



Knowledge, Attitude and Practice Study of Breast Cancer and Breast Self-Examination among Females in Jazan, Saudi Arabia

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Abstract

Breast cancer is the leading cause of cancer in females in Saudi Arabia and its incidence is steadily increasing. Late discovery and diagnosis leads to poor outcomes. This study aims to measure the knowledge and level of awareness about breast cancer among the females in Jazan and their knowledge, attitude and practice of breast self-examination (BSE). A descriptive cross sectional study was conducted among 440 women in the age group (20-60 years) randomly chosen from 5 health facilities.

Data was collected through interview using a structured questionnaire. The questionnaire consisted of four parts: socio-demographic characteristics, Knowledge about breast cancer and associated factors, practice of breast self-examination (BSE) and the attitude seeking medical advice. Results show knowledge of studied women about breast cancer was low (35.6%), only 23% know about the relation of breast cancer with family history and genetic link.

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Educational level was significantly associated with knowledge of BSE, when to practice it and mammograms. Although 38.6% of females in the sample know how to practice BSE, only 8.4% practice it regularly and 32.2 % not regularly. Attitude about seeking medical help and practice of BSE was high (94.6%).

Keywords: breast cancer; breast self-examination; knowledge; attitude; practice; associated factors; women; Jazan; Saudi Arabia.

1. Introduction

Breast cancer is the most commonly diagnosed cancer in women and the second leading cause of death among them worldwide. The incidence rates vary considerably and have shown marked geographical variations; highest rates in western countries and lowest rates in Asian and African countries. Environmental factors might be the cause for the global variations but also under reporting and missed diagnosis might be the cause [1].

The prevalence of breast cancer in Saudi Arabia ranges from an estimated 7.5% in Jazan to 30% in the Eastern province. It's estimated at 18.6 % in Riyadh city, 20.9 % in Makka, 9.3 % in hail, about 11.3 % in Al-Madinah, 8.6 % in Najran and 9 % in the Northern region [1, 2].

According to the Saudi Cancer registry and Saudi Ministry of health, breast cancer accounts for 27.4% of all newly diagnosed female cancers. A girl born today has a cumulative one-in-eight risk of developing breast cancer during the course of her life [2, 3].

Around 73% of cases in the Kingdom of Saudi Arabia decide to consult the doctor at a very advanced stage of disease that cannot be cured while cure rates can range from 92- 96% if detected early [3].

The modifiable risk factors of breast cancer can be controlled by maintaining a healthy weight, regular exercise and reducing alcohol intake [2, 4]. This could eventually have an impact in reducing the incidence of breast cancer; however, these strategies cannot eliminate the majority of breast cancers. Therefore, early detection in order to improve breast cancer outcome and survival remains the cornerstone of breast cancer control. The proper knowledge about breast cancer and its risk factors together with early detection are important for better outcomes [3]. Therefore, the aim of this research is to measure women's knowledge of breast cancer and breast self-examination (BSE), their attitude towards when to seek medical advice and their practice of BSE in Jazan City in the Southern region of Saudi Arabia.

2. Materials and methods

A descriptive cross sectional study design was used. The study area is Jazan region, the second smallest region in South-West of Saudi Arabia. It covers an area of about 13,457 km² and is sub-divided into 14 governorates. It is one of the most populated regions in Saudi Arabia and population is estimated at above 1.5 million according to the 2010 census.

The study was conducted in 5 health facilities; Jazan General Hospital and 4 health centres. The sample size

calculated for this study was 440 women age (20-60) years old. The age range was used due to the evidence showing that a larger proportion of young females are getting breast cancer in Saudi Arabia [3].

Sample size was based on 50% estimated prevalence rate due to lack of previous data among females in Jazan ($\pi= 0.5$). The margin of error selected was 0.05 with a 95% confidence level and 10% for non-response.

A Cluster sampling technique was used to choose 5 health facilities (A general hospital and 4 health centres) covering the different administrative areas. Females were selected by simple random sampling inside these facilities.

Data was collected by 4th year medical students who were trained and supervised for the purpose through interview using a structured questionnaire in Arabic. The questionnaire consisted of 59 questions in four parts: socio-demographic characteristics, Knowledge about breast cancer and associated factors, practice of breast self-examination (BSE) and the attitude seeking medical advice. Interviewed females were also asked to demonstrate how to perform BSE.

