

# Effects of awareness and knowledge on breast cancer among intellectuals affiliated to an Iraqi Ministry

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**Abstract- Background:** Breast cancer is the commonest cancer among females. The lack of adequate skills and knowledge precludes early detection of breast cancer.

**Aim of study:** To evaluate the level of the awareness and knowledge on breast cancer among different levels of educated women affiliated to a Ministry in Iraq.

**Methodology:** The sample included 75 females who were subjected to two sets of questionnaire before and after a symposium about breast cancer which has been held in the 15<sup>th</sup> of April 2013 for 3 hours at the Ministry of Labor and Social Affairs. Twenty questions were asked concerning the frequency of breast cancer, risk factors, and means of early detection, prevention and treatment. The knowledge and attitude were included for evaluation.

**Results:** There was a significant increase in scoring regarding risk factors, knowledge and attitude. About 55% of the respondents correctly answered 50% of the total score after the lectures than before (30.7%), ( $p=0.01$ )

**Conclusion:** The level of awareness and knowledge on breast cancer among the attendees were significantly higher after presenting the lectures.

**Recommendations:** Educational public health awareness campaigns should be promoted to cover all sectors of the community reaching rural areas; where women are under educated and might suffer from barriers due to religious impact.

**Index Terms-** Breast cancer, awareness, knowledge, intellectuals, Iraq.

## I. INTRODUCTION

Serious attempts to control breast cancer, as a major health burden among women in the world in general and Iraq in particular [1,2], are encouraged due to the noticeable rise in its incidence rates, the higher victims at younger ages, and the advanced stages at time of diagnosis. This was the starting point of the Iraqi national program for early detection of breast cancer, which was initiated in 2001 with the objective of down staging this disease at the time of presentation. Since then specialized centers and clinics for early detection of breast tumors have been well-known in the major hospitals in all Iraqi provinces. [2, 3, 4.]

The World Health Organization (5) and the Breast Health Global Initiative (6) provide guidelines for early detection and screening in middle and low-income countries that encourage public health awareness programs. It has been demonstrated that

early detection and screening of breast cancer, particularly when combined with adequate therapy, could lead to a fall in breast cancer mortality [7].

In 2009 a "National Breast Cancer Early Detection and Research Program" was organized by the authority of the National Cancer Research Center of Baghdad University in order to achieve main objectives that include enhancing knowledge and skills of health personnel, promoting relevant research studies, and raising the awareness of the general population to the common risk factors and means for early detection of the disease.

## II. MATERIAL AND METHODS

This is a prospective study which is carried out by the Iraqi National Cancer Research Center. The data were collected during a 3hour symposium that was held at the Ministry of Labor and Social Affairs in the 15<sup>th</sup> of April 2013 as part of the awareness activities of Iraqi national cancer research program. The main objective focused upon promoting education among the general populations. Seventy five attendees were asked to answer twenty questions before and after the presented lectures as shown in table 1. The questionnaire paper was designed to evaluate the level of knowledge in a studied sample about breast cancer and means of its control.

Twenty questions have been grouped to simplify the calculation. The total score of all questions was calculated before and after the lecture. The four groups of questions were designed as follow:

1. Questions about frequency of breast cancer.
2. Questions about means of early detection
3. Questions about breast cancer risk factors.
4. Questions about prevention and treatment approaches.

Statistical analysis was performed with the SPSS. Univariate data were summarized using standard descriptive statistics, tabulation of categorical variables and histograms of numerical variables. T-test was used to compare means of the continuous variables. Exact tests were used to calculate the p value. In all statistical analyses, a p value < 0.05 was considered significant.

III. RESULTS

**Table 1: Questionnaires used for evaluation of the respondents knowledge about breast cancer (same pre and post assessment questionnaire).**

No.	Question
q1	Rank of breast cancer in Iraq
q 2	Rank of breast cancer in the world
q 3	Means of early detection of breast cancer
q 4	The best time to do breast self examination (BSE)
q 5	BSE in menopausal woman
q6	The effect of aging on the possibility of breast cancer
q7	The effect of infertility on the possibility of breast cancer
q8	Risk of breast cancer in menopausal woman over 55yr
q9	Risk of breast cancer if menarche starts at 11 years
q10	Risk of of developing breast cancer if the ovaries were removed at an early age
q11	Impact of obesity in postmenopausal women at risk for breast cancer
q 12	The effect of the use of hormonal contraceptives on the likelihood of developing breast cancer
q 13	Do you think that alcohol may increase the likelihood of developing breast cancer!
q 14	Do you think that radiation exposure may increase the likelihood of developing breast cancer!
q 15	Possibility of treating breast cancer through!
q16	Means of breast cancer control
q 17	The main reason behind the increase in likelihood of developing breast cancer in obese women after menopause
q18	Methods of prevention of breast cancer
q 19	Factors that increase the risk of developing the disease
q 20	Factors that help to decrease the likelihood of breast cancer

