Original Article

Knowledge, Attitudes and Practice of Women towards Breast Cancer and Its Screening: Babol City, Iran – 2017

Mehdi Safarpour[1]   Amir Tiyuri[2]   **Masume Mohamadzade[3*]**

1.   MS of Epidemiology, Health Deputy, Babol University of Medical Sciences, Babol, Iran
2.   PhD Student of Epidemiology, Department of Epidemiology, School of Health, Iran University of Medical Science, Tehran, Iran
3.   MSc of Health Services Management, Health Deputy, Babol University of Medical Sciences, Babol, Iran

*****Correspondence to**: Masume Mohamadzade
mohamadzade@yahoo.com

Abstract

***Background and Purpose*:** Considering the high prevalence and the reduction of the age of breast cancer in Iran, the present study was conducted to survey women's knowledge, attitude and practice about breast cancer and its screening tests in Babol city.

***Materials and Methods*:** In a cross-sectional study, 304 women aged 20-65 years (in Hashemi Healthcare Centre affiliated to Babol University of Medical Sciences) who were selected through random sampling were studied over a period of six months in 2017. Data collection was carried out using a standard questionnaire including demographic variables, 12 questions about knowledge, 15 questions about attitude, and 2 questions about practice. The collected data were then analyzed using SPSS 22 by ANOVA, chi-square, and correlation coefficient.

***Results*:** The mean age of the participants was 43.3 ± 10.4 years. 22.3% of the participants had a good knowledge, and 61.8% had a positive attitude. Only 17.1% undertook screening examinations. There was also a significant relationship between age and education level with knowledge, attitude, and practice of women (P <0.001). However, there was found no significant relationship between the presence of cancer in relatives with knowledge (P=0.131), attitude (P=0.996), and practice of the women (P= 0.131).Conclusion: The radical scavenging ability of the extracts could be attributed to the presence of flavonoids and phenolics.

Conclusions: Increasing awareness about breast cancer is emphasized, especially in older women or the ones with lower education.

Keywords: Breast Neoplasms; Breast Self-Examination; Health Knowledge; Attitudes; Practice

Citation*:** Safarpour M, Tiyuri A, **Mohamadzade M. Knowledge, Attitudes and Practice of Women towards Breast Cancer and Its Screening: Babol City, Iran – 2017. Iran J Health Sci. 2018; 6 (4): 1-9.

1. Introduction

According to the World Health Organization (WHO), breast cancer was the second most common cancer in the world and the first prevalent cancer among women in 2012. It was also the fifth cause of death from cancer (1). The risk of breast cancer during the lifetime of a woman is 1 out of eight people (2). Based on the American Cancer Society, it is estimated that 252,710 new cases of breast cancer will be diagnosed among American women in 2017, and approximately, 40,600 women will die due to this cancer (3). In Iran, breast cancer is the highest prevalent cancer among women with 21.4% of all cancers that has risen and since 1999 onwards, it was ranked first among the cancers registered in Iran, and from 2002, it has increased by 2% compared to the previous year (4, 5). Early diagnosis of this cancer could reduce its death rates significantly in the long-term (6). There are some ways for early breast cancer diagnosis. Awareness of early signs of this disease, familiarity with breast self-examination methods, and performing mammography can reduce the mortality rate by 20-30% in women over the age of 50 (7). Vakobi quoted from other studies that prolonged delay in the treatment of women with symptomatic breast cancer can be associated with advanced stages of the disease, increased tumor size, and reduced chance of survival. In this regard, the five-year survival rate in women with breast cancer in Nigeria is 10% compared with 70% in North America and Western Europe. It seems that the recent fall in deaths from breast cancer in Western Nations is partly explained by earlier diagnosis as a result of early presentation (8). Despite the importance of screening tests and the training that has been done so far, still, a low percentage of Iranian women perform screening tests. The results of a survey of 400 women referring to health centers showed that only 18.8% of them perform breast self-examination (9). Physicians believe that the biggest success factor in cancer treatment is the awareness of the patient in early stages of cancer, and breast cancer is no exception to this (4). Considering the high prevalence and reduction in the age of breast cancer in Iran and the fact that this cancer is one of the most common among women, and also considering the role of screening in early diagnosis of breast cancer, the present study aimed at investigating the knowledge, attitudes, and practice of women towards breast cancer and its screenings tests in Babol, to provide useful information for the planning of effective interventions.

