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DOI:
10.4103/jehp.jehp_1023_20

Breast cancer awareness's and attitude among regular health-care users versus irregular in a sample of Kurdish women in the West of Iran

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Abstract:

INTRODUCTION: It is universally acknowledged that strengthen the participation rate in breast cancer (BC) screening can find cancer in its earlier stages. The aim of this study was to determine the effect of regular visits to the health centers on women's knowledge and attitude about BC screening.

MATERIALS AND METHODS: In a cross-sectional study, data were collected from 380 women identified with Kurdish background, who were registered in health care centers of Islamabad-e Gharb during January and February 2017. The subjects were divided into two regular and irregular groups based on the quantity of presence in health centers. Data on women's awareness and attitude about BC screening were collected by a trained interviewer using a structured questionnaire. Bivariate analysis, analysis of variance, and independent sample *t*-test were used to see the mean differences within the groups. The level of confidence was set at 0.05 significant.

RESULTS: Women were representative of four health-care centers of the city, mainly ≤ 39 years old (73.9%), married (96.3%), with high school education (44.2%) characteristics. The total mean \pm standard deviation of awareness score about BC was 6.03 ± 3.90 . In total, 19.2% of participants had poor (< 2.13), 64.2% had an average (2.13–9.93), and 16.6% had good (> 9.93) awareness about BC. The results showed that the level of knowledge and attitude about BC screening was significantly different between regular and irregular groups ($P < 0.05$).

CONCLUSION: An important message from this study is the need for improved and coordinated BC education for all social classes of women. It is necessary to discover ways to encourage women with academic education to visit health centers regularly during interventional studies.

Keywords:

Awareness, breast cancer, Eslamabad-e Gharb, knowledge, screening, women

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Received: 13-08-2020
Accepted: 15-10-2020
Published: 31-08-2021

Introduction

Among women worldwide, breast cancer (BC) is the most common cancer, accounting for about a quarter of all cancers and one of the most common causes of cancer death.^[1,2] Even though awareness of BC has increased significantly among the general population in the past several years, there is a high mortality rate in low- and middle-income countries (LMICs) with ranging from 60% to 70%.^[3,4]

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Five-year survival rates for BC in LMICs reported $< 40\%$ compared with developed countries about 80%.^[5,6] There are many factors that cause a huge discrepancy in survival chances between high-income countries and LMICs. The late diagnosis of BC is considered to be the most important cause of low survival rates in LMICs, arising from a high proportion of patients with advanced BC.^[7]

In Iran, the age-standardized rate for BC incidence is 33.21/100,000, and it is expected that the number of new cases and mortality

How to cite this article: Rastad Z, Kaboudi M, Shiri N. Breast cancer awareness's and attitude among regular health-care users versus irregular in a sample of Kurdish women in the West of Iran. *J Edu Health Promot* 2021;10:316.

will be three-fold, in 2035 compared to 2012.^[8,9] It has been proven that one-fourth of Iranian women with BC are diagnosed in advance stage, and this could lead to the death of about 5248 people by 2025.^[9,10] However, it would be reduced through early detection using current screening protocols.^[11]

Massat *et al.* found that attending breast screening at least once reduced the risk of mortality by 35%, and attending in the 3 years before the diagnosis resulted about 60% reduction in mortality.^[12]

To evaluate the health-care centers in BC screening, the organizational levels of countries in relation to BC are categorized by the "Breast Health Global Initiative." At the fundamental level, breast self-examination (BSE) is introduced, whereas diagnostic ultrasound and mammography are not available enough to everyone. At the next level, a large part of the target group have access to diagnostic mammography, and the population undergoes organized screening for BC.^[4] Three screening methods are recommended by the American Cancer Society for the early detection of cancer. These methods are BSE, clinical breast examination (CBE), and mammography.^[10]

In developing countries, awareness and source of information about methods of BC screening and the use of BC services are extremely low.^[6]

Islam and coleage in a population-based survey in Bangladesh showed that there is a large difference between the proportion of women who reported knowing about CBE (97%) compared with those who reporting they know about BSE (11.4%) and mammographic diagnosis (5.6%).^[11]

Since the BC has a substantial public health impact, and because primary prevention is not available yet, more effort to promote early detection should be taken seriously. The aim of this study was to determine attitudes, knowledge, and screening behavior about the BC among regular health-care users versus irregular in Eslamabad-e-Gharb city.

