

Knowledge, Attitude and Practice of Female toward Breast Self-Examination at Abha City

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Abstract

Aim: This study aimed to explore knowledge, attitude, and practice of female toward Breast Self-Examination (BSE) at Abha city. **Research design:** A descriptive- cross sectional design was utilized to conduct this study. **Setting and sampling:** A convenient sample of 508 female from different primary health care centers at Abha city South-western, Saudi Arabian. **Tools of Data collection** included a structured interviewing questionnaire to cover data related to socio demographic characteristics, knowledge about breast self-examination, attitude toward breast self-examination and practice toward breast self-examination. It was Google form. **Results:** More than half of female didn't perform breast self-examination in previous twelve months (53.7%), less than half of them had satisfactory level of knowledge (40.4%), one third of them had fair knowledge (34.4%) and fourth of them had unsatisfactory level of knowledge(25.2%). Moreover, more than two thirds of female had negative attitude towards BSE (66.5%). In addition, more than half of studied female had unsatisfactory practice (64%) related to BSE. **Conclusion:** This study concluded that most of female had unsatisfactory knowledge, more than half of them had unsatisfactory practice and more than two third of them had negative attitude toward breast self-examination. **Recommendation:** additional effort by health care provider to conduct campaign program in primary health care centers and university to improve awareness of female about breast self-examination.

Keywords: Breast Self-Examination (BSE), knowledge, attitude, practice.

Introduction

Breast cancer (BC) is the most common cancer and most commonly diagnosed malignancy in women worldwide and the leading cause of cancer-related deaths, 2020. In 2020, more than two million women were diagnosed with BC, and 685,000 deaths were sick globally. Nearly, 7.8 million women had been living with BC for the past 5 years, making it the world's most widespread form of cancer (World Health Organization, 2021). KSA's Ministry of Health uses mammographic screening strategies to detect breast cancer every 1-2 years in women aged 40-49 years and

mammographic screening in women aged 70-74 years, contrary to international guidelines (MOH, 2022).

Breast self-examination (BSE) is one of the best early detection methods alongside clinical breast examination and radiographic mammography for the early detection of breast cancer, and analysis is still inadequate in developing countries like KSA (Reeves & Kaufman, 2022; Alotaibi et al., 2018).

When breast cancer is detected at an early stage, the prognosis is accurate and morbidity and mortality are reduced. Therefore, serious steps should be done to ensure early

detection and timely treatment. A delayed diagnosis is a major reason for the poor prognosis. Therefore, critical steps should be taken to ensure early detection and timely treatment. Two important strategies for early detection include early diagnosis and screening. A key step in early detection includes raising awareness of the early signs of cancer among health care professionals, and the general public (**World Health Organization, 2022 & World Health Organization, 2018**).

BSE, mammography and clinical breast examination (CBE) are accepted screening methods for breast cancer. BSE is a relatively simple, convenient, non-invasive, and cheap early detection method recommended for female. Female should start this routine in her 20s to know how healthy breasts look and feel. This enables immediate reporting of breast changes to a medical professional and effective routine application by female themselves. An identifying changes sign of BSE in her that may indicate breast cancer also has a dual purpose, as lumps are detected in the breast when a woman tracks breast changes (**Al-Saleh, 2022**). Breast cancer screening, including mammography, is rated at very low level of practice in Saudi Arabia, but medical centers are fee-exempt (CBE) and 92% of women have been instructed not to have mammography in the past 12 months (**El Bcheraoui et al., 2015**). For powerful screening and early prognosis, good enough knowledge and attention are of ladies is maximum importance.

Significance of the Study:

Early detection of breast cancer plays an important role in reducing both morbidity and mortality. Screening mammography has been reported to reduce breast cancer mortality by 23% (**Wang et al., 2014**). Even though breast self-examination is effective in reducing mortality, lower rates of breast self-examination have been reported among Arab women (**Keten et al., 2014**). So this study was conducted to explore female knowledge, attitude, and practice toward Breast Self-Examination

Aim of the study:

This study aims to explore knowledge, attitude, and practice of female toward Breast Self-Examination (BSE) at Abha city.

Operational definitions

Breast self-examination: Monthly examination of breasts conducted by women following the five major steps of breast self-examination which include: examining both the breasts for size, shape, color and contour while looking in front of the mirror with their arms straight, on the hips, and over the head; to palpate or feel the breast both in standing and lying position using the three finger pads.

Research questions

1. What is the level of knowledge of female toward breast self-examination?
2. Is the attitude of female toward breast self-examination positive or negative?
3. Is the practice of female toward breast self-examination satisfactory or not?

Research design:

A descriptive- cross sectional design was utilized to conduct this study; this design fits the nature of the study because it used to describe the study variables (knowledge, practice and attitude toward breast self-examination).

