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BREAST SELF-EXAMINATION AMONG WOMEN: A QUANTITATIVE STUDY

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ABSTRACT

Breast cancer is the most common cause of cancer related deaths among women worldwide. The disease in women occurs at a younger age in Iran than in western communities. Breast self-examination (BSE) plays a role in early diagnosis of this cancer and decreasing the subsequent mortality rate; in addition, the importance of knowledge and attitude of women towards this matter encouraged the conduction of this study to investigate the knowledge and attitude of the women, visiting the health centers in Jiroft City, towards breast self-examination. This is a descriptive-analytical study, in which the knowledge and attitude of 200 women visiting health centers in the City of Jiroft, towards breast self-examination were investigated. They were selected using convenience sampling method. Data collection instrument: included a questionnaire containing personal-social information, as well as some information about the knowledge and attitude of women towards BSE. For data analysis, SPSS and descriptive-inferential statistics were used. The mean age of the respondents was $43/6\pm5/29$, ranging from 20 to 51 years. The present study showed that women obtained only 34% and 41% of total knowledge and attitude scores, respectively. In addition, research findings demonstrated a significant relationship between knowledge and attitude ($p<0.01$). In comparison of mean scores of demographic information, significant differences were observed in age groups ($p<0.05$), educational level, educational level of partner, and carrier ($p<0.01$). There was also a significant difference in the scores of women's attitude regarding education level, educational level of partners, carrier ($p<0.01$), and previous information ($p<0.05$). Findings of this study showed that women's knowledge and attitude towards BSE were not satisfactory. Therefore, training programs for encouraging women to perform BSE correctly is recommended.

Keywords: Knowledge, Attitude, Breast Self-Examination, Screening

INTRODUCTION

Breast cancer is the most common problem among women across the world (Noroozi and Tahmasebi, 2011; Yousefi *et al.,* 2011). In Iran, it is the most prevalent type of cancer and accounts for the 21.4% of malignancies in women (Noroozi *et al.,* 2011). Breast cancer is a stressful experience that leads to emotional anxiety and destructs one's performance in performing daily tasks. The world's statistics indicate increased number of breast cancer infection and quicker spread of it in developing countries, which have had low rate of breast cancer before (Parsa *et al.,* 2008). Despite technical advancements in surgery, chemotherapy, and radiotherapy, the rate of mortality caused by breast cancer has not changes for 50 years.

The main reason for this is that one-third of the target women visit health centers in the advanced stage of their disease; while, breast cancer improvement prognosis is directly related to a stage, in which the disease is diagnosed (Sadikoglu *et al.,* 2010).

Early diagnosis of breast cancer through screening methods including breast self-examination, clinical examination, and mammography, has fundamental role in the reduction of breast cancer mortality (Okobia *et al.,* 2006). According to the recommendation by American Cancer Society, women should become learn self-examination to be capable of reporting any slight change in their breasts (Kasper, 2005), since 97% of the cancers are diagnosed at early stages by the patients themselves (Fincham *et al.,* 2005). Unfortunately, despite the advantages of regular BSE, a limited numbers of women perform it

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(Mousavi *et al.,* 2007). There is a positive correlation between the BSE and early diagnosis of breast cancer, and the majority of early detections are done by people who perform BSE.

Breast self-examination is the easiest and cheapest method for early diagnosis of the disease, and breast cancer screening is the only technique for women who do not have easy access to health care systems (Parsa *et al.,* 2008). Limited knowledge of women about the realities of breast cancer, lack of knowledge about the importance of self-examination and how it is performed, negligence in treating with BSE, social poverty, late appearance of annoying symptoms of breast cancer like skin ulceration, and physician's careless examination are among the causes of not visiting in the early stages of this cancer. There is a wide range of statistics suggesting the success of breast screening examinations including BSE (Karimy *et al.,* 2009; American Cancer Society, 2000; Champion, 1992). Given the importance of early detection of breast cancer to physical and mental health of people, and the significant of BSE, and also due to the important role of knowledge in people's attitude and behavior, any planning for increasing the knowledge, changing attitude, and finally boosting the performance of women, requires investigation into their knowledge and attitude.