2. Materials and Methods

This cross-sectional study was carried out over a period of six months from March to September 2017 in Hashemi Healthcare Centre affiliated to Babol University of Medical Sciences. It involved women of 20-65 years. In order to estimate the proper sample size, first, 50 questionnaires were completed by participants, and after the initial analysis, good knowledge of women was estimated as 25%. The sample size of this study, taking into account the mentioned level of good knowledge and considering α = 0.05, and estimation error of 0.05, was calculated to be 300 people. Then, by using the list of 20-65-year-old women in the health center (available from the latest census), a random sampling method was used, and people were asked to come to the center after a telephone call. It was also conditioned that if the person does not want to participate, the next person will be invited according to the list. This

research was approved by the Ethics Committee of the Babol University of Medical Sciences by the code MUBABOL.HRI.REC.1395.101.

Data collection in the present study was done using a questionnaire used in the Anvari 's study in Mashhad (10) whose validity was confirmed by experts, and an acceptable Cronbach's alpha coefficient of 0.8 was obtained for its reliability. In the present study, in order to observe ethical issues in the research, after providing enough information about the research goals and obtaining the consent of the participants, the participants were included in the study, and the questionnaire was provided to the client to complete it. The questionnaires were self-administered to the women, however, those who were unable to complete the questionnaire for any reason were helped by an interviewer. The questionnaire consisted of 4 sections: including demographic characteristics and history of breast diseases in prevalent, knowledge questions (12 questions, with three options answer: a. correct b. wrong c. no comment), attitude questions (15 questions, with five options, completely disagree to completely agree), and practice questions (2 questions). To investigate the knowledge of women, in the case of correct answers to 4 questions, the person had a poor knowledge, a person with 5-8 correct answers to questions had moderate knowledge, and in case of correct answers to 9 questions and more, the person had good or proper knowledge about the subject study. The answer to the questions of attitude section was Likert scale type, which were scaled from one to five. The participants were divided into two groups based on their attitudes, the score range of 15-50 was regarded as indicating a negative attitude, while the score of more than 50 was considered as indicating a good attitude. In the practice evaluation, self-examination and presenting to a physician or midwife for breast examination were questioned. If the answer was yes, the person would be in the proper practice group. Regarding those who had not referred to a doctor or midwife for breast examination in person, the reason was asked.

In the current study, data analysis was performed using SPSS 22. The mean and standard deviation were calculated through SPSS to describe the quantitative variables, and the frequency and ratio were used for describing qualitative variables. Also, to assess the relationship between the independent variables of the study and the score of knowledge and attitude and practice of participants, ANOVA, Chi-square, and Pearson correlation coefficient were used. The significance level or p value was also considered to be <0.05.

3. Results

Of the 304 participants in the study, majority of women (76.3%) were married. The mean age of the participants was 43.3 ± 10.4. Health workers and books were the main sources of women's awareness. According to Table 1, in terms of education, illiterate people and those with education under diploma had the least and most frequency level with 2.3% and 41.7%, respectively.