Study setting:

This study conducted at three primary health care centers at Abha city, South-western, Saudi Arabian. Primary health care centers were: Medial- Abha ,Al-Namass and Al-Manhal centers which settled at Abha city , Asser Region.

Sampling:

A convenient sample of 508 female was chosen from primary health care centers at Abha city, Saudi Arabian among female who attending the PHC center for routine medical checkups or coming with their relatives.

Conclusion criteria:

Female who accepted to participate in the study

Sample Size

Based on data from literature (*Salem et al., 2020*), to calculate the sample size with precision/absolute error of 5% and type 1 error of 5%, Sample size = $[(Z_{1-\alpha/2})^2 \cdot P(1-P)]/d^2$, where, $Z_{1-\alpha/2}$ at 5% type 1 error ($p < 0.05$) is 1.96, P is the expected proportion in population based on previous studies and d is the absolute error or precision. Therefore, sample size = $[(1.96)^2 \cdot (0.797) \cdot (1-0.797)] / (0.03)^2 = 507.6$. Based on the formula, the sample size required for the study is 508.

Data Collection tools:

To achieve the aim of this study, four tools were used for data collection.

Tool I: Structured interview questionnaire

It was developed by the researchers after extensive review of literatures. It designed to covered data related to socio demographic characteristics of the female as age, educational level, and marital status etc.

Tool two: knowledge about breast self-examination: It was developed by the researchers after extensive review of literatures to assess knowledge level of female. It consisted of twenty two questions like, methods of BSE, time, technique, position, and warning signs. The knowledge score was considered poor (less than 50%), faire (50%-75%) and good (75%).

Tool three: Likert scale: to assess the attitude of female toward BSE *Alomair et al. (2020) & Ayed et al. (2015)*. It was an 8 item using three Likert scale. The positive attitude was considered if more than 50%.

Tool four: Self-Reported Practices to assess females' Practice toward BSE *Alomair et al. (2020) & Ayed et al. (2015)*: It was a 5 item. The satisfactory one was considered if

more than 50%. Unsatisfactory was considered if less than 50%.

Validity and Reliability of the Tools

A panel of five experts revised the tool and some questions were added or modified. The Cronbach's alpha value for the knowledge regarding breast cancer questionnaire was 0.873, attitudes of women towards breast self-examination questionnaire was 0.918, and practices of women towards breast self-examination questionnaire was 0.897.

Pilot study

A pilot study was conducted on 10% female to ensure the feasibility and validity of the tools. Accordingly, to achieve the aim of the study, some modifications were performed such as rephrasing some statements, and changing and adding some questions. The subjects in the pilot study did not involve in the study sample.

Ethics consideration

The Research Ethics Committee at King Khalid University (HAPO-06-B-001) has reviewed and agreed on the project shown as Approval No. ECM#2021-5003. Formal letter of cooperation was written at King Khalid University. We stated for the participants that they had the right of unwilling to participate in the study and they had also the right to quit their participation at any stage without any restriction. Moreover, we informed the purpose, procedures, advantage and disadvantage of the study to the participants.

Field work

Preparatory phase: The tools for data collection were prepared after massive reviewing of literature.

Planning phase: Apply ethical consideration agreement from Ethical committee. The researchers apply questionnaire on goggle form and ensure amendment of the questions.

Implementation phase: The researchers interviewed female, introduced themselves to them. The aim of the study was clarified to the

female at beginning then soliciting their consent then sending Google form questionnaire to them. The researchers interviewed the subjects of the study in a convenient location at the study setting in waiting time as a group. The designed questionnaires by Google form were administered to the female. The time spent to fill the questionnaire with each participant ranged from 7 minutes to 10 minutes. Any clarifications or questions were answered.

This study started from October 2021 to May 2022. The researchers interviewed female then introduced themselves after that explain the aim of the study to each female. The researchers interviewed each female at previous mentored setting, and after taken her consent to participate in the study ask her to complete the goggle form questionnaire at waiting time.

Statistical Analysis:

In this study, there were a total of 508 respondents women with a response rate of 97%. A total of 508 complete questionnaires were fill by goggle form to collect data, from Assir Region, Based on the decently descriptive nature of the study we defined continuous variables such as age using means and standard deviations, and categorical variables such as the frequency of yes, no responses using their frequencies and the percentages.

All statistical analyses were performed using SPSS for windows version 23.0 (SPSS, Chicago, IL). All continuous data were normally distributed and were expressed in mean \pm standard deviation (SD). Categorical data were expressed in number and percentage. Chi-square test was used for comparison of variables with categorical data. Reliability (internal consistency) of the women knowledge regarding breast cancer questionnaire, attitudes of women towards breast self-examination questionnaire and practices of women towards breast self-examination questionnaire was calculated. Statistical significance was set at $p < 0.05$.