MATERIALS AND METHODS
Methodology
This descriptive study has been conducted on 200 women visiting health centers in the City of Jiroft for problems irrelevant to breast. Data collection instrument was a short-structured, researcher-made, standardized questionnaire designed in 3 sections as follows: demographic, knowledge, and attitude towards BSE items to estimate the knowledge of the investigated population. Responses to 20 knowledge-related items are scored as 1, -1, and 0 for correct, incorrect, and null answers, respectively. The subjects were categorized into people with little knowledge (scored 0-10), moderate knowledge (scored 1-10), and great knowledge (scored 11-20), based on their overall score. A 12-item questionnaire was used to investigate the subjects' attitude towards BSE, its importance, early diagnosis of breast diseases, and continuation of BSE on a 5-point Likert scale (Strongly Agree, Agree, Null, Disagree, Strongly Disagree), in form of predicative sentences. Scoring in the attitude inventory was done as follows: 4, 3, 2, 1, and 0 for strongly agree, agree, null, disagree, strongly disagree, respectively. The internal consistency of the questionnaire at attitude section was determined as 71%. Scores lower than 24, between 24 to 36, and higher than 36 were considered as the indicators of poor, moderate, and good attitudes. The validity of the knowledge assessment inventories was confirmed, using content analysis. In that, the questionnaires were prepared using several relevant articles and texts, and their validity was confirmed using the opinion of eight experts and faculty members of Kerman University of Medical Sciences. The reliability of knowledge and attitude assessment inventories was confirmed using Cronbach's alpha (86% and 70% for students' knowledge and attitude inventories, respectively). After data collection, they were analyzed using chi-square, frequency, and ANOVA tests with SPSS18.

RESULTS AND DISCUSSION
Findings
Based on the findings, the minimum and maximum age of the research subjects were 20 and 51 years, respectively, with mean and standard deviation of 6.43±29.5. In addition, 98% and 41.7% of the research units were married and had high school educational level, respectively. Moreover, 25.7% of the investigated subjects have performed BSE, and only 9.1% of them do it in a regular monthly routine. The history of BC infection in family members and close relatives was 10%, out of which 1% were of the first-degree relatives.

In this section, 96% of the research subjects emphasized the lack of BSE training program through health-care team. They felt a scientific need for participation in cancer training, prevention, and screening programs, especially for breast cancer, in which the correct BSE and breast clinical examination (BCE) techniques are taught. According to the results from research questionnaire, the respondents' knowledge of the symptoms, signs and risk factors of breast cancer and the correct technique of BSE and BCE was

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not satisfactory. In that, 30.3%, 35.4%, and 34.3% of the subjects had good, moderate, and poor knowledge of breast cancer and BSE, respectively.

Table 1 shows the percentage of the responses to items related to the assessment of knowledge about symptoms, signs, and risk factors of breast cancer and correct way of performing BSE.

Results (Table 3) suggested a significant differences in the mean score of knowledge, age ($p<0.05$), carries ($p<0.01$), educational level ($p<0.01$), and educational level of partner ($p<0.01$).

Table 1: The percentage of the responses to items related to the assessment of knowledge about symptoms, signs, and risk factors of breast cancer and correct way of performing BSE in women visiting health centers in Jiroft in 2014, and their attitude towards BSE

Items		Correct	Incorrect	I Don't Know
Symptoms and Signs of Breast Cancer	Painless Lump	60.8	7.9	31.3
	Premenstrual Breast Nodules	30/38	11.8	57.4
	Nipple Radiating Pain	59.7	20.7	19.6
	Breast Pain	36.1	40.4	23.5
	Secretion of Milk after Breastfeeding	30.3	50	23.5
	Breast Asymmetry	21.8	14.4	63.8
	Bloody Discharge from the Nipple	43.9	10.3	45.8
Risk Factors	Aging	52.4	14	6.33
	Hygiene Violation Breast	11.8	39	492
	Delivery after the first-time Pregnancy over the Age of 30 Delivery after the Age of 30	20.5	18.9	60.6
	Slimness	34	4.7	61.3
	Mother or Sister with Breast Cancer	74.2	3.8	22
	Direct Contact with a Person with Breast Cancer	60	2	38
Breast Self-Examination	Prolonged Breastfeeding	34	61.3	4.7
	Postmenopausal Obesity	11.8	5.38	7.49
	Touching Each Breast with Ipsilateral Fingers	36.5	5.48	15
	Breast Discharge Monitoring	78.5	6.1	19
	Looking at the Breasts in the Mirror	82	5.9	12.2
	Squeezing the Breast between Thumb and All Four fingers in the Shower	41.2	37	21.8
	Touching the Breast with Three Middle Fingers of Contralateral Hand, While Lying Down or in the Shower	38	30	32

