BREAST SELF EXAMINATION PRACTICE AND AWARENESS OF BREAST CANCER SYMPTOMS AMONG WOMEN IN AL-MADINAH AL-MUNAWARA, SAUDI ARABIA

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ABSTRACT

Objectives: To determine knowledge, attitude and practice towards Breast Self Examination (BSE) among the female community in Al Madinah Al-Munawara and to measure the level of awareness about breast cancer (BC) risk factors and symptoms. **Methods:** a cross-sectional descriptive study was carried out among 1546 women in Al-Madinah Al-Munawara city which were selected randomly from public places by using self-administered validated comprehensive questionnaire. Informed consent was conducted among study participants, only those who signed an informed consent form enrolled in the study. **Result:** the study indicated that about half of the participants (57.4%) had ever heard of BSE, Only (21.5%) of them performed it regularly and only (40.2%) of respondents mentioned that BSE should be performed once a month while only (40.6%) reported that mammogram at age of 40 and above should be performed every year. The knowledge of BC risk factors was low; early menarche (17.9%), late menopause (20.1%) and null parity (19.5%). Only 57.1%, 58.2 %, 50.8% and 63.1% knew that nutrition, family history, breast direct radiation exposure and smoking respectively were the risk factors for BC. Regarding BC symptoms, (40.2%) of the respondents mentioned that breast skin redness, nipple pulling (49.4%), and dimpling of the breast (49.0%) are BC symptoms. **Conclusion:** There was low knowledge to BSE, risk factors and symptoms of BC, more educational interventions are needed especially among old age population and it is important

to rise the knowledge of female community about BSE and limiting the incidence of B by early detection.

KEYWORDS: breast self examination, breast cancer, saudi women, mamogram, Al-Madinah Al-Munawara.

INTRODUCTION

Breast cancer is one of the most common cancer-causing a massive number of deaths in women around the globe. It is a universal health issue of both developing and developed countries.[1] It has predicted that More than one million women will be diagnosed with breast cancer every year.[2] In Saudi Arabia, breast cancer in women is ranked first among all cancers as it represents 19.9% of new cases, the number of new cases in Saudi Arabia and united state is not varying, but the difference is the age of patient and stage of cancer at the time of presentation.[3] In the United States, women at the age of 65 and over, represent 50% of new cases of breast cancer and diagnosed at the early stage while in Saudi Arabia, it affected women at the age of 52 and discovered in late stages.[3] Breast cancer usually symptomless when the tumor is small, later on when it becomes larger, it could be characterized by one or more of the following signs and symptoms: painless mass in the breast, breast skin thickening, lump under the armpit, bloody discharge from the nipple and erosion or inversion of the nipple.[4]

Multiple risk factors are associated with the incidence of breast cancer as it commonly increases with aging.[4] Early menarche and late menopause are highly linked with breast cancer.[5-6] Presence of first-degree family history of breast cancer is another risk factor for having an invasive breast cancer in older women.[7] Breastfeeding is considered a protective factor from breast cancer.[8] The use of Hormonal Replacement Therapy (HRT) with combined estrogen and progesterone rises the risk of developing breast cancer if used for a long time.[9-10]

According to The American Cancer Society guidelines for early detection of breast cancer, the mammogram is recommended to be started at the age of forty every year. Clinical breast examination (CBE) about every year for women beginning their forties and also recommends Breast Self Examination (BSE) for women at the age of twenty and over.[11-13]

BSE is a cost-free, easy, non-invasive adjuvant screening method for early breast cancer detection. Women should be aware of the appearance and feel of their breasts and report any changes to her physician right away. However, it was found that many women either perform it in the wrong manner or not at all.[14] Current awareness, attitude and practice of BSE and breast cancer among the female community in Al Madinah are not well known. A recent study in Riyadh revealed that about half of their participants were not aware of BSE, mammography, and breast cancer.[15] Other studies Performed in Saudi Arabia discovered the imperfect knowledge of Saudi women about breast cancer and BSE.[16-17] It is essential to rise the knowledge of female community about breast self-examination and to limit the incidence of breast cancer by early detection.