Table 1. Frequency of study variables

Variable	Frequency (%)
Age groups	
20-29	42(13.8)
30-39	94 (30.9)
40-49	80 (26.3)
50-65	88 (28.9)
Education	
Illiterate	7 (2.3)
Under Diploma	127 (41.7)
Diploma	96 (31.6)
Academic	74 (24.3)
Cancer in the family	
Yes	12 (3.9)
No	292 (96.1)
Marital status	
Married	232 (76.3)
Single	66 (21.7)
Widow / Divorced	6 (2.0)
Source of knowledge	
TV & other media	204 (67.1)
Book	8 (2.6)
Health worker	84 (27.6)
Physician	8 (2.6)

Figure 1. Indicates that most people had good knowledge, most participants (61.8%) had a positive attitude; also in the practice field, only 17.1% of the subjects did breast self-examination or referred to midwife or doctor
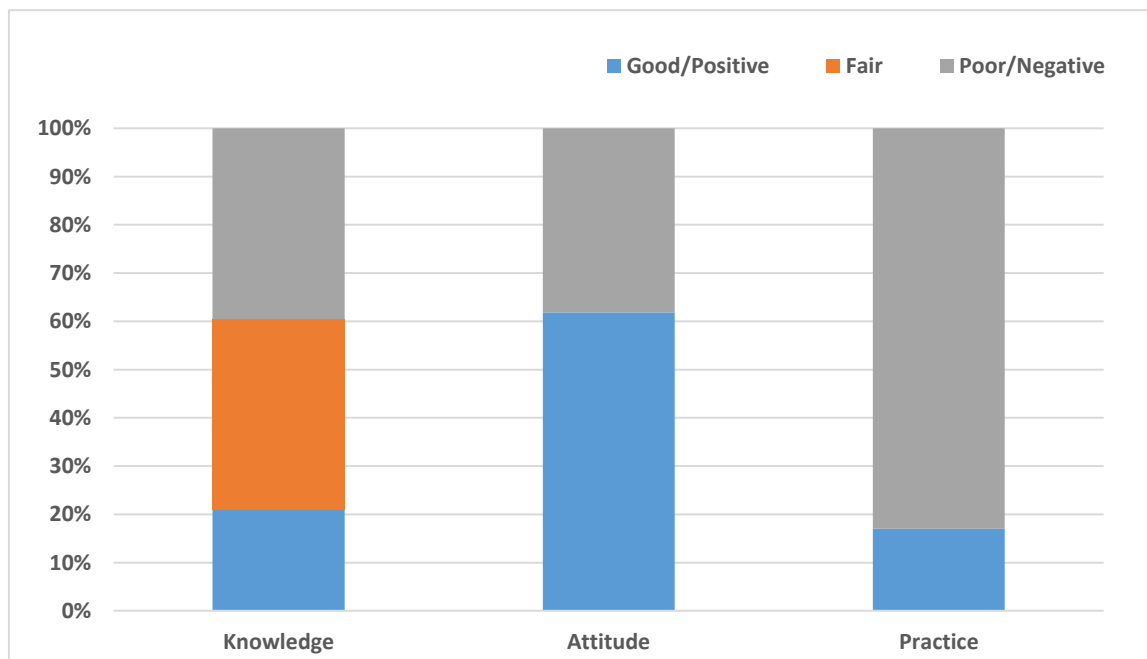
.

Figure1. Knowledge, Attitude & Practice of participants

The most important reason (30.0%) for not performing the examinations was the lack of awareness of the person (Figure 2).

Figure2. Causes of not doing examination

The results of the correlation test between knowledge and attitude scores showed that this relationship was positive and significant. In other words, with increasing knowledge scores, women had a better attitude towards breast cancer (r = 0.46, p = 0.041). But regarding age and knowledge of individuals, there was found an inverse relationship that was statistically significant (r = -0.68, p = 0.013).