Materials and Methods

In this cross-sectional analytical study, we determine awareness and attitudes about the screening behavior of BC among regular health-care users versus irregular in Islam-Abade-Garb City, Kermanshah, Iran. Ethical clearance for this research was obtained from the Kermanshah University of Medical Science (KUMS) Ethical Review Board (KUMS. REC.1395.198).

The study took place at four primary health-care centers (PHC_s) from March to June 2016. In this study, regular

referral to health centers was considered at least twice a year for the past 2 years.

The statistical population of this study included 31,254 women aged 20–65 years covered by health centers of Islamabad-e-Gharb city. A multistage sample was designed with a cluster sampling method, and four PHC_s were selected. According to the percentage of females residing in each region, the sample was stratified. Data were collected from 380 women who registered at these PHC_s and live in Eslamabad-e Gharb for the past 2 years, based on the presumption that the women proportion with acceptable awareness of BC would be about 35%, a design effect of 1.5 due to the multistage sampling, 95% confidence interval (1.96), a precision of 0.05% and a 10% nonresponse rate.^[13] Informed consent is obtained from participants before their involvement. All women who agreed to participate in the study were eligible to enroll in the study if they met these criteria: (1) Age range = 20–65 years; (2) have a health record in the health centers affiliated by KUMS in Eslamabad-e Gharb city; (3) not severe and chronic medical disease; and (4) and consent to participate in the study. No exclusion criteria were applied.

The following tools were used for data collection

A questionnaire to collect sociodemographic information of the women such as age, level of the education, job status, age of first pregnancy, marital status, the number of children, and source of information about BC. In the present study, six experts in related professions were chosen to estimate the content validity of the demographic inventory.

An inventory to evaluate the awareness and attitude about BC, designed in 2012 by Mazloomi Mahmoodabad and Khodayarian.^[13] This tool had 82 phrases; among them, the first 20 phrases represented the awareness part, to assess the BC awareness. These 20 phrases were answered on a correct/incorrect basis with an additional option of "don't recognize." A correct answer was given 1 point and an incorrect/don't recognize answer was given 0 points. The total awareness score ranged from 0 to 20, a higher score means a better awareness of BC. The level of awareness was classified as "Poor" (<mean-1 standard deviation [SD]); "Average" (mean-1SD to mean + 1SD); and "Good" (>mean + 1SD). In the second part, 62 phrases were used to assess the attitude toward the BC screening, seven phrases to measure susceptibility, five phrases to measure severity, nine phrases to measure the benefits to action, thirty phrases to measure barriers to action, four phrases to measure self-efficacy, and seven phrases to measure cues to action. Women were asked to rate their agreement with the statement using a Three-Point Likert Scales and the scores were 1 = "Disagree," 2 = "Neither Agree nor

Disagree,” and 3 = “Agree.” Based on this tool, in all six aspects of attitudes, the higher the score, considered the positive attitude about each construct. For example, higher score in “Susceptibility,” refers to a woman’s subjective perception of the risk of acquiring BC, and higher score in “Barriers” means the barriers to BC screening is lower.

In this research, to reaffirm the validity of the questionnaire, it was given to seven specialists of KUMS and their corrective opinions were applied. In this evaluation, the content of the questionnaire change a little and its face validity was corrected too. The reliability of the questionnaire was re-evaluated by the researchers with a Cronbach’s alpha statistical test, which was 0.77 for the whole instrument.

The data were analyzed using SPSS 22 (version 22.0, SPSS Inc., Chicago, IL, USA). Descriptive statistics were used for summarizing the demographic variables. The frequency, percentage, mean, and SD were done to describe the awareness scores according to the demographic variables. Bivariate analysis, including one-way analysis of variance and independent sample *t*-test, has been performed to see the mean differences

within the groups. A value of $P < 0.05$ was considered statistically significant.