A pilot study was done on 20 females and data collection tools were modified accordingly. Data was entered, cleaned and verified by the research team. Data analysis and descriptive statistics were done using the Statistical Package for Social Sciences software (version 17.0). Frequency measures were done and confidence intervals were set at 95%. A P- value of < 0.005 was considered as statistically significant.

Ethical conduct was maintained throughout the study and participants had the right to participate or withdraw at any time, privacy and confidentiality were also observed. All participants after completion of the survey were also handed a brochure containing demonstration of BSE and links to useful resources regarding breast cancer and BSE.

3. Results

The response rate was 97.7% (430 females). Table (1) below show age distribution of the females in the sample, highest percentage was in the age group (20 – 29) years. Residence of 56.5% of the women is in rural areas. The percent of married females was (31.2%) with 54.4% have children and 48.1% breast fed their children. The majority of the sample is educated (80.7%); only 19.3% of them are illiterate and those educated are mostly university level including currently enrolled students (43.3%). Most of the sample is not employed (72.3%).

a. Knowledge of breast cancer

The women in the sample were asked 22 questions to determine their knowledge of breast cancer including its definition, common sites, its risk factors (e.g. sex, family history, diet, weight, smoking, alcohol drinking) and questions regarding their knowledge of breast self-examination including how to do it, when to do it and what signs to look for (Breast shape, alignment, nipples position, presence of lumps, nipple discharge, skin changes, axillary lymph nodes).

Table 1: The socio-demographic characteristics of the studied sample

Characteristic		Frequency	Percent
Age Groups	20-29	215	50.0
	30-39	114	26.5
	40-49	67	15.6
	50-60	34	7.9
	Total	430	100
Nationality	Saudi	399	92.8
	Non Saudi	31	7.2
	Total	430	100
Marital Status	Married	134	31.2
	Non married	296	68.8
	Total	430	100
Education	Illiterate	83	19.3
	Primary	41	9.5
	Intermediate	36	8.4
	Secondary	84	19.5
	University	186	43.3
	Total Educated	347	80.7
Total	430	100	
Employment	Working	119	27.7
	Not working	311	72.3
	Total	430	100

Those who answered more than 50% of the questions correctly were considered to have adequate knowledge and who got 50% or less as poor knowledge. Those who answered (don't know) to a question were counted as (no). Those who indicated that they know how to perform BSE were asked to demonstrate it.

Figure (1) below show that overall, only 35.6% had adequate knowledge of breast cancer. Only 23% know about the relation of breast cancer with family history and genetic link. 46.5 % of women think that breast

cancer affects only females, 38.6% has demonstrated the right way to perform BSE, 28% know the proper time to perform it and 41.4% recognise signs to look for when performing BSE.

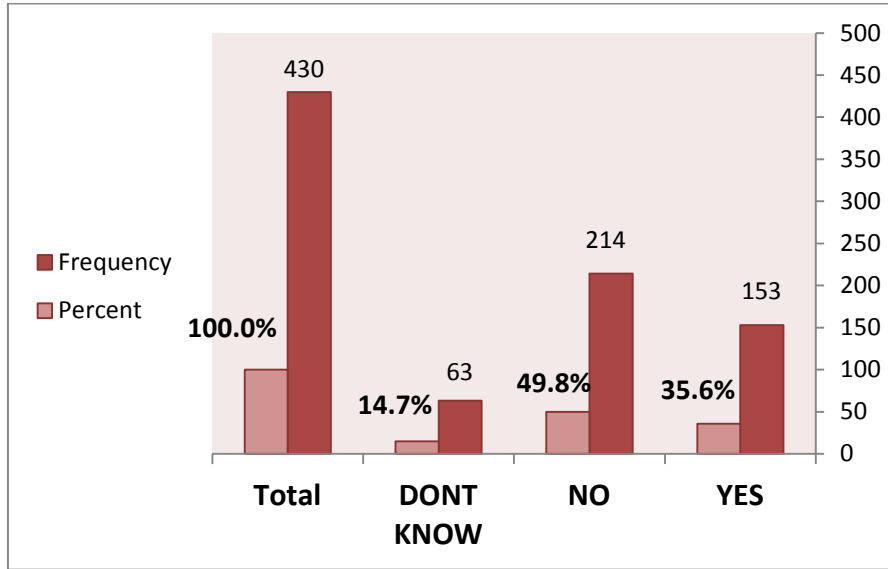


Figure 1: Overall knowledge of women about breast cancer and breast self-examination

Figure (2) summarizes women knowledge about the factors associated with breast cancer. About 49 % of women could not correctly identify factors associated or risk factors for breast cancer. Only 32 % and 16 % identified genetics and nutrition as associated factors respectively.

