

## Original Article

# A survey of breast cancer knowledge and attitude in Iranian women

### ABSTRACT

**Background:** Breast cancer (BC) is the most common cancer among Iranian women. It is recommended that women be under national screening for early detection of cases to improve survival and decrease mortality. Because of shortage of facilities, breast self-examination (BSE) instead of clinical-based examination (CBE) and mammography is advocated as the first step of screening in developing countries including Iran. It is quite clear that the related knowledge, attitude, and practice (KAP) of the community is necessary to have a successful screening program particularly for BSE.

**Materials and Methods:** A community-based descriptive study on 650 females aged more than 18 years was carried out with a well-structured and valid questionnaire to demonstrate the knowledge and practice of women for BSE, CBE and mammography.

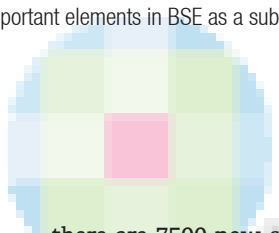
**Results:** The mean age of participants was 40.72 years with standard deviation (SD) of 9.58. Eighty-two point six percent (82.6%) were married and 48.4% were post graduates. A painless mass (60.8%) and bloody discharge (44.9%) were reported as the two important symptoms for BC. In this assay, 80.3% of participants knew females are at risk of BC and 70.6% of them perceived that early detection and operation in early stages are effective issues. Thirty point eight percent (30.8%) of respondents knew the BSE and this knowledge had significant association with their educational status. Fifty-nine point nine percent (59.9%) of participants were able to do BSE but only 12.9% of respondents practiced BSE regularly.

**Conclusion:** Community awareness and education level are important elements in BSE as a substitute for traditional screening in BC for early detection.

**KEY WORDS:** Breast cancer, detection, screening

### INTRODUCTION

Breast cancer (BC) is the most common cancer among Iranian women and throughout the world<sup>[1]</sup> BC also remains an important public health issue in the developed and developing countries because of the number of new cases and its high prevalence. Based on statistical studies, breast cancer is rapidly growing in developed countries.<sup>[2]</sup> The epidemiological feature of breast cancer in Iran is different from other parts of the world. In the eastern Mediterranean countries, the five common malignancies in women reported by Globocan are the breast, cervix, oral cavity, ovary and colon. In Iran, these are reported as breast, colorectal, stomach, esophagus, and hematopoietic (skin is excluded).<sup>[1]</sup> In Iran, 76% of common female malignancies are breast cancer<sup>[1]</sup> and it is the fifth cause of cancer related death for Iranian women after gastric, leukemic, pulmonary, hepatic and biliary tract cancer with 1200 deaths per year and rate of 3.4/100,000 of the female population.<sup>[3]</sup> This is different from the Globocan report in 2002 with 22.5% in 100,000. The incidence rate of breast cancer is growing during the last 40 years.<sup>[4]</sup> Now



there are 7500 new cases annually. The incidence rate is 21.42 and the age specific rate (ASR) is 25/100,000 female population. These differences and the importance of this disease have made it as an important health issue with governmental priority in health management. BC is to be under national screening for early detection of the cases to improve survival and decrease mortality rate; breast self examination (BSE) is another choice for screening in developing countries including Iran. In a study in year 2000,<sup>[4]</sup> 70% of cases were stage III, but in another study<sup>[5]</sup> in 2006 after population awareness and promoting the knowledge of people, 60% were stage II, and in the study released by Dr Akbari *et al*,<sup>[4]</sup> in 2008 in the capital city, Tehran, stage I was 18.4%, stage II 36.1%, stage III 27.7%, and stage IV 17.7%, with different outcomes after diagnosis and treatment; thus, it is clear that awareness of women and increased knowledge and behavior will decrease the stage of the disease upon presentation and improve the quality of life and survival which relate directly to the stage of disease. Multiple studies confirm that Iranian breast cancer patients are ten years younger than western cases and are more prevalent in 40-50 year

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olds.<sup>[1,4]</sup> BSE seems to be an appropriate choice in developing countries including Iran.<sup>[6]</sup> Knowledge, attitude, and practice (KAP) of the community is necessary for a screening program particularly BSE. This study is conducted to identify KAP of Iranian women regarding BC.