OBJECTIVES

This study aims to determine knowledge, attitude and practice towards Breast Self Examination (BSE) among the female community in Al Madinah.

To measure the level of awareness about breast cancer symptoms and clinical presentation. Also, to determine their knowledge about breast cancer risk factors.

METHODS

This is a cross-sectional descriptive study in Al Madinah Al Monawarrah, Saudi Arabia. The study has been started in December 2016 till February 2017. The study sample is a convenience sample of 1546 and was selected randomly from public places (Hospitals - Clinics –Shopping Malls – Restaurants - Universities).

A validated comprehensive questionnaire prepared in accordance to relevant works of literature included questions designed to determine the community knowledge about Breast Self Examination, signs and symptoms and risk factors of breast cancer awareness.

The questionnaire included 40 questions in 4 sections; the first section included questions about socio-demographics. The second section questions about knowledge, attitude and practice towards Breast Self Examination (BSE). The third section included questions related to the awareness of the early warning signs and symptoms, complication and the fourth section included questions about the risk factors for breast cancer.

The validity of the questionnaire was tested through the opinions of three experts for language clarity, content, relevancy, ability to understand questions, and the time needed to

answer. The reliability test conducted for the internal consistency of the items by using the reliability coefficients (Cronbach's alpha= 0.8) which is suitable for the questionnaire.

Ethical Consideration

This study has been approved by ethical review to the community of Almadinah Almunawara, Research Ethics Committee, Taibah University, College of Medicine. Informed consent was prepared and conducted which study participant. Only those who sign an informed consent form was enrolled in the study.

Statistical analysis plan

Data was collected coded, entered and analyzed using the Statistical Package for the Social Sciences software version 20 (SPSS Inc., Chicago, IL). Descriptive analysis followed by inferential statistics was done. Percentages, means and standard deviations were calculated for qualitative and quantitative data respectively. Chi-square test (X^2) and Fisher's exact test were used to analyze qualitative data statistically. Student t-test and ANOVA were used to compare means for quantitative data when needed. A P-value of 0.05 was considered as a cut off point for the level of significance.

RESULTS

Background characteristics of the study population

This study involved 1546 Women. About half 59% of the participants were in the age group 13-29 years, 34.5% were in age group 30-49, the rest of them were 5.8% in age group 50-65 years. According to the marital status, they Were divided into single, married, divorced and widow 44.4%; 51.0%; 3.5%; 1.1%; respectively.**(Table1).**

Table 1: Participants' demographic characteristics: n=1546.

Variables	Frequency	Percentage
Age range		
13-29	922	59.6
30-49	534	34.5
50-65	90	5.8
Marital Status		
Single	687	44.4
Married	788	51.0
Divorced	54	3.5
Widow	17	1.1

In our study, we found that about half of the participant 57.4% had ever heard of BSE, while 10.6% did not hear about it and 32% did not know it exactly. Only 21.5% of the respondents who heard about BSE reported that they perform it regularly, and the majority of women who heard about BSE performed BSE irregularly 71.6%, but only 40.2% of respondents mentioned that BSE should be performed once a month. When participants asked about the proper time of clinical breast examination at the age of 40, and above half of them 51.9% mentioned that it should be performed annually, while only 40.6% of the participants reported that mammogram at the age of 40 and above should be performed every year.**(Table2).**

Table 2: Participants' BSE knowledge and practice n=1546.

