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Knowledge and Concepts about Breast Cancer among age groups of Iraq Women at Oncology Teaching Hospital in Baghdad

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Abstract

Objective:
The main aim of the study is to determine the level of knowledge and concepts about breast cancer among age groups of Iraqi women attending the main breast cancer early detection center in Baghdad.

Methodology: This cross-sectional study recruited 320 women attending the main breast cancer early detection center in Baghdad aged between (18–63years) collected on May 2010. The sample was divided into three age groups of the sample. The knowledge and concepts about breast cancer are assessed through answers of participants to a structured questionnaire which include 2 parts: part I- knowledge about breast health behaviors and risk factors of breast cancer and part II- concepts about breast cancer Statistical analysis of data is done by application of (SPSS version 14) program.
Results: Results: The results of this study show that there is no significant between knowledge and concepts of breast cancer among three age groups (p value>0.05) except on knowledge about childhood radiation exposure as a risk for breast (p value<0.01The total of mean of participants' knowledge and concepts about breast cancer had increased with age.
Conclusion: Our conclusion is that the Iraqi women have poor knowledge about breast health behaviors and risk factors and bad concepts towards breast cancer.
Recommendation: Attitude and practice of breast cancer and BSE can be enhanced through promotion of their knowledge about breast cancer and learning Iraqi women the right way of BSE, this can be achieved by promotion of teaching programs through visual media, symposiums, meetings, educational workshops and conferences.

Key words*: Knowledge, attitude and concepts of breast cancer.*

I. Introduction

Breast cancer is the most common cancer in women in Iraq [1,2] and worldwide, comprising 16% of all female cancers. It is estimated that 519 000 women died in 2004 due to breast cancer, and although breast cancer is thought to be a disease of the developed world, a majority (69%) of all breast cancer deaths occurs in developing countries (WHO Global Burden of Disease, 2004) [3]. Medical advances have shown that one-third of all cancers are preventable and a further one-third, if diagnosed sufficiently early, is potentially curable. This observation demands that cancer control should be of increasing priority in the health care programs of developing countries. [4,5].. There are a variety of health behaviors ranging from health-enhancing behaviors (e.g. exercise and healthy eating), health protection behaviors (e.g. screening), to avoidance behaviors (e.g. not smoking, not consuming alcohol). Research showed that people are engaged in a variety of these behaviors [6,7]. Risk factors are known of breast cancer that include age, family history, null parity, age at first pregnancy, and total duration of active menses [8]. Approximately 75 percent of breast cancers, however, occur in women with no known risk factors [9]. Thus, all women must be considered at potential risk of the disease. The likelihood that someone will take a preventive health action is based on the person's (a)perceived susceptibility to a disease; (b)perceived severity of a disease; (c) assessment of whether the benefits of performing the desired action outweigh the perceived costs and barriers; and (d) acceptance of effective cues to action, either of an internal or external nature [10]. A study [11] suggests a fifth component, self-efficacy, or the confidence that one can carry out the activity needed to produce the

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desired outcome. A review of the HBM by Jones and other shows overall support for the model, and that the concepts should be a part of health education and behavior change planning. [12]

II. Objectives

The main aim of the study is to determine the level of knowledge, and concepts about breast cancer among age groups of Iraqi women attending the main Breast Cancer Early Detection Center/Oncology hospital in Baghdad.

III. Methodology

Design of the study: A cross-sectional study design

The Sample of the study: Recruited 320 women attended the main breast cancer early detection center in Baghdad aged between (18–63years) collected on May 2010 he sample was divided into three groups (<30 years, 30-50 years, and >50 years old age) to compared with their knowledge and concepts.

Instrument: Data were collected through the use of questionnaire; it was developed by the researcher from review literature. The questionnaire was consisting of three parts which include:

1-Questionnaires used for assessment participants' knowledge about correlation between breast cancer and lifestyle; consist 6 items. The answer is either "yes" or "No":

2- Questionnaires used for assessment of participants' concepts about breast cancer; consist 11 items. Participants are allowed to choose more than one item

3- Questionnaires used for assessment of participants' knowledge about breast cancer risk factors; consist 16 items. Participants are allowed to choose more than one item.

Participants are given a score for the knowledge of breast cancer risk factors and calculated as a percentage.