Results

A total of 380 women participated in the study. Table 1 shows the mean of awareness by demographic characteristics. The findings showed that the majority (50.5%) of the women was in the age group of 20–29 years old, 96.3% married, and 82.4% were housewives. Table 1 shows the mean of awareness by demographic characteristics. According the age of participants, the highest and lowest mean knowledge score were recorded in 40–49 and 20–29 years old, respectively, and the difference was significant within the age group (11.24; <0.001). The highest and lowest mean knowledge score based on education was seen in a high school degree and primary degree, and the awareness score difference was significant within the education group (23.85; <0.001). Furthermore, the mean difference of awareness about the BC was significantly different within the number of children and job status groups ($P < 0.001$), but not significant within the marital status ($P = 0.790$) [Table 1].

Table 1: Demographic characteristics of respondents by their awareness score

Characteristics	Frequency (n=380), n (%)	Cumulative percent	Awareness (mean±SD)	Frequency of participants based on regularity of visits	
				Regular*, (n=121)	Irregular**, (n=259)
Age (years)					
20-29	192 (50.50)	50.50	5.23±4.16	41	151
30-39	89 (23.40)	73.9	6.61±3.21	30	59
40-49	57 (23.40)	88.90	8.33±3.30	22	35
≥50	42 (11.10)	100	5.33±3.34	28	14
<i>F; P</i>			11.24; <0.001		
Education					
Illiterate	28 (7.40)	7.40	3.00±0.00	28	0
Primary	32 (8.40)	15.80	2.19±3.30	0	32
High school	168 (44.20)	60.0	7.08±3.95	52	116
Academic	152 (40)	100	6.24±3.90	41	111
<i>F; P</i>			23.85; <0.001		
Marital status					
Single	14 (3.7)	3.7	6.14±1.40	0	14
Married	366 (96.3)	100	6.03±3.90	121	245
<i>t; P</i>			0.269; 0.790		
Number of children					
0	49 (12.9)	12.9	3.08±1.62	11	49
1-2	218 (57.4)	70.3	6.22±4.42	71	218
3-5	113 (29.7)	100	6.95±2.78	39	113
<i>F; P</i>			19.12; <0.001		
Job status					
Employed	67 (17.6)	12.9	7.97±4.26	21	46
Housewife	313 (82.4)	70.3	5.62±3.69	100	213
<i>t; P</i>			4.60; <0.001		

One-way analysis of variance (ANOVA) and independent sample *t*-test has been performed to see the mean differences within the groups. $P < 0.05$ considered as a level of significance (α). SD=Standard deviation *A regular visits to the health center: At least once every 6 months, ** Irregular visits to the health center

As Table 2 shows, among all of the participants, 121 (31.8%) of women stated that they have gone to the university-affiliated health centers at least once every 6 months for the past 2 years (regular group).

The total mean \pm standard deviation of awareness score about BC was 6.03 ± 3.90 . As Table 2 shows, in total, 19.2% of participants had poor (<2.13), 64.2% had an average (2.13–9.93), and 16.6% had good (>9.93) awareness about BC. This information based on regular/irregular groups is shown in Table 2.

The results presented in Table 3 showed that there was a statistically significant difference between two regular/irregular groups regarding on the awareness and attitude of BC screening. Although in the irregular group, the mean of awareness score was higher than the regular group, the scores of perceived susceptibility, severity, benefits, self-efficacy, and cues to action to BC screening (BC_s) were higher in the regular group compared with the irregular group ($P < 0.05$). In addition, the perceived barriers to BC_s were lower in the regular group ($P < 0.05$) [Table 3].

The source of information about BC_s is shown in Table 3.