Questions	Answer	No.	%
Heard about BSE?			
	Yes	888	57.4
	No	164	10.6
	Not exactly	494	32 .0
If you know what BSE do you do it regularly?			
	Yes	332	21.5
	No	1107	71.9
How often should BSE be performed?			
	Once a month	620	40.2
	Once every 3 years	65	4.2
	Once a year	219	15.6
	Every 6 months	154	22.2
at age of 40 and above at least every :			
	3 years	112	7.2
	2 years	114	7.4
	1 year	803	51.9
	1 month	309	20.0
	I don't know	208	13.5
Mammogram at age Of 40 and above at Least every:			
	3 years	161	10.4
	2 years	170	11.0
	1 year	627	40.6
	1 month	91	5.9
	I don't know	488	31.6
Awareness of the importance of BSE in the detection of breast cancer may contribute to reducing its spread?			
	yes	1436	92.9
	No	110	7.1
Do you promote lectures and awareness campaign about BSE?			
	yes	1488	96.2
	No	58	3.8

Regarding the question about the mammogram, 55.3% of the married group said that it should be done every three years where 44.7% of the single group said so. 55.5% of married group think that it should be done annually where 44.5% of single group think so.

The most frequent source of information about BSE was the university study programs 20.9% followed by TV and media 15.6%. 65% of respondents who heard about BSE do not not educate their relatives about it as 17.8% mentioned that due to being not well known of its importance.

This study revealed that 92.9% of respondents believed that media awareness about BSE might contribute to reducing reaching late stages of breast cancer. As 96.2% of women promote doing courses, lectures, and campaign about BSE. **(Table2).**

Regarding the knowledge of risk factors for breast cancer, the participants gave the responses as yes/no/don't know. Most of the individuals were not aware of the risk factor which can cause breast cancer. Only 57.1%, 58.2%, 50.8% and 63.1% knew the nutrition, family history, breast direct radiation exposure and smoking respectively were the risk factors may cause breast cancer. Less than half of The participants believe that some items are risk factors of breast cancer such as early menarche 17.9%, late menopause 20.1%, null parity 25.5% and reproduction after the age of 30 19.5%. The majority of respondents agree that lack of breastfeeding increases the risk of breast cancer 85.6% as well as 58.2% mentioned that family history of breast cancer is associated with it as shown in **(Table 3).**

Table 3: Participants' Breast cancer risk factor awareness.

Variables.	Yes N%.	No N%.	I don't know N%
Nutrition in breast cancer	882 (57.1)	292 (18.9)	368 (23.8)
A family member of breast cancer	899 (58.2)	384 (24.8)	263 (17)
Early puberty before age 12	277(17.9).	645(41.6).	624(40.4)
Discontinuation of menstruation after age 55	310(20.1)	567(36.7).	669(43.3)
Reproduction after the age of 30	301(19.5).	662(41.7).	583(36.7)
Lack of reproduction(childlessness).	395(25.5).	608(39.3)	543(35.1)
Large breast size	209(13.5).	798(51.6).	531(34.3)
Use contraceptive pills	685(44.3).	286(18.5).	575(37.2)
Direct radiation exposure	785(50.8).	241(15.6).	520(33.6)
Take hormones after menopause.	687(43.3).	163(10.3).	696(43.8)
Lack of exercises	692(43.6).	368(23.2).	486(30.6)
Lack of Breastfeeding.	1324(85.6).	49(3.2).	173(11.2)
Smoking	975(63.1).	198(12.8)	373(24.1)