Table 2 indicates the results of ANOVA and Chi-square test for investigating the relationship between each of the independent variables of the study and the level of knowledge, attitude, and practice of the participants. Based on the results, there was documented not a significant relationship between the score of knowledge and presence of cancer in relatives (P= 0.131), the attitude score and marital status (P=0.071), and presence of cancer in relatives (P=0.996). In practice field, except for presence of cancer in relatives, other independent variables had a significant relationship with the participants' practice. Also, the score of knowledge in participants with proper practice (8.7 ± 2.2), was significantly higher than women with improper practice (5.2 ± 2.1) (P<0.001)

Table 2. Knowledge, Attitudes, and Practice by independent variables

Variable	Knowledge			Attitude			Practice*			
	Mean ± SD	F	P-ANOVA	Mean ± SD	F	P-ANOVA	Frequency (%)		Chi-Square	P
							Proper	Improper		
Age groups		48.6	<0.001		202.2	<0.001			11.4	0.010
20-29	8.6 ± 2.1			61.8 ± 9.1			12 (28.5)	30 (71.5)		
30-39	6.5 ± 2.3			63.2 ± 4.1			19 (20.0)	76 (80.0)		
40-49	5.5 ± 2.0			52.3 ± 11.5			15 (18.5)	65 (81.2)		
50-65	4.2 ± 1.6			37.7 ± 7.7			6 (6.8)	82 (93.2)		
Education		15.36	<0.001		259.9	<0.001			10.2	0.017
Illiterate	3.2 ± 0.4			44.2 ± 9.6			2(28.6)	5 (71.4)		
Under Diploma	6.1 ± 2.6			40.5 ± 7.6			15 (11.8)	112 (88.2)		
Diploma	4.8 ± 1.9			63.4 ± 4.4			14 (14.6)	82 (85.4)		
Academic	7.0 ± 2.3			62.1 ± 7.2			21 (28.4)	53 (71.6)		
Marital status		6.3	0.026		2.6	0.071			4.8	<0.030
Married	6.0 ± 2.5			53.6 ± 12.6			46 (19.8)	187 (80.2)		
Single	5.4 ± 2.3			49.7 ± 13.4			6 (8.3)	65 (91.7)		
Widow / Divorced	2.8 ± 0.9			49.9 ± 15.2			**	**		
cancer in the relative		2.2	0.131		0.0	0.996			2.3	0.131
Positive	6.9 ± 1.7			52.6 ± 3.7			4 (33.3)	8 (66.7)		
Negative	5.8 ± 2.5			52.7 ± 3.6			48 (16.4)	244 (83.6)		

* Breast Self-Examination/ Examination by a physician or a midwife

**Merged into above group

4. Discussion

According to the results of the present study, the most important source of information on breast cancer in the participants was television and mass media, but in Anvari et al. study, which was conducted on medical students, the most important sources of information about breast cancer were books and then mass media with a frequency of 39% and 23.2%, respectively (10). The studies of Akhtari et al. in Hamadan (11) and Gurdal et al. in Turkey (12) were in line with the results of the current study which found mass media, such as radio and television, as the most important sources of information on breast cancer and its screening methods. The differences in this section was then found to be attributed to demographic characteristics, such as age, education, marital status, or the way these women were related to health system and the extent to which they benefited from the services provided in health centers. The findings of the present study indicated that 64.5% of the women had moderate knowledge about the subject, which was consistent with the results of a study conducted by Motavali in Ardabil (13), which reported the knowledge of women on the subject to be 82%. On the other hand, the studies of Isara and Ojedokun in Nigeria (14) and Akhtari et.al in Hamadan (11), showed that the knowledge of most participants was poor or low. It seemed that the cause of this difference between studies was due to more emphasis and better information on risk factors, early detection, and breast cancer

prevention methods among women, or the availability and accessibility of informative sources on breast cancer.