Table 2 shows the number and percentage of responses to each item related to women's attitude towards BSE, BCE, and the implementation of breast cancer prevention programs.

Meanwhile, 71.5% of the women strongly agreed or agreed with the probability of having a normal life in the future in case of early detection and treatment of breast cancer. On the other hand, 70.5% of the participants strongly agreed and agreed that the majority of women had no idea about correct BSE technique, indicating the key role of this group in the achievement of the prime goal of cancer prevention within the covered community.

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In addition, comparison of mean attitude scores based on educational level of partner, carrier, and received prognostic information showed a significant statistical difference; in that, those women with academically educated partners ($p<0.01$), women employed in heal-care teams ($p<0.01$), and women who received prognostic information obtained higher mean attitude score. In addition, a significant statistical difference was observed between these variables and attitude. The Spearman's correlation coefficient (Table 3) showed a significant relationship between knowledge and attitude ($p<0.01$).

Table 2: Relative frequency, mean, and standard deviation of the scores of the attitude of women, visiting health centers within the City of Jiroft in 2014, towards BSE

Items	Strongly Agree	Agree	Null	Disagree (Number)	Strongly Disagree	Attitude Scores (M□SD)
Every woman is Prone to Breast Cancer.	**53.3**	43	3	0.7	0	4/49±0/59
Breast Cancer is Fully Preventable.	7.8	2.29	2.8	43	11.8	3/18±1/06
Women Are Incapable of Detecting Abnormalities in Their Breast by Performing BSE.	1.6	28.9	41	4.6	23.9	4/53±0/57
There Is Not Any Need for Monthly Self-Examination.	63.2	34.4	6.1	0.3	0.3	3/22±0/92
The Majority of Women Do not Know How to Perform BSE.	70.5	24.6	2.6	0.3	1	4/60±0/57
Women Prefer to Visit a Physician for Breast Examination.	46.5	48.9	3.3	1.3	0	4/00±0/92
There Is No Need for Regular Examination of the Breasts by a Doctor When There Are not Any Breast Problem.	4.9	26.2	22	39	7.9	3/30±1/11
Diagnosis Methods Have Nothing to Do with Successful Treatment.	1.6	23.9	28.9	41	4.6	4/52±0/63
Adhering to Hygienic Rules Decreases the Probability of Breast Cancer.	63.2	34.4	1.6	0.3	0.3	4/29±0/87
Early Detection and Treatment of Breast Cancer Ensure Patient's Normal Life.	71.5	25.6	1.6	0.3	1	4/66±0/62
Fear of Finding a Lump may Inhibit Breast Self-Examination.	57	40.4	0.7	1	0.7	4/36□ 0/52
Breast Self-Examination Does Not Produce an Important Result.	5.2	20.7	26.8	23.5	14.8	4/02□ 0/9

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Table 3: Comparison of mean and standard deviation of knowledge and attitude of women, visiting health center in the City of Jiroft in 2014, towards BSE, based on demographic specifications

Mean-Standard Deviation- Demographic Specifications		Knowledge M.SD		P	Attitude M.SD		P
Age	**26-35 Years**	0.17	0.73		0.38	4/06	
	Higher than 35	0.16	0.69		0.39	4/07	
Educational Level	**Illiterate**	0.16	00.50		0.35	3/59	
	High-Secondary School Diploma	0.12	0.63	**p<0/01**	0.24	3/80	**p</01**
	Academic Education	0.15	0.65		0.310	3/90	
Educational Level of Partner	**Illiterate-Secondary-High School Diploma**	0.13 0.15	0.70 0.67	**p<0/01**	0.330 0.37	4/3 3/62	**p</01**
	Academic Education	0.08	0.71		0.350	3/88	
Career	Housekeeper and Work-at-Home	0.14	0.66		0.330	3/97	
	Health and Medical Related Jobs	0.16	0.89	**p</01**	0.38	4/47	**p</01**
	Other Public-Private Centers	15.0	0.78		0.34	4/15	
Receiving Prognostic Information	**Yes**	0.14	0.72	**p<0/05**	0.38	4/12	**p<0/05**
	No	0.14	0.74		0.27	3/88	

