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Knowledge, attitude & practice towards breast cancer & breast self examination in Kirkuk University, Iraq

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ABSTRACT

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Objective: To evaluate the level of knowledge, attitude and practice towards breast cancer and breast self examination (BSE) among a sample of educated Iraqi population affiliated to Kirkuk University in Iraq. **Methods:** The total number of participants was 304 (256 females and 48 males); comprising students (85.2%; $n=259$), teaching staff (8.2%; $n=25$) and administrative university staff (6.6%; $n=20$). The mean age of the participants was (23.8±8.3) years. Each was asked to complete a pre-coded standardized questionnaire. Variables were dichotomized and multiple logistic regressions were applied to test the association of independent variables with practicing BSE. **Results:** It was observed that 177 (69.1%) of females have heard about the BSE. One hundred and nine of the female respondents (42.6%) reported that they have practiced BSE. Of those who have heard about BSE only 57.4% were in fact practicing the technique. Multiple logistic regression revealed that age of the respondents and knowledge on the means of early detection, the effect of nulliparity on the probability of contacting the disease and factors that could decrease the incidence of breast cancer were significantly associated with practicing BSE ($P= 0.019, 0.03, 0.03$ and 0.007 respectively). Overall, it has been demonstrated that 89.7% of the female participants in this study presented a positive attitude towards learning the correct procedure of BSE with an intention to instruct others on the technique. **Conclusions:** although the knowledge about breast cancer and practice of BSE was relatively weak in Kirkuk, probably attributable to the long standing conflicts in the city, yet the positive attitude towards learning the screening techniques and the intention to teach others were fairly encouraging. Knowledge and practice can be endorsed by promoting nationwide public health awareness campaigns and establishing sustained educational framework and policy guidelines.

1. Introduction

In addition to being the commonest female cancer^[1,2], there are other features that justify increasing efforts for breast cancer control in Iraq and other developing countries. These include the obvious rise in the incidence rates, the higher frequencies of younger ages and advanced stages at the time of presentation and the likely prevalence of more aggressive tumour behavioural forms resulting in greater

fatality rates^[2-4].

One of the potential obstacles to early diagnosis of breast cancer in Iraq and other middle- and low-income countries include the lack of public health awareness programs^[5,6]. It has been demonstrated that early detection and screening for breast cancer, specifically when combined with adequate therapy, could lead to a reduction in breast cancer mortality^[7]. The main recognized methods of screening involve mammography, physical breast examination (PBE) and breast self examination (BSE).

In Iraq, earlier studies on the topic of breast cancer have focused on the clinical presentation of patients with the disease^[3,4]. Reports addressing the impact of knowledge, attitudes and practices (KAP) towards breast cancer and

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BSE were initiated in different provinces following the establishment of the Iraqi National Breast Cancer Research Program^[8]. Kirkuk, a northern Iraqi governorate, has been exposed to longstanding conflicts, civil wars and strife since March 2003^[9].

This study was carried out to report on the KAP regarding breast cancer and BSE among an educated population attending a major University in Kirkuk.

2. Material and methods

Data were collected during a symposium that was carried out in 2010 to promote breast cancer awareness in Kirkuk University, as part of the activities of the Iraqi National Breast Cancer Research Program. The total number of participants was 304 comprising students (85.2%; $n=259$), teaching staff (8.2%; $n=25$) and administrative staff of the university (6.6%; $n=20$). The total number of females participating in this survey was 256 versus 48 males; thus yielding a female to male ratio equivalent to 5.3:1. The mean age of participants was (23.8 ± 8.3) years.

Each participant was asked to complete a pre-coded standardized questionnaire prepared by the researchers to elicit socio-demographic information pertaining to the respondents (i.e., age, marital status and occupation) and to evaluate their knowledge, attitudes and practice towards breast cancer and BSE (rank of breast cancer in the world and in Iraq, means of early detection, best time and frequency to perform BSE in premenopausal and postmenopausal women). Other questions were designed to assess knowledge of the common risk factors for the

disease (growing older, null-parity, early menarche, late menopause, oophrectomy, consumption of oral contraceptives, alcohol and exposure to radiation) as well as possible means for prevention and the recommended screening methods (Table 1).