## MATERIALS AND METHODS

A community-based descriptive study on 650 females aged greater than 18 years of age was carried out with a well-structured and validated questionnaire. The data was collected from women referring to clinics for other than breast complaints; those with breast complaints were excluded. This questionnaire had 17 questions and each question included 5-9 items.

Each question was ranked separately and scored by KAP component. The questions were included a demographic characteristics question with 7 items about breast cancer sign and symptoms, and a question with 9 items related to risk factors and protective elements; other questions determined whether the case is at risk or not and demonstrates the knowledge and attitude of BSE, CBE, mammography and practice of BSE. After collecting data, analysis was done by SPSS software using Chi-square, ANOVA and post HOC test for multiple comparisons.

## RESULTS

In 650 females without any kind of breast complaint, 6 cases were less than 20 and three cases with more than 60 years old. Mean age was 40.72 years with standard deviation (SD) of 9.58. Eighty two point six percent (82.6%) were married and

48.4% were post graduates, the demographic characteristic are shown in Table 1. Sixty point eight percent (60.8%) stated that painless mass and 44.9% felt that bloody nipple discharge were important symptoms of breast cancer. Fifty two point six percent (52.6%) of participants stated that age is a risk factor and 74.6% of them knew that family history is a very important factor. Table 2 shows knowledge of relative and irrelative breast cancer symptoms and knowledge of breast cancer risk and protective factors. In this assay, 80.3% of participants knew females are at risk of breast cancer and 70.6% of them perceived that early detection and operation in early stages is very helpful in changing the life style. Seventy six point eight percent (76.8%) of them were informed of the triple assay of early detection [Table 3]. Thirty point eight percent (30.8%) of respondents knew of BSE and this knowledge had significant association with their educational status. Eighty three point one percent (83.1%) were aware of how to perform BSE and 59.9% of participants were able to do BSE but 78.3% didn't trust to their examination. Only 12.9% of respondents practiced BSE regularly, 50.6% of them performed it occasionally and 36.5% never did BSE [Table 4]. The main reasons for lack of attention to BSE were 41.6% forgetfulness and 33.4% did not know the correct approach to BSE. Fifteen point eight percent (15.8%) of them feared to find a mass in their breasts [Table 5]. Forty four point three percent (44.3%) performed CBE occasionally and the common reasons for their negligence to do CBE were: 14% of them said that they had no problem and in 10% lack of time was the reason. In 10% of the cases, fearing of finding a mass in their breast was the reason for negligence of CBE [Table 6]. Ninety four percent (94%) of females knew that BSE, mammography and CBE are three prerequisites for early detection. Respondents who had more awareness and information about cancer symptoms and risk factors and how to practice BSE were more prepared to have BSE ( $P < 0.0001$ ) and CBE ( $P < 0.0001$ ).

**Table 1: Demographic characteristics**

	Number	%
Age groups (years)		
20-29	87	13.4
30-39	145	22.3
40-49	267	41.1
50-59	151	23.2
Mean (SD)	41.01(9.18)	
Range	71-9	
Educational status		
Primary and secondary education	285	43.8
Higher education	365	56.2
Marital status		
Single	86	13.2
Married	537	82.6
Widowed/divorced	27	4.2
Do you know breast cancer symptoms	361	55.53

**Table 3: Early detection procedures**

Early detection procedures	Number	%
Monthly BSE+ mammography:	74	11.4
Regular CBE	38	5.8
Monthly BSE+ mammography +regular CBE	499	76.8
Unknown	39	6.0

**Table 2: Knowledge about breast cancer**

	Correct (%)	Wrong (%)	Unknown (%)
Knowledge of relative and irrelative Breast cancer symptoms			
Painless mass	60.8	8.0	31.2
Nodular breast before menses	30.8	11.8	57.4
Nipple radiating pain	20.3	17.4	62.3
Mastalgia	19.1	18.5	62.4
Galactorehea after lactating period	22.3	18.5	59.2
Asymmetric breast	21.8	14.5	63.7
Bloody nipple discharge	44.9	9.3	45.8
Knowledge of breast cancer risk and protective factors			
increase in age	52.6	13.8	33.6
Poverty	11.8	38.5	49.7
Disregarding breast hygiene	19.2	29.1	51.7
First child bearing after age 30 years	20.8	18.9	60.3
Skinniness	43.1	1.4	55.5
Touching the breast cancer patient	57.8	1.9	40.3
First relative positive family history	74.6	3.4	22.0
Long lactating period	34.2	4.5	61.3
Post menopause obesity	28.6	11.7	59.7

