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The Attitude of Women Visiting Health Centers of the Tehran University of Medical Sciences Toward Breast Cancer

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ABSTRACT

Introduction: Considering changes in the structure of Iran's population, the prevalence of cancer is increasing. Increasing social awareness about cancer and screening for cancers are the most cost-effective approaches for breast cancer prevention. Studies show a significantly low rate of regular breast cancer screening behaviors. Given the importance of breast cancer and the decreasing effect of screening methods on the financial burden and disease complications, awareness about their attitude can provide appropriate information for Policy-making about breast cancer screening methods in Iran. This study aimed to investigate the attitude of women over 40 years-old visiting health centers affiliated toward breast cancer screening methods.
Methods: This is a descriptive/analytical study performed cross-sectionally in the health centers affiliated with TUMS. Two hundreds fifty-five women from Imam Khomeini Hospital Complex and some health centers that were subsidiaries of the south health centers of TUMS, were enrolled. To collect the required data, we developed a questionnaire based on tools used in similar studies. We used the Chi-square test to investigate the relationship of the attitude score with demographic and socioeconomic variables. The statistical analyses were performed in STATA.
Results: About 77.6% of the participants agreed that breast cancers detected earlier are almost treatable. About 18.9% of the participants believed that (agree and highly agree) they will not develop breast cancer in the future, and 47.8% had no idea; 68.2% of the participants disagreed with the item "breast cancer is almost incurable even if detected in early stages;" about 22.0% of them believed that they are at higher risks for breast cancer compared to other women, and 61.3% of the participants agreed to visit a physician in case of feeling pain or a mass in the breast
Conclusion: The attitude of the Women participating in the study toward breast cancer screening is high; this finding can be used in plans aiming to raise awareness and conduct screening in Iran.

Keywords: Breast cancer, Screening, Attitude

INTRODUCTION:

According to the literature, overall, the burden of cancer incidence and mortality is rapidly growing worldwide. The risk of breast cancer is increasing with a ratio of one in eight women [2]. The World Health Organization (WHO) attracted global attention to the significant rise in the prevalence of breast cancer in recent years, warned about the growing trend of cancer in the coming years, and emphasized early detection as an essential strategy for controlling breast cancer. This strategy can increase the breast cancer detection rate in its early stages and reduce disease-induced complications and mortality [3]. The most common cancer among women in Iran is breast cancer. Averagely, women develop cancer in the age range of 41 to 45 years [1]. Based on the latest statistics of the International Agency for Research on Cancer (IARC), of 2,121,032 cases of newly-developed cancer among women in 2020 in Iran, 656,632 (30.95%) pertained to breast cancer. In addition, 117,775 women died from breast cancer in 2020 in Iran. Considering changes in the structure of Iran's population, the prevalence of cancer is increasing, and breast cancer cases are predicted to augment to about 22 thousand women in 2030 and about 26 thousand women in 2040.(4)

Training and screening are the cornerstones of early detection of cancer. Increasing social awareness about cancer and screening for common cancers are the most cost-effective approaches for breast cancer prevention and control [5]. Selection of an appropriate screening test for population-level screening involves evaluating the test characteristics of the screening tool, assessing its cost-effectiveness, its availability in the region, evaluating its acceptability and also the feasibility of implementing the same in the chosen population. However, choosing an appropriate screening test is only one aspect of the screening program. [6]. Studies show a significantly low rate of regular breast cancer screening behaviors [7]. Various factors, such as age, education, insurance, occupation, access to screening centers, and income, can affect the rate of these behaviors [8, 9].

Low awareness of Iranian women about risk factors, signs and symptoms, advantages of screening programs, and the function of breast cancer health clinics arises from the lack of prevention programs [10].

Given the importance of breast cancer and the decreasing effect of screening methods on the financial burden and disease complications, awareness about women's attitudes can provide appropriate information for decision-making and policymaking about breast cancer screening methods in Iran. This study aimed to investigate the attitude of women visiting health toward breast cancer screening methods.

Methodology:

Study type

This is a descriptive/analytical study performed cross-sectionally in the health centers affiliated with TUMS.

Study population

The study population consisted of women over 40 years visiting the health centers of TUMS. The samples of this study were selected randomly from women over 40 years visiting the health centers. finally, 255 women participated. Based on the guidance from advisors and supervisors, the study was performed in Imam Khomeini Hospital Complex, the most visited center, and some health centers that were subsidiaries of the south health centers. The interviewer conducted structured interviews with eligible women at the centers, both those receiving treatment and those accompanying the patient. Each interview lasted 30-40 minutes per sample. The number of samples selected from each center depended on their visitors' count.

