# RESEARCH COMMUNICATION

# Do Knowledge, Attitudes and Practice of Iranian Health Care Providers Meet WHO Recommendations on Early Detection for Breast Cancer?

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## Abstract

<u>Objectives:</u> The present study was carried out to assess knowledge, attitudes and practice (KAP) concerning early detection for breast cancer among Iranian health care providers (HCP). <u>Methods:</u> Three hundred and eighteen HCPs were selected with stratified simple random sampling and given questionnaires to determine their baseline KAP for breast cancer early detection. Results were compared among categories of age, educational level, marriage status and professional experience with the Chi square test. <u>Results:</u> For six knowledge questions, 71.8% participants had four or more correct responses, 80.5% agreed completely with 'women will accept the screening program if the physicians advise it'. However, 48% of female HCPs did not carry out any method of breast cancer screening for themselves during the last year; 81.5% did not carry out breast examinations for the majority of female outpatients and inpatients during last year; only 5.1% recommended breast self examination (BSE) to more than 70% of their female patients. <u>Conclusions:</u> Knowledge and attitudes are relatively appropriate, but practical measures are not enough. Considering the HCP's role for implementing the national breast cancer control program, improvement in knowledge and attitudes is still important, but this may not be enough to reach to an appropriate level of desired practice.

Key Words: Breast cancer - knowledge - attitudes and practice (KAP) - Iran - health care providers

## Introduction

Breast cancer is the most common cancer among Iranian women. Recommendations for countries with limited resources and World Health Organization (WHO) emphasized that the national breast cancer control program should encourage early diagnosis of breast cancer, especially for women aged 40-69 years who are attending primary health care centers or hospitals for other reasons by offering clinical breast examinations to those concerned about their breasts and by promoting awareness in the community. If mammography is available, the top priority is to use it for diagnosis, particularly for women who have been detected an abnormality by self-examination. The first step for this case will be increasing mass awareness about the breast cancer and providing facility for early detection. Knowledge, attitude and practice (KAP) of health care providers (HCPs) on breast cancer early detection have important roles in implementing this method.

The Iranian Center for Disease Control and Prevention (CDC) of Ministry of Health would like to assess the feasibility and efficacy of this method for national breast cancer control program in Iran. The present study was carried out to assess KAP about breast self examination (BSE), clinical breast examination (CBE), and mammography as early detection for breast cancer among Iranian HCPs.

## Materials and Methods

In this cross sectional study; an area was selected with consultation of CDC in North East of Iran as representative for the whole of country. The population was 1,477,045 with six health networks (Semnan, Shahrood, Damghan, Garmsar, Sabzevar and Neishaboor). The number of HCPs

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**Table 1. Demographic Characteristics of the Study Sample (n=318)**

| Characteristic | Category | Frequency | (%) |
|---|---|---|---|
| Age group | <30 | 79 | 24.8 |
| | 30-39 | 109 | 34.3 |
| | 40-49 | 113 | 35.5 |
| | >50 | 17 | 5.3 |
| Education | <Diploma | 22 | 6.9 |
| | Diploma | 40 | 12.6 |
| | Technician | 33 | 10.4 |
| | BSc | 104 | 32.7 |
| | MSc | 9 | 2.8 |
| | MD | 110 | 34.6 |
| Sex | Female | 198 | 62.3 |
| | Male | 120 | 37.7 |
| Marital status | Single | 29 | 9.1 |
| | Married | 264 | 83.0 |
| | Divorced/widowed | 7 | 2.2 |
| | Missing | 18 | 5.7 |

who are working in these areas is 10,655; about 3% of them (medical practitioners, medical specialists, nurses, midwives, health experts, and Behvarz "health workers in rural areas") were selected with stratified simple random sampling from public and private health sector and urban and rural areas.