Statistical Analysis: The data is analyzed by using the SPSS program version 14. Data are collected and described by using number, mean, standard deviation, percentage, frequency,

mean, association between variables are measured by chi-square and ANOVA tests. The

association is considered to be statistically significant when P value< 0.05

IV. Results

Table 1: Correlation between age groups and Knowledge about breast health behaviors

Question	Answer	Age groups			*P* value for Age	Total (N^1/N^2)
		<30 (n/N)%	30-50 (n/N)%	>50 (n/N)%		
Q1: Exercise may decrease the probability of breast cancer	yes	49/71 (69%)	116/145 (80%)	28/38(73.7%)	0.195	193/254 (76%)
Q2: Obesity could be a cause of breast cancer		35/69(50.7%)	87/143 (60.8%)	19/36(52.8%)	0.335	141/248 (56.9%)
Q3: Excessive intake of fatty diet and fried food can increase the risk of breast cancer.		41/49(83.7%)	93/124 (75%)	27/34(79.4%)	0.431	161/207 (77.8%)
Q4: Eating vegetables may increase risk of breast cancer.	No	47/49(95.9%)	115/124(92.7%)	33/34(97.1%)	0.134	195/207 (94.2%)
Q5: Eating fruits may increase risk of breast cancer.		49/49 (100%)	123/124(99.2%)	34/34 (100%)	0.716	206/207 (99.5%)
Q6: Eating carbohydrates may increase risk of breast cancer		44/49(89.8%)	114/124(91.9%)	34/34 (100%)	0.870	192/207 (92.8%)
Total of mean		81.5%	83.1%	83.8%		82.9

n=is the number of participants with right answer .N=is the total number of each age group who answered the question whether "yes" or "no", it differs from one question to another.
N^1=is the total number of participants who answered correctly N^2= is the total number of participants who answered with "yes" or "no"

Table1 summarizes the correct answers of participants to six questions for assessment of samples' knowledge breast health behaviors and its relation between age groups.in this table show that the answers for question 2 were low percentage 59.9%.While the answers of the sample for question 5 were High percentage 99.5%. There is no significant differences between age groups and answers of all questions (*p* value> 0.05). The participants of age (>50) year's group have higher mean (83.8%).

Table 2: Correlation between age groups and Knowledge about breast **cancer risk factors**

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Risk Factor	Age groups			*P* value	Total number (N^1/N^2)%
	<30 (n/N)%	30-50 (n/N)%	>50 (n/N)%		
1.Early Menarche	8/63 (12.7%)	16/123 (13%)	2/33 (6.1%)	0.53	26/219(11.87%)
2.Late Menopause	12/62 (19.4 %)	22/123 (17.9%)	4/33 (12.1%)	0.66	38/218(17.43%)
3.OCP intake for >5 years	15/62 (24.2%)	47/123 (38.2%)	14/33 (42.4%)	0.103	76/218(34.86%)
4.Never breast feeding	29/62 (46.8%)	49/122 (40.2%)	16/33 (48.5%)	0.561	94/217(43.32%)
5.Aging	11/62 (17.7%)	26/123 (21.1%)	10/33 (30.3%)	0.358	47/218(21.56%)
6.Breast enlarging substances	26/62 (41.9%)	35/123 (28.5%)	12/33 (36.4%)	0.173	73/218(33.49%)
7.Stress	23/62 (37.1%)	55/123 (44.7%)	18/33 (54.5%)	0.258	96/218(44.04%)
8.Heredity	22/62 (35.5%)	47/123 (38.2%)	15/33 (45.5%)	0.63	84/218(38.53%)
9.Smoking	20/62 (32.3%)	40/123 (32.5%)	18/33 (54.5%)	0.05	78/218(35.78%)
10.Alcohol intake	13/62 (21%)	32/123 (26%)	14/33 (42.4%)	0.07	59/218(27.06%)
11.Childhood Radiation Exposure	15/62 (24.2%)	43/123 (35%)	19/33 (57.6%)	0.005	77/218(35.32%)
Total of mean	28.4%	30.5%	39.1%		31.2%

n=is the number of participants with answer "yes". N=is the total number of each age group who answered the question whether "yes" or "no", it differs from one question to another.
N^1=is the total number of participants who answered correctly N^2= is the total number of participants who answered with "yes" or "no"

This table summarizes the correct answers of participants to eleven questions for assessment of samples' knowledge about breast cancer risk factors and demonstrates the effect of age on it. Found that had low percentage in all question of risk factor knowledge of breast cancer. There is no significant effect of age on correct answers of all questions (*p* value> 0.05), except for the risk of "childhood radiation exposure" showing that there is a highly significant difference among the three groups of age ($p<0.01$). The participants of age (>50) year's group have higher mean (39.1%).