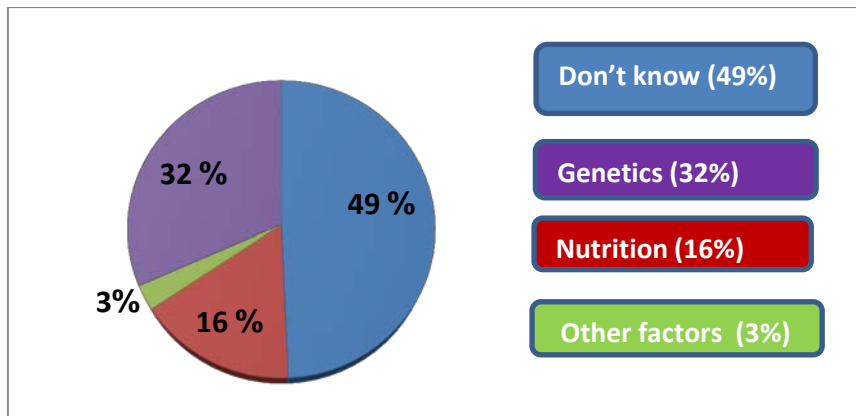


Figure 2: Women's knowledge of factors associated with breast cancer

Table (2) below show the relationship between level of awareness about breast cancer and the age, residence and educational level of the females. The younger the female the more knowledgeable she is about breast cancer. Results were statistically significant for signs to look for during BSE and what is a mammogram. Women residence does not show much variation in their knowledge of breast cancer between rural and urban living. The educational level has a positive correlation with all knowledge variables of breast cancer, how to perform BSE, and what is a mammogram. The relation is statistically significant.

Table 2: Cross tabulation between knowledge of breast cancer and age, residence and educational level of women

Knowledge Variable	Age in years					Residence			Education Level		
	20-	30-	40-	50+	P value	Rural	Urban	P value	Illiterate	Educated	P value
Breast cancer awareness	78	48	19	8	0.252	82	71	0.272	20	130	0.016
Know self-examination	87	50	22	7	0.065	91	75	0.575	8	144	0.002
Sign that should be alert to when self-examination	96	48	29	5	0.011	89	89	0.022	0	151	0.000
Know mammogram	87	30	15	2	0.000	61	73	0.003	10	120	0.000

Figure (3) show an inverse relationship between knowledge and age of the women that is statistically significant. The older the female the less aware she is about what is breast cancer, how to perform BSE, signs to look for during BSE and what is a mammogram. This is probably due to the increase in female education in younger generations.

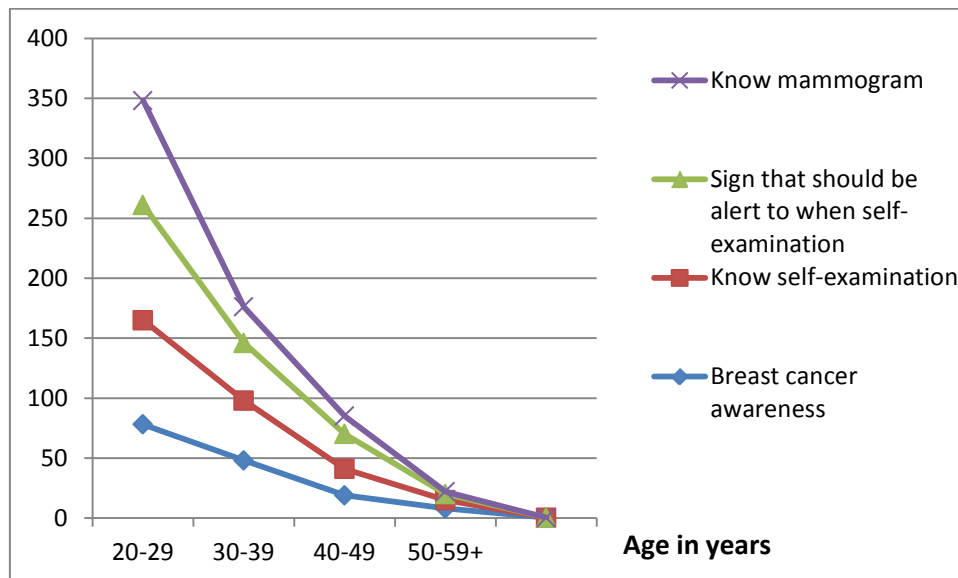


Figure 3: The relationship between age of women and knowledge of breast cancer & BSE

b. Attitude towards breast cancer and BSE

Women in the sample were asked about 11 questions regarding their attitude towards different variables related to breast cancer, BSE and when to seek medical advice. Women had to chose on a 5 likertt scale from strongly agree to strongly disagree.