Seventy-five respondents were involved in the pre assessment while only fifty-three respondents answered the post assessment questionnaire. The mean age of attendees was 38.01 years (SD ± 10.1). The demographic distribution of the attendees is summarized in the tables 2.

**Table-2: The demographic distribution of the sample according to marital status and educational levels:**

- Educational level	Frequency	Percent
Primary school	9	12.0
College or Institute graduate	66	88.0
Total	75	100.0
Marital status		
Married	50	66.7
Non-married	25	33.3
Total	75	100.0

Table (2) illustrates that 88% of the study population were College or Institute graduates and 66.7% were married.

**Table-3: Comparison of scores of answers before and after the lecture.**

Questioners	Group	N	Mean ± SD	P
Knowledge and attitude	Pre-Test	75	7.83 ± 3.17	0.006*
	Post-Test	53	9.53 ± 3.52	

The mean scores of the answers were significantly higher after the lecture than before the lecture (p = 0.006).

**Table-4: Associations between knowledge and Attitude ranks before and after the lecture.**

Group		Knowledge and attitude ranks		Total	p
		Less than 50 %	50 % or more		
Pre-Test		52	23	75	0.01
		69.3%	30.7%	100%	
Post-Test		24	29	53	
		45.3%	54.7%	100%	
<b>Total No of the study population</b>		<b>76</b>	<b>52</b>	<b>128</b>	<b>100%</b>
		<b>59.4%</b>	<b>40.6%</b>		

At the same time there was a significantly larger proportion (54.7%) of individuals who had answered correctly more than 50% of the total score in the post assessment compared to the pre assessment stage (30.7%), (p = 0.01) .

#### IV. DISCUSSION

Breast cancer continues to represent a major public health problem, and extra gains in survival might be achieved by encouraging women to look for aid more quickly [8]. It has been documented that breast self examination (BSE) along with diagnostic mammography could offer cost effective approaches to early detection of the disease (9). Unfortunately, a high percentage of women are unaware of the benefits of BSE and its procedure [10]. Accordingly that useful and simple examination is often neglected [11].

Our study illustrates that the level of knowledge and education about breast cancer could enhance awareness in women. That has been evident by the significant increase in the rate of correct answers and the higher achieved scores in the level of knowledge and attitude about breast cancer after being instructed by the presenting lectures.

Relatively close findings were displayed in a previous similarly designed study from Saudi Arabia which emphasized the limited knowledge and practice among female Saudi students in schools and colleges [12]. A Jordanian study conducted among 163 nurses and 178 teachers revealed that profession, age and family history significantly influenced breast cancer awareness. Most of the nurses (88.3%) were able to correctly answer the questions; the mean awareness score for nurses was higher than that for teachers. [13].

A similar study among female health care workers in Tehran demonstrated that their knowledge was unsatisfactory and concluded that Iranian women needed more education about breast cancer [14]. That finding was endorsed by another survey from the Islamic Republic of Iran [15]. On the other hand, in a teaching hospital in Karachi, 35% of Pakistani nurses had fairly good level of knowledge about breast cancer risk factors [16] .

In our study it was concluded that among the variables which might affect the level of knowledge, as revealed by this analysis, were risk factors, prevention, treatment and practice of BSE; all of which being vital parameters. Our results are thus consistent with the findings recorded in other surveys which highlighted that behavioral based health interventions could promote women knowledge; change their attitudes and beliefs about breast cancer and the relevant screening and control measures (17, 18).

Fortunately, the Iraqi National Program for Early Detection and Breast Cancer Research has been promoted to involve other collaborating countries in the region (19) in a practical attempt to implement national cancer control strategies. The favorable findings documented in our study justify expanding the spectrum of the implemented awareness campaigns and increasing efforts in order to reach remote rural areas where women are significantly less educated, imprisoned by the cultural impact and thus neglecting their well being needs. Enhancing the potential effectiveness of the visual media in modifying health behavior and promoting public education among the general population about BSE is essentially emphasized as well.

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