Variables were dichotomized and multiple logistic regressions were applied to test the association of independent variables (i.e., demographic data, general knowledge on breast cancer, risk factors and possible control measures) with practicing BSE. P value < 0.05 was considered as significant.

3. Results

Out of the total number of female participants in this study, it was observed that 177 (69.1%) have heard about the BSE. One hundred and nine of the total female population (42.6%) reported that they have practiced BSE. On the other hand, 57.4% of those women who have heard about BSE were in fact practicing the technique.

Multiple logistic regression (Table 1) revealed that age of the respondents, knowledge on the means of early detection (Question 3), the effect of nulliparity on the probability of contacting the disease (Question 7) and factors that could decrease the incidence of breast cancer (Question 20) were significantly associated with practicing BSE ($P=0.019$, 0.030, 0.030 and 0.007 respectively).

Overall, it has been demonstrated that 89.7% of the female participants in this study presented a positive attitude towards learning the correct procedure of BSE with an intention to instruct others on the technique.

Table 1

Multiple logistic regression showing the association of the studied variables with practicing BSE.

Variables	BSE		
	B	SE	P value
Age	-0.06	0.03	0.019
Marital status	-0.10	0.30	0.700
Occupation	-0.30	0.30	0.300
Q1-Breast cancer ranks the first in Iraq	-0.15	0.30	0.600
Q2-Breast cancer is the commonest cancer in women worldwide	-0.10	0.30	0.700
Q3-Means for early detection include Mammography, Ultrasound, PBE & BSE	0.80	0.40	0.030
Q4-Best time to conduct BSE in premenopausal women	-0.30	0.30	0.400
Q5-Best time to conduct BSE in postmenopausal women	-0.60	0.30	0.060
Q6-Effect of age on BC	0.07	0.30	0.800
Q7-Effect of nulliparity on BC	-0.70	0.30	0.030
Q8-Probability of BC after age of 55 years	0.40	0.30	0.200
Q9-Probability of BC in early menarche (11 years or less)	-0.40	0.30	0.200
Q10-Probability of BC after early oophrectomy	0.40	0.40	0.900
Q11-Effect of postmenopausal obesity on probability of BC	-0.30	0.30	0.300
Q12-Effect of oral contraceptive pills and HRT on probability of BC	-0.20	0.30	0.400
Q13-Alcohol consumption increases probability of BC	-0.10	0.30	0.700
Q14-Exposure to radiation at a young age may increase probability of BC	0.20	0.30	0.300
Q15-Treatments for breast cancer include surgery, chemotherapy, radiotherapy and hormonal manipulation	-0.30	0.30	0.200
Q16-Early detection is the best approach to breast cancer control	0.60	0.30	0.080
Q17-The increased risk in postmenopausal obese women is mainly due to raised endogenous estrogen levels	0.15	0.30	0.600
Q18-Preventive measures include alcohol abstinence, physical activity, healthy diet and body weight, avoidance of unprescribed hormonal therapy	-0.70	0.30	0.040
Q19-Low levels of endogenous estrogen decrease the risk	-0.30	0.30	0.300
Q20-Early pregnancy, seeking medical advice for breast lumps, physical activity, fat-low diet and regular breast examinations may decrease the incidence	-0.03	0.30	0.007

4. Discussion

Early detection and screening, as cornerstones for breast cancer control, play a pivotal role in reducing related mortalities. Until circumstances are ripe for routine mammography screening in developing countries, an emphasis should be directed to encourage women to practice PBE and BSE. BSE is a simple, intuitively attractive, non-invasive procedure that requires little time and has no medical cost. Although controversy still exists over its effectiveness in reducing mortality from breast cancer^[10], this culturally sensitive technique remains an important tool for early detection of breast cancer in countries with limited resources ^[6]. Studies on the effectiveness of BSE suggested that women who practiced the technique regularly were more likely to find their breast tumours by themselves and that the detected lumps were smaller in size^[11].

This study reported that 69.1% of the respondents had already heard about BSE. This rate is lower than that recorded recently in a similar survey involving Baghdad and Najaf provinces in Iraq (91.5%)^[8]. The difference might be attributed to the fact that Kirkuk city has experienced longstanding conflicts, civil war and strife since March 2003^[9]. It has been documented that conflicts and stress could affect the knowledge, attitude and practice of the exposed population as well as their priorities^[12].