Table 3: Correlation between age groups and women's Concepts about Breast Cancer

Concept	Age groups			*P* value for Age	Total (N^1/N^2)
	<30 (n/N)	30-50 (n/N)	>50 (n/N)		
1.Breast cancer is the most common cancer in Iraqi female	61/70(87.1%)	125/142 (88%)	33/38(86.8%)	0.791	219/250(87.6%)
2.Breast cancer is a Killer	26/70(37.1%)	72/150 (48%)	16/39 (41%)	0.291	114/259 (44%)

3.Breast cancer is Infectious disease	5/70(7.1%)	9/150 (6%)	1/39 (2.5%)	0.604	15/259 (5.8%)
4.Breast cancer is Hereditary disease	29/70(41.4%)	66/150 (44%)	18/39(46.1%)	0.884	113/259(43.6%)
5.Dangerous but can be cured	36/70(51.5%)	70/150 (46.6%)	18/39(46.1%)	0.781	124/259(47.8%)
6.Dangerous but cannot be cured	12/70(17.2%)	19/150 (12.6%)	10/39(25.6%)	0.131	41/259 (15.8%)
7.Not Dangerous and easily cured	2/70(2.9%)	14/150 (9.3%)	4/39 (10.2%)	0.196	20/259 (7.7%)
8.Caused by un healthy diet	22/65(33.8%)	35/140 (25%)	10/35(28.5%)	0.423	67/240 (27.9%)
9.Caused by abnormal genes	37/65(56.9%)	103/140(73.5%)	22/35(62.8%)	0.050	162/240(67.5%)
10.Caused by pollution	18/65(27.7%)	36/140 (25.7%)	15/35(42.8%)	0.132	69/240 (28.7%)
11.Caused by body deodorant	8/65(12.3%)	12/140 (8.5%)	7/35 (20%)	0.147	27/240 (11.2%)
12.Caused by breast cream	16/65(24.6%)	26/140 (18.5%)	10/35(28.5%)	0.346	52/240 (21.6%)
13.Having breast lump is disturbing	49/60(81.6%)	101/129(78.3%)	32/34(94.1%)	0.246	181/223(81.2%)
14.Breast lump can be cured easily	7/60(11.7%)	23/129 (17.8%)	1/34 (2.9%)	0.069	31/223 (13.9%)
15.Breast lump is not curable	4/60(6.7%)	4/129 (3.1%)	1/34 (2.9%)	0.069	9/223 (4 %)
16.Having breast lump do not draw attention	1/60(1.7%)	0/129 (0%)	0/34 (0%)	0.884	1/223 (0.44%)
Total of mean	31.33%	34.5%	38.8%		26.3%

n=is the number of participants with answer “yes”. N=is the total number of each age group who answered the question whether “yes” or “no”, it differs from one question to another.
N^1=is the total number of participants who answered correctly N^2= is the total number of participants who answered with “yes” or “no”

Table 3 summarizes the answers of the participants to sixteen questions for assessment of samples’ concepts about breast cancer and demonstrates the effect of age on it, found that had low percentage in all question of women‘s concepts of breast cancer. There is no significant effect of age on patients’ concepts about breast cancer. The participants of age (>50) year’s group have higher

mean (38.8%),

V. Discussion

Delayed presentation of symptomatic breast cancer of three months or more is associated with lower survival rates [13]. A recent fall in deaths from breast cancer has been reported due to improved survival from a combination of earlier diagnosis, breast screening and improvement in treatment methods [14]. The relative contribution of these factors remains to be clarified. In the meantime, breast cancer continues to represent a major public health problem, and further gains in survival might be achieved by encouraging women to seek help more promptly. Understanding the factors that influence patient delay is a prerequisite for the development of strategies to shorten delays [15].

Overweight and obesity, as measured by high body mass index (BMI), moderately increases the risk of post-menopausal breast cancer and is one of the few modifiable risk factors for breast cancer. Physical activity probably protects against breast cancer, with studies showing a (20-40%) risk reduction for women in the highest category of physical activity [16]In our study, still there is (24%), (42.9%) of our participants do not know the right effect of exercise and obesity on breast cancer, respectively (table 1).

There has been a lot of research into the effects of dietary factors on breast cancer risk, but findings are generally inconsistent and inconclusive. The strongest evidence seems to be for fat intake: a meta-analysis of 45 studies reported that higher total fat intake increased breast cancer risk by 13% while a recent cohort study showed a small but significant risk increase for higher intakes of saturated, monounsaturated and polyunsaturated fat [17] In our study, (22.2%) of our participants do not know this fact (table1)

Findings from the Women's Health Initiative randomized controlled trial in the United States in 2006 suggested that for women with the highest intake of fat in their diet, changing to a low-fat diet can reduce the risk of breast cancer by around 20% [18]. The data from several studies generally show a statistically significant inverse association for consumption of fruit, green vegetables, and carrots and breast cancer, [19] however only (27.9%) of our participants perceive the link between breast cancer and unhealthy diet (table 2) , this mean that our population need more educational programs to enhance healthy diet intake.