Table (3) summarizes women response to 5 main variables and were grouped into 3 categories (Agree, disagree and neutral). More than 90% of women agree to the need for regular screening for breast cancer and for more breast cancer awareness. About 78 % of women agree that breast cancer affects the quality of life of the patient and her family and about quarter of the respondents believe that BSE is painful and takes a long time.

Table 3: Women’s attitude regarding breast cancer and BSE

Variable	Agree	Disagree	Neutral
The need for regular screening	416 (96.8%)	4 (0.9%)	10 (2.3%)
Breast cancer affect the life of patient	375 (78.2%)	17 (4%)	38 (8.8%)
Woman believe that BSE is painful	107 (24.9%)	128 (29.8%)	195 (45.3%)
Woman believe that BSE takes a long time	121 (28.2%)	135 (26.4%)	174 (40.4%)
There is a need for breast cancer awareness	405 (94.2%)	8 (1.9%)	17 (4%)

More than 90% of respondents are willing to seek health advice when having a breast mass, breast discharge or swelling of lymphatic glands in the axillary area as seen in figure (4) below. About 41% are willing to seek health advice when there is change in the shape of the breast, nipples or covering skin, while 57.7% were neutral about it.

c. Practice of breast self-examination

Women in the sample were also asked if they perform BSE or not, how frequent they do it, what to look for when examining the breast and what are their reasons for performing BSE. Among the total sample of 430 women, only 38.6% were practicing BSE while 61.4% has never practiced BSE before. Among those who do practice BSE only 8.6 % has indicated that they perform it regularly on monthly bases while the remaining

30.2% practice it irregularly ranging from once every 6 months to less frequent than that (figure 5).