According to breast cancer symptoms knowledge, more than half of participants agree that breast lump, breast size change, nipple bleeding and breast shape change are symptoms of breast cancer 75.2%, 58.2%, 69.1%, 63.3% respectively. While less than half of the respondents mentioned that breast skin redness 40.2%, nipple pulling 49.4%, and dimpling of the breast 49.0% are breast cancer symptoms as you can see in (**figure1**).
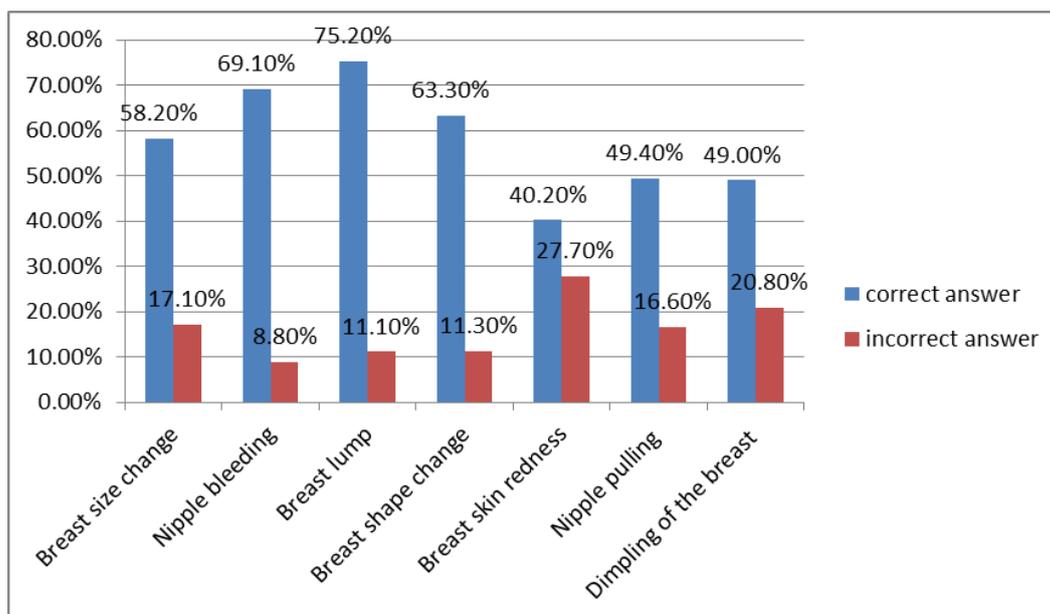
Figure 1: Participant's knowledge about breast cancer symptoms.

Nearly half of the married population think that presence of a lump in the breast considered as a breast cancer symptom where half of them think not. 49.1% of the single population considered the lump as breast cancer, 41.9% said no, and 54.9% said I do not know.

DISCUSSION

In this study about more than half of the respondents had heard about BSE 57% which is a lower result than studies done in Taif city, Yemen and Uganda they reported 74%, 77%, 76% respectively.[18-20] However, our result is higher than study done in South East Nigeria which showed a lower knowledge 38% about BSE as well as among female students at Jordan university which reported 34% had heard about BSE.[21]

A low percent 21% of our samples who heard about BSE practice it regularly compared to Malaysian women whom more than half of them 55.4% practice BSE monthly.[22] Our findings are similar to findings of Ba'amer Ahmed who found 24.6% of female university students in Yemen practice BSE regularly.[21] Other studies that showed the low percent of

BSE practice indicates that the practice is low among women globally irrespective to their age and education level.[17,19,23,24,25] However, the percent of practicing BSE in this study is higher than previous studies done in Iran and Turkey in which only 6% and 6.7% of their population performed BSE monthly, respectively.[23-24] Moreover, In this study 40% reported that BSE should be performed monthly which is higher percent than Saudi females in Taif whom only 23.3% of them reported BSE should be practiced monthly.[18]

In current study we found that age is significantly associated with awareness of BSE p=0.031 as there is a high knowledge among young age group compared to women above 30 years old as well significantly associated with a knowledge that BSE should be performed monthly p=0.00 which is consistent with a study done in Riyadh which reported that there is a significant association between age and BSE practice among Saudi female nursing students.[26] Similar findings were reported in Malaysia and Turkey.[22-24]

Regarding to source of information about BSE the majority of participants mentioned that university study programs are their primary sources 21% followed by TV and mass media, brochures, courses, friends, and family while other studies reported TV and mass media were the primary sources of information about BSE among 67.3% of university students in Yemen and lectures were the second source 43.7% as well as TV and mass media was the first source of BSE knowledge reported by high school female students in turkey 48.6% and Malaysia 38.2%.[22-24] Mammogram awareness in our sample 40.6% was similar to Saudi women in Riyadh 38%.[15]

Our of the majority of participants showed good knowledge regarding risk factors of breast cancer in lack of breastfeeding, smoking, family history, nutrition, direct radiation 85.6%, 63.1%, 58.2%, 57.1%, 50.8% respectively. The inadequate knowledge discovered in early puberty before the age of 12 (17.9%), reproduction after the age of 30: 19.2%, discontinuation of menstruation after the age of 55: 19. 5% and Lack of reproduction (childlessness) 25.5%.