Data collection tool

To collect the required data, we developed a questionnaire based on tools used in similar studies whose reliability and validity have been confirmed [11-14]. The first part of the questionnaire included demographic characteristics and the history of breast cancer, and the data were classified according to different levels. The divisions of education levels are expressed in Iran based on the educational system and its levels. The insurance status of individuals is divided according to the Iranian insurance system and the Classification of breast cancer

screening methods was based on the review of previous studies The second part had six items about the participants' attitudes toward breast cancer risk and mortality and other relevant questions. In this section, people are asked questions about their personal and family history of breast cancer, the likelihood of developing breast cancer, and the risk of dying from breast cancer. The items were scored according to the 5-point Likert scale in which the scores of items 1 and 6 were)highly agree = 5, agree = 4, no idea = 3, disagree = 2, and highly disagree = 1(and the scores of items 2 to 5 were)highly agree = 1, agree = 2, no idea = 3, disagree = 4, and highly disagree = 5(. To rank the attitude questions, the total score of the items was calculated. The data were collected from April until September 2022.

Data analysis

In data analysis, descriptive and inferential analysis of the data was done in the initial part of the questions related to the demographic and socioeconomic status of the participants, and the data were expressed as percentages. For ranking the attitude questions, the total score of the items was calculated, according to which the participants were divided into three groups: positive attitude, moderate attitude, and negative attitude. They were expressed as a percentage. We used the Chi-square test to investigate the relationship of the attitude score with demographic and socioeconomic variables. The statistical analyses in this study were performed in STATA.

Findings:

A total of 255 women over 40 years were included in the study. The mean age of the participants was 54.49±9.79 years. The minimum age of the participant was 40 years, and the maximum age was 77 years. The mean number of children was 2.33. Twenty percent of the participants were family providers. Social Security Insurance was the most prevalent treatment insurance among the participants (63%), and 25.5% were covered by supplemental insurance. The monthly income of half of the participants was between 40-80 million Iranian Rials (IRRs); 14.5% of the participants had a history of breast cancer, and 18.8% of the participants had a first-degree relative with breast cancer history (Table 1).

Breast cancer screening was performed by 30.2% of the participants, 59.3% of whom were screened by mammography; 14.1% have undergone mammography in the last 12 months; and 13.3% were examined by a healthcare provider, a physician, or a midwife. In addition, 18% of the participants have performed breast self-exam in the last three months (Table 2).

About 64.7% of participants underestimated their risk for breast cancer, and 43.1% expressed their concern about breast cancer (Figure 1).

Table 3 depicts the answers of participants to questions on the attitude of women toward the risk and mortality of breast cancer. About 77.6% of the participants agreed that breast cancers detected earlier are almost treatable. About 18.9% of the participants believed that (agree and highly agree) they will not develop breast cancer in the future; 68.2% of the participants disagreed with the item "breast cancer is almost incurable even if detected in early stages;" about 22.0% of them believed that they are at higher risks for breast cancer compared to other women, and 61.3% of the participants agreed to visit a physician in case of feeling pain or a mass in the breast.

Discussion:

The present study investigated the attitude of women visiting health centers affiliated with the Tehran University of Medical Sciences (TUMS) toward breast cancer. Almost 14.5% of the participants had a history of breast-related diseases; 18.8% of the participants had a first-degree relative with breast-related diseases; about 30.2% of them have performed breast cancer screening, of whom 59.3% have used mammography; 64.7% of the participants underestimated their risk for breast cancer; and 43.1% of them expressed their concern about breast cancer.

Breast cancer is the most common type of cancer among women in the world, and breast cancer screening (BCS) programs, i.e., physical examination or mammography, are developed to decrease mortality.

Breast cancer health and financial burdens are still significant despite efforts to resolve them [15]. Breast can-

Table 1. Demographic and socioeconomic information of participants

Variable	Subgroup	Mean ±SD	Frequency	Relative frequency%
Education	Illiterate		89	34.9
	Under diploma		66	25.9
	Diploma and associate degree		15	5.9
	Bachelor		59	23.1
	Master		25	9.8
	Doctorate		1	0.4
Family provider	Yes		51	20
	No		204	80
Insurance type	Social Security		163	63.9
	Health Insurance		53	20.8
	Army Forces		22	8.6
	Rural		11	4.3
	Relief Foundation		0	0
	Others		4	1.6
	None		2	0.8
Supplemental Insurance	Yes		65	25.5
	No		189	74.1
Monthly family income	<40 IRR*		88	34.5
	40-80 IRR		132	51.8
	80-120 IRR		32	12.5
	>120 IRR		3	1.2
Breast cancer history	Yes		37	14.5
	No		218	85.5
Breast disease history in first-degree relatives	Yes		48	18.8
	No		207	81.2

*IRR: The Iranian rial (IRR) is the national currency of the Islamic Republic of Iran.