Results:

Table (1): The characteristics of the 508 women who joined in this study are summarized in table 1: which illustrates that the female age

ranged from 30-50 years old (59.5%) with the mean \pm SD (36.7 ± 9.2). Regarding education, 83.9% had university educational level, and 82.5% from urban areas, also 46.1% of them were married.

Table (2): shows that study samples did not have family history of breast cancer or history of breast biopsy (86.2% , 90%), respectively, and 52.2% perform breast self-examination .Also, 59.7% of the studied samples age's of menarche was (11-13 years), in addition 79.5 % had regular period, 44.9% of the sample have children , 13.8% had family history of breast cancer ,most of relative relation was grandparent (68.6%), and only 10% of them did breast biopsy.

Table (3) presents that the major source of information of BSE was medical team followed by social media (53.1, 23.2%) respectively.

Table (4) illustrate that 53.7% of female didn't practice breast self-examination in previous 12 months and 86.2% of them did not undergone mammogram.

Figure (1): Illustrates that current knowledge level of BSE, 40.4% of them had good knowledge, 34.4% had fair knowledge and 25.2% had poor knowledge.

Figure (2): shows that 66.5% of female had negative attitude towards BSE.

Figure (3): revealed that 64% of studied female had unsatisfactory practice related to BSE.

In table 5: There was a significant relationship between attitude and knowledge level $P < 0.001$. Also, there was a significant relationship between practice and knowledge level $P < 0.001$. In addition, there was a significant relationship between attitude and practice level $P < 0.001$.

Table (6): presents the association between total attitude level and total practice level, there was a significant relationship between attitude level and practice level $P < 0.001$.

Table 1. Distribution of Socio-Demographic Characteristics for the studied female

Variables	No=508	%
Age (Years)		
< 30	164	32.3
30 – 40	166	32.7
40 – 50	136	26.8
> 50	42	8.3
Mean ±SD	36.7 ±9.2	
Educational Level		
Illiterate	14	2.8
Pre-university	68	13.4
University	426	83.9
Marital Status		
Single	234	46.1
Married	234	46.1
Widow	40	7.9
Residence		
Rural	89	17.5
Urban	419	82.5
Occupational Status		
Not working	204	40.2
Working	304	59.8
Age of menarche (Years)		
10 – 11	47	9.3
12 – 13	256	50.4
14 – 15	166	32.7
> 15	39	7.7
Mean ±SD	13.2 ±1.5	
Period Regularity		
No	104	20.5
Yes	404	79.5

Table (2): The distribution of current history among the studied female:

Variables	No=508	%
Age of menarche (Years)		
11 – 13	303	59.7
14 – 15	166	32.7
> 15	39	7.7
Mean ±SD	13.2 ±1.5	
Period Regularity		
No	104	20.5
Yes	404	79.5
Do You Have Children		
No	280	55.1
Yes	228	44.9
Number Of Children (n=228)		
< 3	129	56.6
> 3	99	43.4
Family History of Breast Cancer		
No	438	86.2
Yes	70	13.8
Degree of relation (n=70)		
Mother	14	20.0
Sister	8	11.4
Grandparent	48	68.6
History of breast biopsy		
No	457	90.0
Yes	51	10.0
Did You Notice tumor (n=265)		
No	243	47.8
Yes	265	52.2
Did You Notice tumor (n=265)		
No	203	76.6
Yes	62	23.4

Table 3. Distribution of females, information regarding breast self -examination

Variables	No=508	%
Had information About BSE		
No	133	26.2
Yes	375	73.8
Source of information		
Medical institute	79	21.1
Medical team	199	53.1
Social media	87	23.2
Family	10	2.7

Table 4. Distribution the history of breast screening practices among studied female :

Variables	Done		Not done	
	N	%	N	%
Perform Breast Self-Exam in previous 12 Months	235	46.3	273	53.7
Perform Mammogram in previous 12 Months	70	13.8	438	86.2

Figure 1. Distribution of female knowledge level regarding breast self-examination