Regarding the attitudes of women, it was found that most of the subjects (61.8%) had a good attitude towards breast cancer screening, which was similar to the results of Jahan et al. study in Saudi Arabia, in which 69.7% of women had positive attitudes toward screening for breast cancer (15). At the same time, the results of another study on medical students by Tavakol et al. was also found to be consistent with the current study with 96.4% of positive attitudes (16). But in the study of Motavali and Mousazadeh (13), the attitudes were poor in the majority of women. When a woman perceives that she can be exposed to breast cancer, it would be more likely that she perform regular breast examinations. Improving community awareness and attitudes towards breast cancer can have a positive role in screening behaviors of women in the community. In practice, only 17.1% of the participants systematically did self-examination or referred to the medical staff. Among the women who did not have any practice, lack of awareness about the benefits and necessity of breast examination, with 29.7% was the most important reason. Breast self-examination is a simple, cost-free and implementable method. Although its effectiveness in reducing mortality from breast cancer has not been established, it is important in encouraging the adoption of preventive and informative behaviors in relation to breast cancer in women and to increase the individual's health responsibilities (17). However, in previous studies, conducting screening was also reported to be low, and more than 70% of the women were not screened (13, 15). In the study of Akhtari et al. in Hamadan, the most important reasons

for not screening were lack of awareness, forgetfulness, and fear of finding a tumour (11). In the study of Anvari et al., negligence, lack of awareness, and lack of feeling of a problem were reported with the frequency of 33.2%, 15.2%, and 9.8%, respectively, as the reasons for not performing breast self-examination (10). In a systematic review by Hazavehei et al., in four educational intervention studies using the Health Belief Model, an increase in screening rate was reported (18). Considering that the most important reason for not performing breast examination was the lack of awareness of women, increasing the awareness of women, especially regarding the need for regular breast examination, along with the identification and elimination of possible barriers to the implementation of this job, such as lack of health insurance, modesty, etc., can increase this rate. In confirmation of this issue, the study of Gozum et al. in Turkey showed that the rate of breast self-examination, clinical examination, and mammography was 14.6%, 33%, and 8.9%, respectively, which were upgraded to 61.9%, 99.5%, and 99.3%, respectively, after training (19). According to the results of the mentioned studies, it seemed that increasing women's knowledge about the necessity and the way of screening was effective in increasing the positive performance of women.

Based on the results of the present study, there was a significant relationship between education and age with knowledge, attitude, and practice of women. In contrast, the family history of breast cancer with none of the variables was statistically significant, which may be due to a low number of positive cases. The marital status also showed a significant relationship with the knowledge and practice of the participants.

Motavali reported a significant relationship between knowledge and education of women in their studies (13). In the study of Akhtari et al. in Hamadan, there was not a significant relationship between age, level of education, and familial history with women's performance in screening, but there was a significant relationship between marriage and breast screening (11). In the study of Andsoy and Gul in Turkey, there was found a significant relationship between self-examination and marriage (20). Hence, education seemed to be an important factor in raising awareness and, consequently, facilitating women's breast self-examination. Based on the findings of the present study, people with better knowledge and attitudes had better practice in screening. In confirmation of these results, the findings of Isara and Ojedokun study in Nigeria indicated a higher level of breast screening in women with higher awareness, too. In other words, a higher level of knowledge leads to more positive behaviors of individuals which can have a positive effect on breast self-examination and referring to a physician (14).

5. Conclusion

The results of the present study showed that the higher knowledge of women about breast cancer and its screening tests resulted in the appropriate performance of them in the field of self-examination. In addition, the lack of awareness was found as the most important barrier to screening. Therefore, it is suggested that appropriate planning be undertaken by authorities and policymakers to increase the awareness of the target group by holding educational or informational meetings through mass media.