A simple questionnaire designed by an expert panel was used for this study; its reliability and validity were also tested. It has 14 multiple choice questions, six on attitude to determine baseline knowledge about breast cancer, five multiple choice objective questions to clarify early detection and three to define practice of BSE, CBE and mammography of health care providers. The questionnaires were filled out by all participants in separate meetings after a brief explanation of the study. The completion of the questionnaire was discretionary. Each question was reported separately and effect of the age, educational level, marriage; and professional experiences of participants were analyzed with Chi square test (P value < 0.05 was assumed significant).

## Results

Three hundred eighteen selected HCP completed the questionnaire. The mean age of participant was 37.3 years (CI95%: 36.4 to 38.1), 198 (62.3%) were female, 83% married; their mean professional experiences have been 12.3 years (CI95%: 11.4 to13.2). Eighty one percent of these had university degrees. The details of demographic data were shown in Table 1.

The knowledge findings are summarized in Table 2. All six questions were responded by 16.4% of participants correctly, 71.8% had 4 or more correct responses. The knowledge of women was significantly higher than men (P= 0.007). There was no association between the levels of education and their knowledge on breast cancer. The attitudes of participants were shown in Table 3.

Forty eight percent of female health care providers did not carry out any method of breast cancer screening (BSE, CBE, or mammography) for themselves during last year. 81.5% of HCP did not carry out breast exam for majority of female outpatients and inpatients presenting with any symptom other than breast complaint during last year.

The participants were asked to present their recommendations for breast self examination of female patients during last month. Just 5.1% of them presented the recommendations to more than 70% of female patients during mentioned period (Table 4). Female HCP did clinical breast examination and recommended breast self examination more than the males for their patients (P<0.001 and P<0.0001 respectively) and it was associated with educational level (P≤0.0001). There were no differences between HCPs for BSE for themselves according to their educational levels (P=0.21).

## Discussion

This study shows the knowledge, attitude and practice of Iranian HCP. However, the knowledge and the attitude are relatively appropriate, but practice is not good; a study

**Table 2. Knowledge on Breast Cancer Early Detection of Health Care Providers in Iran (N=318)**

| Questions | True (%) | False (%) | Don't know (%) | Missing (%) |
|---|---|---|---|---|
| The main symptom of breast cancer is painless mass | 246 (77.4) | 57 (17.9) | 13 (4.1) | 2 (0.6) |
| Treatment for breast redness and scratch is as in other locations | 39 (12.3) | 210 (66.0) | 64 (20.1) | 5 (1.6) |
| Normal mammography means no breast cancer | 135 (42.5) | 153 (48.1) | 30 (9.4) | 0 (0.0) |
| The incidence of breast cancer is increasing in all the world | 246 (77.4) | 31 (9.7) | 40 (12.6) | 1 (0.3) |
| All breast mass are almost malignant | 16 (5.0) | 285 (89.6) | 16 (5.0) | 1 (0.3) |
| Trauma could be one of the causes of breast cancer | 82 (25.8) | 179 (56.3) | 55 (17.3) | 1 (0.3) |

**Table 3. Attitudes on Breast Cancer Early Detection of Health Care Providers in Iran**

| Queries | Agree completely | Agree | So-So | Disagree | Disagree completely | No response |
|---|---|---|---|---|---|---|
| Breast cancer is lethal and treatment has no effect | 6 (1.9) | 16 (5.0) | 36 (11.3) | 165 (51.9) | 93 (29.3) | 2 (0.6) |
| The women will accept the screening program for breast cancer if the physicians advise it to them | | | | | | |
| | 96 (30.2) | 160 (50.3) | 46 (14.5) | 13 (4.1) | 0 (0.0) | 3 (0.9) |
| Mass awareness could decrease mortality of breast cancer | 225 (70.7) | 89 (28.0) | 4 (1.3) | 0 (0.0) | 0 (0.0) | 0 (0.0) |
| Iranian women have no ability and competence for BSE | 45 (14.2) | 117 (36.7) | 48 (15.1) | 96 (30.2) | 11 (3.5) | 1 (0.3) |
| Screening with mammography is the only way for breast cancer control and other methods have no effect | | | | | | |
| | 8 (2.5) | 32 (10.1) | 43 (13.5) | 188 (59.1) | 45 (14.2) | 2 (0.6) |