Discussion
Results from this study confirm different research reports suggesting that the improvement of knowledge and attitude of the society towards breast cancer may have positive role in women's screening behaviors (Pearlman *et al.,* 1999; Frazier *et al.,* 1996).

Findings indicate that more than half of the participants have moderate to poor knowledge about the symptoms, signs, and risk factors of breast cancer, and the correct self and clinical examination of breast. A study in the west region of Turkey on 20-64 years women showed that women with inadequate knowledge of breast cancer knew little about BSE (Akyildiz and Coban, 2006).

Seidman *et al.,* (1987) puts that about one-third of the investigated Iranian women have had moderate to poor knowledge of these matter, and it seems that these women are less aware of the advantages of breast cancer screening at its symptomless stage.

In a study by Hajimahmodi *et al.,* (2002), the knowledge and attitude of health staff were reported at moderate level, and the implementation of cancer prevention related training programs was recommended to them. Results from a study in Nigeria showed that students had poor knowledge of breast cancer, inhibiting them from performing BSE (Isara and Ojedokun, 2011). On the other hand, 85% of the participants in a study in China had heard about breast examination (Elizabeth *et al.*). In a study by Kumar (2009) in Karachi, participants had good knowledge of breast cancer risk factors. Results of the present study suggest that performing breast self-examination is significantly related with higher educational level, which is consistent with the findings of Ucel *et al.,* (2005).

Our research showed a significant correlation between the carrier and knowledge, in that the staff of health centers had broader knowledge. It was reported in a study that nurses, as the members of health-care team, had wider knowledge than teachers (Mahnoush *et al.,* 2013). In a study by Secginli and Nahcivan (2006), higher educational level has been introduced as the predictor of more screening behaviors like BSE and mammography. In addition, our study showed that the participants' attitude towards BSE was moderate. From investigating the cultural views on breast health and cancer, Yarbo and Meneses (2007) concluded that fear of rumors and being shunned by partner, family members, and

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friends inhibits many women from performing BSE, towards which they had moderate attitude. According to Pengpid *et al.,* (2014), efforts should be made to develop programs that can increase breast cancer knowledge and improves attitudes towards BSE. In a study by Ceber (2006) in Turkey, the attitude of the investigated people has been reported as low.

In this study, we concluded that the higher is the knowledge level, the more positive is attitude of the samples towards BSE. Indeed, there is a significant statistical relationship between knowledge and attitude, which is consistent with the findings of Ceber *et al.,* (2006). According to Hachian *et al.,* (2011), training healthy behaviors can improve the knowledge an attitude of women towards screening methods.

It can be said that women's' attitude has been affected by their educational level and that of their partners. On the other hand, broader knowledge leads to better attitude towards literacy (UNESCO). UNESCO knows training and education as important factors in changing people's attitude and strategies towards health principles (Frotan, 2002).

Karayurt *et al.,* (1002) puts that culture and attitude may have a role in performing health-oriented behaviors like BSE. In general, in this study, the knowledge and attitude of the investigated women towards BSE were estimated unsatisfactory.

Lamieyan *et al.,* (2008) says: as the objective of health training is the development of appropriate solutions to warn against health threats, paying attention to the structure of women's attitude and using health-oriented screening approach are recommended.

Hajian (2011) recommends designing interventional training programs based on well-known psychological theories for screening breast cancer in developing countries. Tavafian *et al.,* (2009) also emphasizes BSE training programs aiming at promoting self-efficacy and taking perceived barriers into account.

Conclusion

It can be concluded that the improvement of knowledge level and consequently correcting the

attitudes of Iranian women, as active members of the society whose health ensures family health, and as an objective of Millennium Development, are an absolute necessity.

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