogram for a breast complaint, 77 % were willing to have a screening mammogram and only 26 % reported having had a mammogram at least once. Although a common cultural practice among Middle Eastern societies is not to look for a health problem if there is no physical complaint but 47% reported being worried about divorce if diagnosed with breast cancer. The majority of women is interested in lowering their risk of breast cancer and have no religious or significant cultural barriers to mammography. Thus educational projects to promote clinical and mammographic screening for breast cancer are an appropriate starting point in helping to increase early detection of breast cancer<sup>18</sup>. A

study of Palestinian women in West Bank also identified a combination of personal, cultural and environmental barriers for which educational programs and allocation of resources for early detection of breast cancer are also suggested<sup>17</sup>. Other studies of attitudes toward breast cancer screening among women in the Middle East suggest that some of the barriers to screening mammography may be mitigated by their age. A recent study in 2009 on Qatari women showed that breast cancer screening is utilized more frequently by the younger Qatari women with higher educational levels<sup>19</sup>. This would also allow for comprehensive understanding of the health attitudes and provide more filtered and specific interventions to improve early detection of breast cancer. Other important barriers such as economic and geographical barriers<sup>20</sup>

## V. Conclusion

Although cultural, geographic and socioeconomic barriers for early detection of breast cancer among Iraq women, our study show that these women are interested in obtaining appropriate care if, or when, a specific breast problem. they interested in learning more about breast cancer and in lowering their risk. They also realize that early detection of breast cancer can improve survival rates and mammography can help with early detection. Mammography is not against religious or cultural values. This may be attributed to a combination of misconceptions, socioeconomic barriers and lack of availability and accessibility to medical care. Educational programs targeting promotion of breast cancer screening in Iraq, addressing the misconceptions about breast cancer and mammography, reinforcing societal positive attitudes toward breast health care including support from family and friends may be necessary to improve the rates of early detection of breast cancer. Those educational programs need to be conducted in a multidisciplinary fashion targeting both the public and the health care sectors. Any intervention to increase early detection of breast cancer should also work on creating infrastructure for proper treatment and management of breast cancer in order to be able to save lives.

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