Table 2. The status of screening in participants

Variable	Subgroup	Frequency	Relative frequency
Breast cancer screening	Yes	77	30.2
	No	178	69.8
Breast cancer screening method	Breast self-exam	14	16.3
	Physical examination by a healthcare provider or a physician	9	10.5
	Mammography	51	59.3
	Self-exam and physical examination	4	4.7
	Physical examination and other	2	2.3
	Other	6	7
Mammography in the last 12 months	Yes	36	14.1
	No	219	85.9
Physical examination in the last 12 months	Yes	34	13.3
	No	221	86.7
Self-exam in the last 12 months	Yes	46	18
	No	209	82

cer screening in the general population can decrease health and financial burdens [16].

In this study, about 30% of the population have performed breast cancer self-exam, whereas 15% of the population in the study of Khalili et al. (2009) have performed breast cancer screening. Unawareness of screening methods, the lack of breast problems, and the lack of need were the main causes of not performing screening. It seems that informing people about screening methods may increase the screening rate in the community [17].

In the study by Mandrick et al. in 2019, 64% of women believed that early detection of breast cancer increases its curability. Meanwhile, 15% and 13% of the women agreed with the statements "I will never get sick to breast cancer" or "I don't want to know about cancer if I have cancer," respectively, while only 7% of women considered their breast cancer risk to be higher than of the other women. Almost half of women (49%) stated that they do not postpone addressing for healthcare services when they have any health issue [18]. In this study about 64.7% of participants underestimated their risk for breast cancer, and 43.1% expressed their concern about breast cancer. About 18.9% of the participants believed that (agree and highly agree) they will not develop breast cancer in the future. about 22.0% of them believed that they are at higher risks for breast cancer compared to other women, and 61.3% of the participants agreed to visit a physician in case of feeling pain or a mass in the breast.

In addition, the results of a study by Blouin-Bougie et al. on women in Quebec, Canada, showed that many psychosocial factors are associated with women's interest in willingness to pay for breast cancer screening. According to the results of this study, the higher are the women's breast cancer risk perceptions, the higher is their level of interest in breast cancer screening. More anxious, less optimistic women are more interested in breast cancer screening and thus will probably more extensively use such services. This may suggest that some moderating psychosocial variables might influence the women's decision process to get screened or not and their willingness to pay [19].

It should be noted that the educational program, developed based on needs assessment and the health belief model and adapted to the culture, has changed health beliefs and screening behaviors to some extent; in addition, focusing on increasing perceptual sensitivity

Table 3. Attitude of women toward the risk and mortality of breast cancer

Variable	Subgroup	Frequency	Relative frequency
1- Breast cancer is almost curable if detected in early stages.	Highly agree	18	7.1
	Agree	198	77.6
	No idea	18	7.1
	Disagree	21	8.2
	Highly disagree	0	0
2- I believe that I will not get breast cancer.	Highly agree	6	2.4
	Agree	42	16.5
	No idea	122	47.8
	Disagree	78	30.6
	Highly disagree	7	2.7
3- I don't want to know about cancer if I have cancer.	Highly agree	6	2.4
	Agree	27	10.6
	No idea	43	16.9
	Disagree	171	67.1
	Highly disagree	7	3.1
4- Breast cancer is almost incurable even if detected in early stages.	Highly agree	1	0.4
	Agree	25	9.8
	No idea	46	18
	Disagree	174	68.2
	Highly disagree	9	3.5
5- I think I have a higher risk for breast cancer than other women.	Highly agree	2	0.8
	Agree	54	21.2
	No idea	137	53.7
	Disagree	57	22.4
	Highly disagree	5	2
6- I visit a healthcare provider or a physician once I feel pain or a mass in the breast (secretion, breast size change, etc.)	Highly agree	24	9.4
	Agree	161	63.1
	No idea	58	22.7
	Disagree	10	3.9
	Highly disagree	2	0.8

and reducing perceived barriers in future educational programs with a long follow-up interval can affect performing mammography. Bakhtari Aghdam et al. showed that training significantly increased women's perceived intensity, threat, and benefits in the intervention group. Moreover, training increased the rate of breast self-exam by 15.4% in the intervention group. There was a significant difference between the groups in the post-test regarding breast cancer screening behaviors [20].