Our study shows that a high percentage of participants (>75%) perceive the importance of exercise and physical activity, eating vegetables and fruits in decreasing the risk of breast cancer, while more than 40% of our participants (which is high percentage) do not know that obesity could be a cause of breast cancer. There is no significant effect of age on perception of most of healthy life style we asked about (table 1) which indicate the deficient awareness programs in our community that the patients can benefit from neither throughout their curriculum nor through their lifetime experiences.

One of the greatest challenges in health promotion in contemporary societies is securing compliance with medical recommendations such as the adoption of healthy behavior and body screening. Under the current health promotion paradigm based on the biomedical model, individuals are expected to behave in ways that health promotion advocates assume to be the basis of sustained good health. Health education is seen to be one of the most effective means to empower individuals to make healthy choices and is thus central to health promotion. [20]

When the knowledge towards breast cancer is so low, the majority of the affected patients present late in hospital when little or nothing can be done again [2,21]. Less than (45%) of our participants answered the questions related to breast cancer risk factors knowledge correctly (table 2), the indicating the low level of knowledge among our participants, which is comparable to what is reported by Dandash et al, Saudi Arabia, 2007 who studied the knowledge & attitude among teachers in Saudi Arabia and points to the insufficient knowledge of female teachers about breast cancer and identified the negative influence of low knowledge on the practice of BSE, they reported that the better level, which included moderate and high scores, was presented by less than half of the participants (47.9 %) [22]

There is an Iranian study of Breast cancer knowledge, perception and BSE which is curried out among Iranian women reported by Parsaa et al, 2005 found that the majority of Iranian women need more education about breast cancer, which is comparable to our results. [23]

Our study shows that there is significant effect of age (above 50) on the knowledge about risk of childhood radiation exposure (table 2); this may be explained by the fact that the older age participants had lived the events of Hiroshima disaster at 1945 and its sequels from which they get their knowledge with its lifelong effect on their personal perception of such risk factor. In addition older age group participants show higher score for knowledge about the other breast cancer risk factors, which in spite of being not significant ($p<0.05$), but it may reflect some of the effect of their life experience on their knowledge.

Fortunately most of our participants (87.6%) know that breast cancer is the most common cancer among Iraqi women. In spite of being (47.8%) of participants thought that breast cancer is a dangerous disease and can be cured, and that only (15.8%) of them thought that “it cannot be cured”, but the concept of being a” killer” and “having breast lump is disturbing “which is mentioned by (44 %) and (81.2%) of participants respectively may have a negative impact on certain behaviors preventing them from submission to the known breast cancer early detection methods and screening tools of breast cancer like breast self-examination, clinical breast examination and screening mammography which supposed to detect a “disturbing breast lump with a killer disease”!.

Although only (4%) in our participants thought that "breast lump is not curable" and only (0.4%) of them thought that "having breast lump do not draw attention" which is a low percentage, but these believes should be changed to adapt the healthy behavior in our society (table 3).
About (5.8%) of participants in our study thought that breast cancer is an infectious disease (contagious), great effort should be done to change this concept which will prevent them from seeking medical advice in breast cancer centers fearing from contact with patients with breast cancer.(table 3)
Different researches were done to find the relation between the use of antiperspirant deodorant and the risk of breast cancer. Darbre (2004) carried out a study on 20 samples of human breast tumor to detect the level of parabens (cosmetic preservatives that can mimic the action of estrogen). In 4 of the 20 tumors, total paraben concentration was more than twice the average level. In spite of this finding, Darbre (2004) suggests more studies are needed to support or refute this hypothesis [24]. On the other hand, some experts think that perspiration does not eliminate toxins and there are in fact no toxins in sweat, which is made up of water, sodium, potassium, and magnesium [25]. The relation between antiperspirant use and breast cancer is considered as a myth in another website [26]. An Iraqi study curried out at Al-Nahrain Universiyy, 2006, failed to find a link between antiperspirant use and breast cancer. In fact this study showed that antiperspirant use was higher among the control group than the cancer cases[21]. In our study (11.2%) of our participants thought that deodorants can cause breast cancer, however further researches are recommended to agree or refuse such believe [25].

VI. Conclusions

Our conclusion is that the Iraqi women have poor knowledge and bad concepts towards breast cancer.

VII. Recommendations

Attitude and practice of breast cancer and BSE can be enhanced through promotion of their knowledge about breast cancer and learning Iraqi women the right way of BSE, this can be achieved by promotion of teaching programs through visual media, symposiums, meetings, educational workshops and conferences, teaching folders and posters and by inserting such programs through the curriculum of intermediate, secondary school and college.

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