**Table 4: Breast self examination**

	Correct (%)	Wrong (%)	Unknown (%)
Best time for BSE	30.8	25.4	43.8
Correct BSE	83.1	16.9	0
Regular BSE	12.9		

BSE: Breast self examination

**Table 6: The reason for negligence to do clinical-based examination**

No knowledge for CBE	66
No problem in the breast to do CBE	113
Cost	21
Time	103
Fearing to finding a mass	57
Other reason	33

CBE: Clinical-based examination

## DISCUSSION

BC prevalence is increasing year by year. The total direct medical cost of breast cancer is more than 7 billion dollars per year.<sup>[7]</sup> Early detection is still the first priority for national cancer control programs.

Undoubtedly, screening can be efficient in reduction of mortality in two malignancies: breast and cervical carcinoma. In developing countries such as Iran, appropriate knowledge and attitude of the community may be the most important necessity for early detection and screening program of breast cancer.

The target of this study is investigation of the knowledge level and attitude among Iranian females with regard to BSE and CBE; 60.8% of our participants stated that a painless mass is the most important symptom of breast cancer. This rate is decreased to 44% in another Iranian study<sup>[8]</sup> and increased to 70% in a UK study and they are able to identify these symptoms in their BSE.<sup>[9]</sup> The data about knowledge statuses of participants about CBE and mammography are contradictory in Iran: in our study, 94% of respondents were aware of CBE and mammography, in the city of Sari there were 87.3 and 68.8%<sup>[10]</sup> and only 21 and 9% in other study.<sup>[11]</sup> Maha showed 42.7% of their participants agreed to mammography screening<sup>[12]</sup> and 61.2% in Riyadh study in Saudi Arabia.<sup>[13]</sup> According to our study, 12.9% of participants performed regular monthly BSE, this rate was 6<sup>[14]</sup> and 17%<sup>[11]</sup> in another study. In published literature from south Asia, the monthly BSE rate was 12<sup>[15]</sup> and 16%.<sup>[16]</sup> Thirty one percent (31%) between Austrian women<sup>[17]</sup> and 10.2% in Turkish women.<sup>[18]</sup> Fifty point nine percent (50.9%) of our respondents performed BSE occasionally. This rate was 53.9% in China<sup>[19]</sup> and 29.5% in Turks.<sup>[18]</sup> Thirty three point four percent (33.4%) of our participants rejected BSE due to lack of information about performance of BSE. In our study, participants who forget to do BSE was 41.7%. This was 57% in Budden's study<sup>[20]</sup> and in Marinho's study

**Table 5: Causes for negligence to do Breast self examination**

No knowledge for BSE	217
Do not believe in BSE	32
Time consuming	36
Forgetting	271
Fearing to finding a mass	103
Other reason	96

BSE: Breast self examination

it is was 58%.<sup>[21]</sup> We saw a significant relation between level of knowledge and attitude and practicing of BSE and CBE ( $P < 0.0001$ ). In another study, 45.7% of females who performed BSE had good knowledge ( $P < 0/05$ ).<sup>[22]</sup> Yelland *et al* reported that Australian females who had CBE previously perform BSE more frequently and with more precision.<sup>[23]</sup> Data shows that in Iran and other developing countries, improvement of knowledge and attitude of people can change behavior toward breast cancer by down staging and increasing quality of life and even survival and reduction of mortality.<sup>[1,4-6]</sup>

## CONCLUSION

Educational status had significant association with knowledge and attitude ( $P < 0.0001$ ). Postgraduates had more knowledge and attitude about breast cancer symptoms and risk factors, BSE and early diagnostic procedures. CBE had significant relation with age, marital status and educational level ( $P < 0.0001$ ). It seems that improvement of knowledge and practice of women and their awareness of breast cancer risk factors and early detection intervention are important in prevention of disease and is helpful in early diagnosis.

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