According to the literature, the higher the level of awareness of the target group in society and the stronger their positive attitude in this regard are, the better they will perform in this field, resulting in a decrease in breast cancer-induced mortality in women in the future. In addition to gaining awareness about health behaviors and their implementation, people should believe that health behaviors such as breast cancer screening can preserve their health, prevent disease occurrence, and reduce

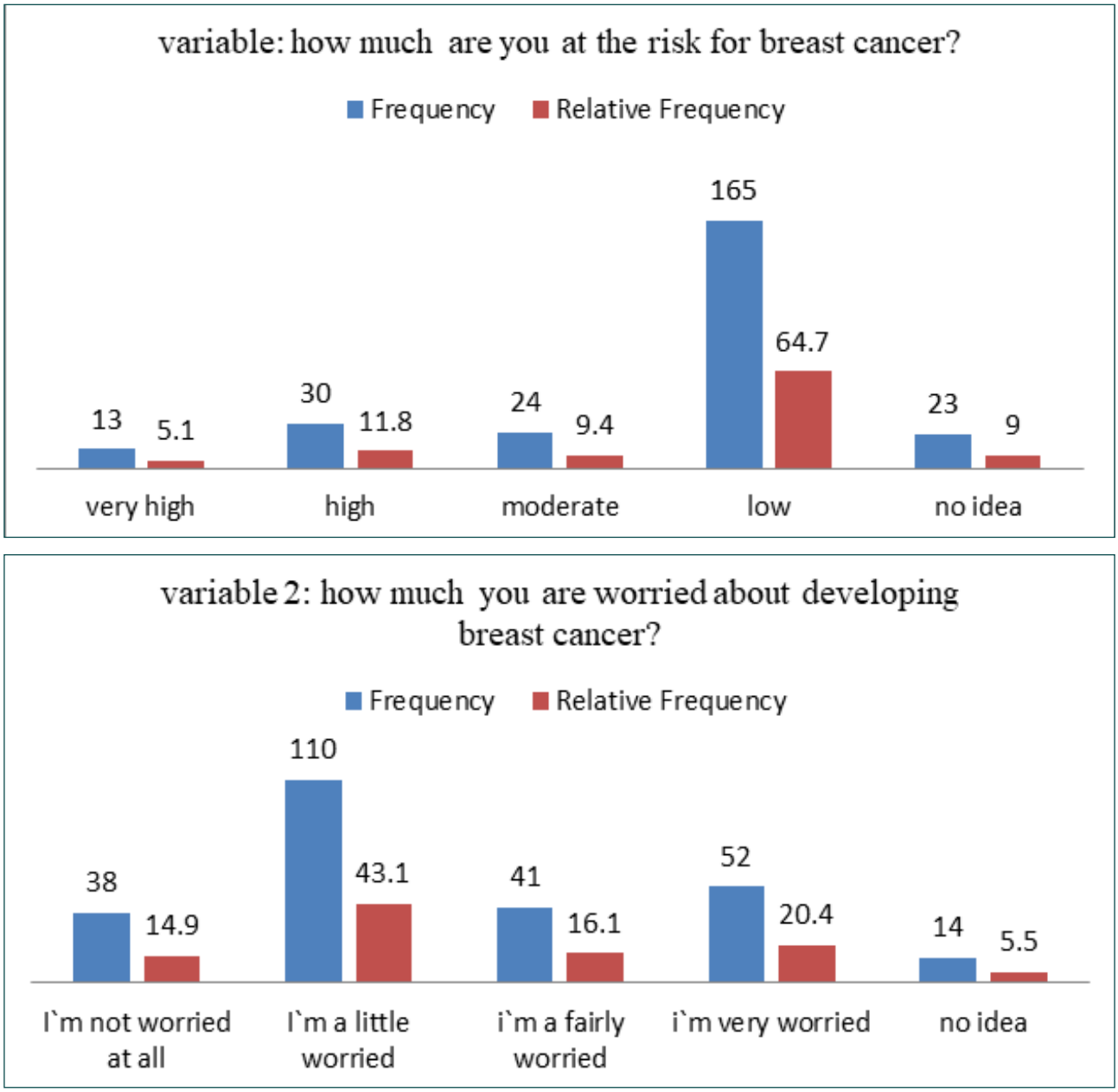

Figure 1. Self-assessment of breast cancer risk in participants

treatment costs. This can be realized by formulating continuous, targeted, and long-term programs by health and treatment policy-makers in line with their prevention responsibility [21].

In this study, most patients had a positive attitude toward the early detection of breast cancer, and the rate of people who believed that early detection of breast cancer increases the chance of successful treatment was higher than in previous studies. In addition, the prevalence of breast cancer screening has increased compared to previous studies, which can be attributed to increased awareness and education.

Limited access to patients was one of the limitations of this study. Despite efforts to enroll more patients, the

number of participants did not exceed 255. Access to a larger number of patients can lead to a more complete assessment of the screening status.

Conclusion:

The attitude of the women's society toward breast cancer screening is high; this finding can be used in plans aiming to raise awareness and conduct screening in Iran.

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