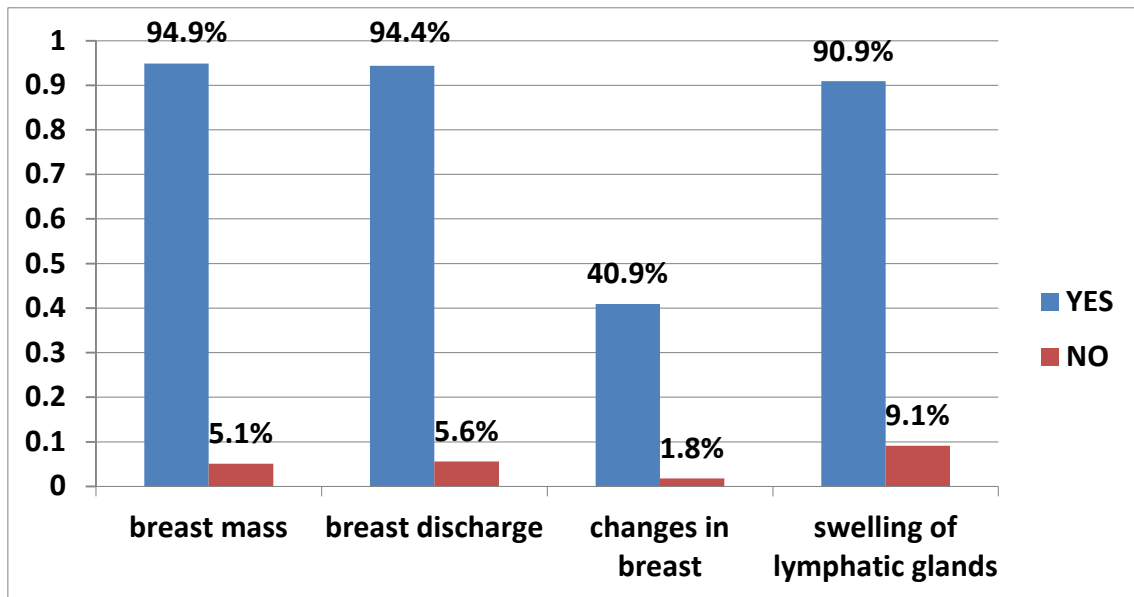


Figure 4: Attitude of women towards when to seek health advice

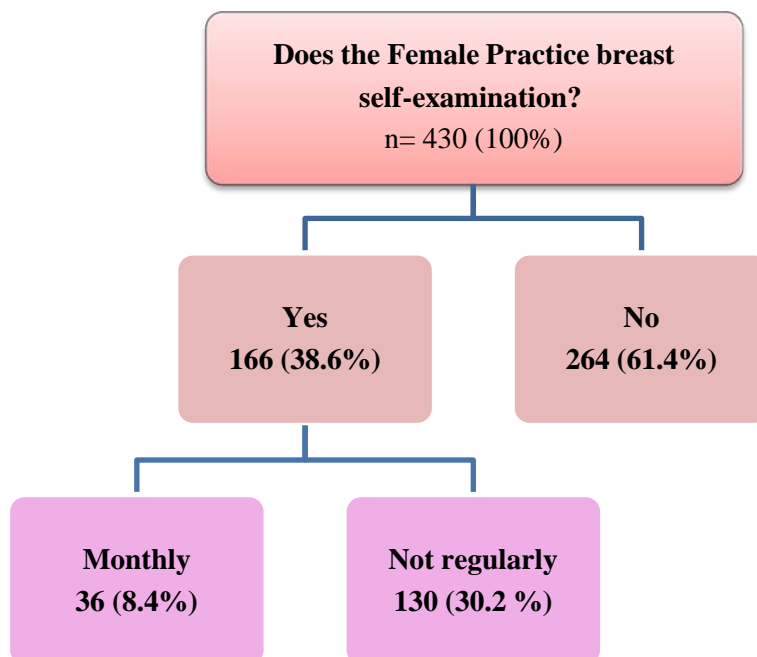


Figure 5: Practice of women of Breast Self-examination and Frequency

Further analysis of women's attitude and its relation to their performance of BSE regularly was found to be statistically significant with relation to breastfeeding, menstruation, family history of breast cancer and obesity (P value= 0.016, 0.02, 0.00 and 0.00 respectively).

4. Discussion

No previous data was found by the authors regarding the awareness of women in Jazan of breast cancer or breast self-examination or practice. Therefore, comparison with local data or time trends could not be identified. However, studies done in other parts of Saudi Arabia show similar results to this one.

The low knowledge level of women about breast cancer show similar results as other studies done in Saudi Arabia; 35.6% compared to 34 % In Al-Madina Al-Monawara. Low awareness levels were also found in Riyadh, Abha, Hail & Qassim in Saudi Arabia [5,6,7,8].

The positive correlation between educational level and awareness of breast cancer is also a common finding among studies. This shows the influence of education in promoting prevention and early detection of breast cancer [9].

The negative correlation between age and level of knowledge was also found in a general survey among Saudi women [10].

Attitude towards learning about breast cancer, breast self-examination and seeking health advice is favorable across all studies in Saudi Arabia and levels ranging between 80% to 97 % as in this study (more than 90%) [1,5, 6,11].

Practice of breast self-examination (BSE) as well as other moods of breast examination like clinical breast examination (CBE) and mammography has shown variation between regions and female populations but overall it has always been on the low side. Practice of BSE was found to be 5% in Jeddah among females attending a health clinic and about 20 years later it still ranged between 8 % and 66% in different parts and populations in Saudi Arabia. High practice level (66%) was found among nursing students in Riyadh and this high level was attributed to their academic experience [8,9]. This study stand somewhere in the middle with 38.6% women reporting practice of BSE but regular practice of BSE is at 8.4% only.

5. Conclusions

This research provides important insight on the level of awareness about breast cancer and BSE among females in Jazan. The knowledge level of women about breast cancer, its risk and associated factors is low. Their practice of BSE is also low especially regular practice. However, women's attitude towards learning about breast cancer, seeking health advice and performing BSE was all high.

6. Limitations

The main limitations of this study are that women were selected from health facilities and not from the community. The elderly age group (more than 50 years) represented less than 8% of the sample recruited for the study and this might affect the knowledge level because it's expected that the knowledge would decrease with age due to the decrease in educational level of females in this area. The value of BSE might be

questionable in some literature; however, it remains a valuable tool in this area where health facilities for mammography are limited.

7. Recommendations

The research team based on the findings recommends extensive awareness raising efforts and health education about breast cancer and practice of BSE in Jazan area. The value of BSE in early diagnosis and improved outcomes of breast cancer need to be disseminated among females in Jazan.

Establishment of women health centers or women health clinics within available facilities is recommended.

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