Table 2: Frequency of participants based on poor, average, and good awareness by the regular/irregular visits to the health centers

Awareness	Frequency		
	Total (n=380)	Regular visits* (n=121), n (%)	Irregular visits (n=259), n (%)
Awareness			
Poor	73 (19.2)	31 (25.6)	42 (16.2)
Average	244 (64.2)	90 (74.4)	154 (59.5)
Good	63 (16.6)	0 (0)	63 (24.3)

Table 3: Awareness and attitudes of the respondents by the regular/irregular visits to the health centers

Variables	Regular visits*, (n=121), mean \pm SD**	Irregular visits, (n=259), mean \pm SD	T***	P
Awareness	3.53 \pm 2.15	7.20 \pm 3.98	-11.64	0.000
Attitudes				
Susceptibility	16.83 \pm 1.81	13.35 \pm 3.47	12.83	0.000
Severity	12.48 \pm 1.88	9.09 \pm 1.90	16.20	0.000
Benefits	22.93 \pm 4.79	16.94 \pm 5.34	10.95	0.000
Barriers	79.17 \pm 5.99	56.66 \pm 19.58	16.89	0.000
Self-efficacy	10.49 \pm 1.40	7.84 \pm 2.56	13.02	0.000
Cuestoaction	18.21 \pm 1.98	13.66 \pm 3.32	16.61	0.000
Total attitudes	160.12 \pm 6.016	117.54 \pm 33.96	19.53	0.000
Sources of information, frequency (%)				
Health center staff	90 (74.4)	25 (9.7)	-	-
Mass media	22 (18.2)	59 (22.8)	-	-
Relatives	-	40 (15.4)	-	-
Books and magazines	-	11 (4.2)	-	-
Internet	9 (7.4)	124 (47.9)	-	-

*A regular visits to the health center: At least once every 6 months, **SD: Standard deviation, ***Independent sample t-test has been performed to see the mean differences within the groups. $P < 0.05$ considered as a level of significance (α)

Discussion

The present study is aimed to assess the awareness and attitude of women aged 20–65 years who live in Eslamabad-e Gharb, Kermanshah, Iran, for the past 2 years. The bivariate analysis showed that the age, formal education level, number of children, and job status were associated with awareness.

Women aged 40–49 years old had a higher awareness about BC screening, risk factors, and the incidence of breast cancer.

Mah and Bryant show that compared with the women aged ≥ 50 years, those 40–49 years old were significantly more aware of BC screening ($P < 0.05$). They argued that it may be the older women feel that they had many other problems with their health to worry about the possibility of BC.^[14]

Similar to other studies, women with high school and a higher level of education had more knowledge about BC and have heard of BC.^[15,16] The result shows 23.14% of women who regularly attending PHCs were illiterate; this ratio was zero in the regular group. This finding can explain the higher awareness in the irregular group compared with lower awareness in women who regularly attending PHCs centers.

The majority of women in this research presented an average level of awareness. Interestingly, despite the higher awareness of women with irregular attendance at health centers, but women who were in the regular referral group had a better attitude about BC. In other words, the recent group had higher perceived sensitivity, severity, the benefits of screening, cues to action, and self-efficacy than the irregular group (number of visits

less than twice a year, 6 months apart). Furthermore, the perceived barriers of the regular group were lower than the irregular group.

We must consider that in Iran, because of the rising age of childbirth and breastfeeding for the first child,^[17] the chances of BC is likely to increase.^[18,19] Therefore, it is recommended that to diagnose BC in the early stages of the disease, using modern educational methods such as cyberspace, the health system staff should attempt to improve women's views on BC screening.

Limitations

Our study was cross-sectional research, but intervention studies are needed to find effective manners to challenge and correct misinformation about BC. Large-scale well-design prospective studies are required to assess the relationship between attitudes about BC_s and their influence on screening behaviors.

Conclusion

Determining the level of awareness and attitude about breast determining the level of awareness and attitude about BC is an important step to establishing suitable programs to reduce mortality and morbidity of this severe and relatively common disease. An important message from this study is the need for improved and coordinated BC education for all social classes of women. It is necessary to discover ways to encourage women with academic education to visit health centers regularly during interventional studies.

Acknowledgment

The research was specifically supported by deputy of research and technology, KUMS. The authors would like to thank all the participants who patiently participated.

Financial support and sponsorship

This study was drawn from a research project (KUMS.REC.1395.198), sponsored by deputy of research and technology of KUMS. The cost of the payment is spent on the design and implementation of the study.

Conflicts of interest

There are no conflicts of interest.

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