In our study, most of younger females aged 13-29 years had high knowledge of risk factors for breast cancer than older female. For example, Early puberty before age 12 is considered a risk factor among younger female as it revealed for these answers, YES, NO and I DON'T KNOW 71.6%, 61.6%, and 52.6% respectively and for older female 23.8%, 33.6% and 40.2% respectively. Also, knowledge about Reproduction after the age of 30 as a risk factor

showed a higher percentage of younger females 73.1% and lower knowledge was observed among older female groups at 23.3%.

Most participants agreed that lack of breastfeeding is the most critical risk factor of breast cancer 85.6% This finding is higher than the result of study conducted in Saudi Arabia which revealed lack of breastfeeding reported by the respondents was 52.7%, and family history of breast cancer was the most critical risk factor agreed by their population 75% which is different from our finding 58.2%.[18] Another study in Saudi Arabia showed 63.5% of their sample agreed that breastfeeding decrease risk of breast cancer.[27]

Our Second majority respondents 63.1% indicated Smocking as one of the main risk factors for breast cancer. 57.4% of our participants believed that Presence of family history of breast cancer is a risk factor for it, while 84.6% of Malaysian women reported positive family history is a risk factor for developing breast cancer which is higher than our result.[22] A study conducted in Turkey among High School students showed that the widely known risk factor was the family history of breast cancer 67%.[24] Although some of the respondents had low knowledge in early puberty before the age of twelve 17.7%, Reproduction after the age of thirty 19.2% While other study conducted in Saudi Arabia revealed bearing the first children after age 30 years by 41.3% of their sample.[18] Moreover, other study reported higher percentages of knowledge regarding early menarche before the age of 12 and late menopause after age of 55: 24%, 20.6% respectively which are different from our findings.[20]

According to breast cancer signs and symptoms, most of the population showed good knowledge in the presence of breast lump 75.2%, nipple discharge 69.1% and change in breast shape 63.3% this is in line with findings of Katende Godfrey who found that more than half of his study population able to identify breast lump 62.3%, nipple discharge 79.4%, change in breast shape 75% as signs and symptoms of breast cancer.[20] It was similar to the previous study done which showed 55.3% accepted that breast cancer might present as a breast lump, 65.3% approved that it may present as nipple discharge.[28]

In a quick comparison of similar previous researches we found that Women aged 45 to 64 were more probable to check their breasts at least once a month than women under the age of 45, and they had shown more knowledge of breast cancer symptoms,[29] comparing to our results in which younger population 13-29 had shown higher level of awareness, Particularly for symptoms such as nipple puckering, dimpling and pulling.

Regarding the change of the position of the nipple and pulling in the nipple we found that there was a better known among the age group of 13-29: 64.5%, 66.9% respectively, comparing to the older age group 30-49: 31.2%, 29.5%. Also, the youngest age group reported a sound knowledge regarding the rest of the breast cancer symptoms such as changing of the breast size and nipple with 64.3% and pain in one of the breasts with 64.3%. When assessing the presence of breast lump 63.9%, nipple rash 66.4% and discharge or bleeding from the nipple as breast cancer symptoms 64.7% among the age group 13-29 the results were confirmative to the previous results which clearly illustrate the difference in knowledge between the age groups.

The knowledge level in the old age group in our study was lower than other studies conducted.[20] In contrary to our results some symptoms listed as one of the most common in a survey was done in London the top of the list was for breast lump and nipple discharge, and in the other hand, dimpling and nipple inversion had fewer percentages.[29]

CONCLUSIONS

Awareness of BSE and breast cancer is still low in Al-Madinah Al-Munawarah and age significantly influences their knowledge. There is insufficient knowledge of some important risk factors and symptoms of breast cancer. More educational interventions and awareness campaigns needed especially among old age population in Al-Madinah Al-Munawara city.

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