Different studies from developing countries of the world show diverse results. The determined frequency is lower than that reported in Pakistan^[13]; nevertheless, it is still higher than those displayed in studies from India^[14], Iran^[15] and Saudi Arabia ^[16]. In accordance with earlier reports^[8,17,18], the main source of information about breast cancer and BSE, as recorded by the study participants, was the television. That emphasizes the potential effectiveness of the visual media in modifying health behavior and promoting public education among the general population.

In this study, it was found that only 42.6% of the female respondents have practiced BSE. That could be a reflection of the composition of the study sample; given that 80.5% were young university students (i.e., 206 out of total 256 female participants). It has been noted in earlier studies that practice of BSE is more frequently associated with older age^[14]. The rate is obviously lower than that displayed in a similar study conducted at the same year in Baghdad^[8]. On the other hand, it is significantly less than what has been observed by researchers from developed countries^[19]; where BSE practices appear to be correlated with the relatively high level of education and health care services offered in those regions of the world. That might again reflect the impact of the widespread violence in the city of Kirkuk^[9] with its negative influence on the cognitive functions of the individual^[13]. Stress of conflicts, coupled with the strain of morbidity and depression in those women and their deadly view towards breast cancer, could inevitably interfere with the concept of early detection and limit the attitude of

practicing BSE.

The negative influence of low knowledge on the practice of BSE has been identified in earlier reports ^[16,18,20] A cross sectional study conducted on 300 Saudi females in Qassim region^[21] revealed that 69% had never heard of BSE and only 19.7% reported that they had ever practiced BSE. A more recent survey on that topic emphasized clearly the limited knowledge and practice among Saudi students in schools and colleges^[22].

In the current study, a significant association was noted between those who practiced BSE and their knowledge about the screening tools for breast cancer ($P=0.030$), factors that could possibly decrease the incidence of the disease ($P=0.007$) and the effect of nulliparity on increasing the risk ($P=0.030$). In an earlier report from the capital of Iraq^[8], it was observed that almost three quarters of the study female population answered confidently that the best way to control breast cancer is through early detection and other preventive measures; of those 44.8% realized that mammography, ultrasound, PBE and BSE are effective screening tools.

Focusing on the females who recorded that they have heard about BSE in our study, it was shown that only 57.4% of those were in fact practicing the technique. However, this finding is higher than what has been reported in Saudi Arabia^[21] and Iran^[15]. That might be due to presence of a national protocol for cancer screening in Iraq following the establishment of the National Program for Research and Early Detection of Breast Cancer.

In consistent with other reports^[20,23], the main reasons presented by the remaining 42.6% of females, who have heard about BSE but have never practiced the technique, included either the lack of confidence in their own examination (27%), fear from detecting a lump in the breast (25%) or that they had not been instructed to perform BSE (20%). That highlights the urgent necessity of promoting public health awareness campaigns in our society emphasizing the important role of early detection of breast cancer and BSE.

As mentioned earlier, it was demonstrated in this study that older age females significantly adhere to BSE ($P=0.030$). A screening survey involving women nurses and teachers in Amman, Jordan^[25] documented that age, profession and family history had a significant influence on breast cancer awareness.

It was interesting to determine that 89.7% of the female respondents in Kirkuk University presented an intention to instruct others on the technique of BSE. That positive attitude towards practicing BSE and promoting health education was exhibited by younger women in earlier studies from Iraq^[8] and other Low- and Middle income countries^[15,17].

In conclusion, although the knowledge about breast cancer and the practice of BSE was relatively weak in Kirkuk, yet the positive attitude towards learning the screening techniques and the intention to teach others were fairly

encouraging. Knowledge and practice can be endorsed by promoting public health awareness campaigns through various media. It is mandatory to establish sustained institutional framework and nationwide policy guidelines to enhance adequate dissemination of information about risk factors of breast cancer, significance of BSE and the other recommended approaches to control the disease.

Conflict of interest statement

We declare that we have no conflict of interest.

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