Conflict of interest
None declared

References

1. World Health Organization. Breast Cancer Estimated Incidence, Mortality and Prevalence Worldwide in 2012 [cited 2017. Available from: http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx.
2. Dahlui M, Ng C, Al Sadat N, Ismail S, Bulgiba A. Is breast self-examination (BSE) still relevant? A study on BSE performance among female staff of University of Malaya Asian Pacific Journal of Cancer Prevention. 2011;12(2):369-72.
3. American Cancer Society. Breast Cancer Facts & Figures 2017-2018. Atlanta: American Cancer Society, Inc. 2017.
4. Poorkiani M, Abbaszadeh A, Hazrati M, Jafari P, Sadeghi M, Mohammadianpanah M. The effect of rehabilitation on quality of life in female breast cancer survivors in Iran. Indian Journal of Medical and Paediatric Oncology. 2010;31(4):105.
5. Fouladi N, Pourfarzi F, Amani F, Ali-Mohammadi H, Lotfi I, Mazaheri E. Breast cancer in Ardabil province in the north-west of Iran: an epidemiological study. Asian Pacific Journal of Cancer Prevention. 2012;13(4):1543-5.
6. Wang L. Early Diagnosis of Breast Cancer. Sensors (Basel, Switzerland). 2017;17(7).
7. Rosmawati N. Knowledge, attitudes and practice of breast self-examination among women in a suburban area in Terengganu, Malaysia. Asian Pacific Journal of Cancer Prevention. 2010; 11(6):1503-8.
8. Okobia MN, Bunker CH, Okonofua FE, Osime U. Knowledge, attitude and practice of Nigerian women towards breast cancer: a cross-sectional study. World journal of surgical oncology. 2006;4(1):11
9. Noroozi A, Tahmasebi R. Factor's influencing breast cancer screening behaviour among Iranian women. Asian Pacific Journal of Cancer Prevention. 2011;12(5):1239-44.

10. Anvari K, Mousavi H-S, Kavoosi F, Sylanian M. Evaluation of knowledge, attitude and practice of female students of Mashhad university of medical sciences regarding risk factors, early diagnosis and prevention methods of breast cancer. Iranian Journal of Breast Diseases. 2012;5(2):30-43. [In Persian]

11. Akhtari-Zavare M, Ghanbari-Baghestan A, Latiff LA, Matinnia N, Hoseini M. Knowledge of breast cancer and breast self-examination practice among Iranian women in Hamedan, Iran. Asian Pacific Journal of Cancer Prevention. 2014;15(16):6531-4.

12. Gurdal SO, Saracoglu GV, Oran ES, Yankol Y, Soybir GR. The effects of educational level on breast cancer awareness: a cross-sectional study in Turkey. Asian Pacific Journal of Cancer Prevention. 2012;13(1):295-300.

13. Motavali R, Mousazadeh T. Women's Knowledge and Attitude towards Breast Cancer Screening Tests. Journal of Health and Care. 2011;13(3):22-8. [In Persian]

14. Isara A, Ojedokun C. Knowledge of breast cancer and practice of breast self-examination among female senior secondary school students in Abuja, Nigeria. Journal of Preventive Medicine and Hygiene. 2011;52(4).

15. Jahan S, Al-Saigul AM, Abdelgadir MH. Knowledge, attitudes and practices of breast self-examination among women in Qassim region of Saudi Arabia. Saudi Medical journal. 2006;27(11):1737-41.

16. Tavakol Z, Bani-Hosseini S, Mansoori A. Knowledge, attitude and practice about breast cancer screening among students of Tehran University of Medical Sciences, in 2010. Navid No Journal. 2012;16(58):1-12. [In Persian]

17. Suh MAB, Atashili J, Fuh EA, Eta VA. Breast self-examination and breast cancer awareness in women in developing countries: a survey of women in Buea, Cameroon. Bio Med Central Research Notes. 2012;5:627.

18. Hazavehei SMM, Ezzati-Rastegar K, Dogonchi M, Salimi N, Gheisvandi E. The Impact of Educational Intervention Programs to Promoting Mammography Screening: A Systematic Review. Journal of Education and Community Health. 2016;3(1):58-67.

19. Gözüm S, Karayurt Ö, Kav S, Platin N. Effectiveness of peer education for breast cancer screening and health beliefs in eastern Turkey. Cancer nursing. 2010;33(3):213-20.

20. Andsoy II, Gul A. Breast, cervix and colorectal cancer knowledge among nurses in Turkey. Asian Pacific Journal of Cancer Prevention. 2014;15(5):2267-72.