All data are numbers and percentages (%); BSE, breast self examination

**Table 4. Answers to "What percentage of women did you recommend for BSE during last year?"**

| Percentage | Females | | Males | |
|---|---|---|---|---|
| 0-10% | 108 | 56.5 | 87 | 82.1 |
| 10-40% | 48 | 25.1 | 16 | 15.1 |
| 40-70% | 22 | 11.5 | 1 | 0.9 |
| >70% | 13 | 6.8 | 2 | 1.9 |
| Total* | 191 | 100 | 106 | 100 |

*Twenty two persons (7%) did not respond to this question

on female nurses in Jordan showed the CBE was done by 52% of them . Mean of total breast cancer knowledge score of primary health nurses before and after an in service education was 58 and 75 respectively in Turkey . Other KAP studies in Iran showed the range for appropriate knowledge, attitude and practice of Iranian women about breast (??).

This study has shown nearly half female HCPs did not carry out any breast cancer early detection methods (BSE, CBE, and mammography) for themselves during last year. The breast cancer early detection programs in the community would be encountered by important challenge with this practice level of HCP for themselves. Despite national guideline for doing breast exam of all outpatient and inpatient women, only 19.5% of HCP carried it out for the majority of their cases. This might be due to their non effective education, time limitation with lots of other tasks, low job satisfaction, and weakness on the program assessment and evaluation by the system.

Mass screening for breast cancer was not recommended by Ministry of Health in Iran, but it was emphasized to be recommended BSE for women over 20 years old by HCPs; 82.1% and 15.1% of HCP recommended BSE for 0-10% and 10-40% of their female patients respectively. This low rate might be due to previous paragraph reasons and the low acceptance rate by the women too.

Appointing the female HCP for breast cancer control programs might be more suitable because the knowledge, the recommendation for BSE, and carrying out the CBE of female HCP were higher than male staff. Continuing instruction especially for male HCP is a priority. If the doctors prescribe the BSE, it would be accepted by women; this was the attitude of 80% of HCP. This attitude might be due to the trust to the physicians in population or it may be a false estimation.

Mammography fails to detect 10% to 15% of all palpable malignant lesions. Over 50% of HCP was emphasized the normal mammography rule out breast cancer, this could make false confidence and cause less attention to the breast examination. Therefore their attitude should be revised by education.

Seventy three percent of HCP disagreed with mammography as the only method for breast cancer control and the efficiency of other methods. A working group of the International Agency for Research on Cancer had been concluded too: There is inadequate evidence that breast screening with clinical breast examination, whether lonely or accompanied with screening mammography could reduce mortality caused by breast cancer and, there is inadequate evidence that breast self-examination can reduce mortality from breast cancer. However, the working group made a relevant research recommendation, a randomised trial of clinical breast examination versus no screening should be conducted in a country or countries where resources are unlikely to permit implementation of mammographic screening in the foreseeable future. This attitude may be an opportunity for health policy makers to implement the protocol for assessing the effectiveness of CBE and BSE for breast cancer control.

Given the present level of evidence; the WHO recommendation for breast cancer early detection might be the only practical one in Iran and the same countries as a midterm program. For this, in addition to increasing the mass education as the basic needs for breast cancer early detection, it should emphasize to provide the facilities in the health care settings. Increasing the knowledge and attitudes is the basic method for practicing but it might not be sufficient; Revising the HCP's tasks, their payments, and developing the assessment and evaluation system would be the necessities for reaching the optimal activities of this program, in order to the political supports and health managers' conformity.

One of the main limitations of this study was non random selection of the regions, but they were selected according to the comments of CDC experts. In each region, the samples were selected randomly, the participants were asked to complete the questionnaire in the meetings, which might be based on their responding for their attitudes and practices on breast cancer examination.

## Acknowledgement

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