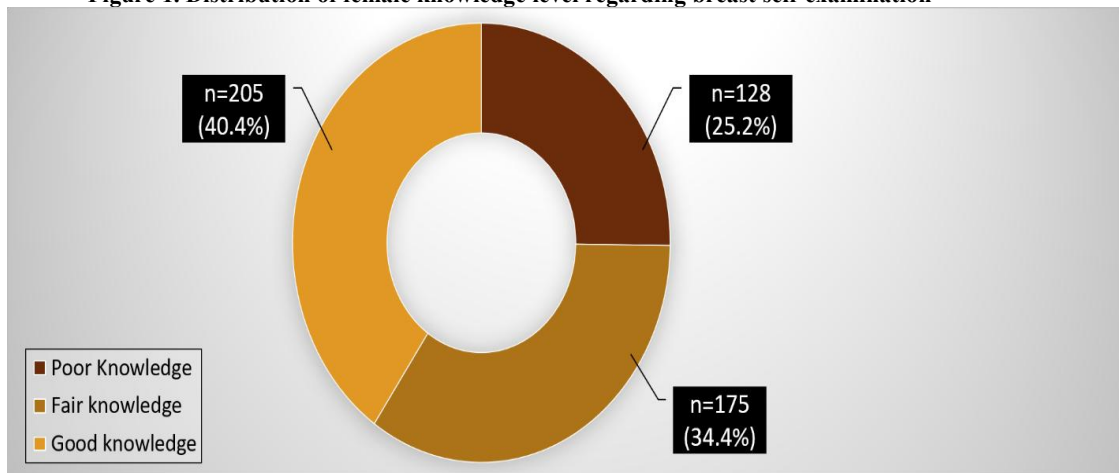


Figure 2. The level of attitude among studied female

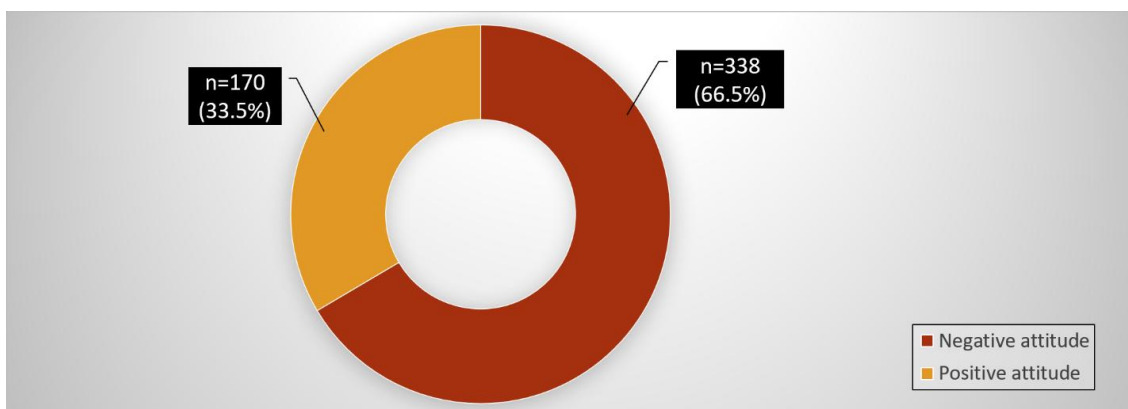


Figure 3. The level of female practice related to breast self-examination

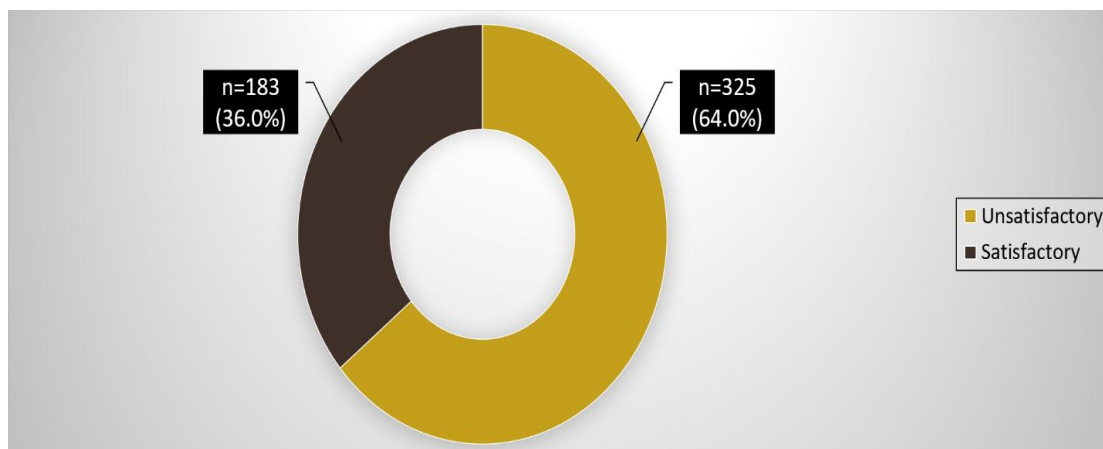


Table 5. Association between total knowledge level with total attitude level and total practice level

Variables	Poor knowledge (n=128)		Fair knowledge (n=175)		Good knowledge (n=205)		Chi-Square	
	N	%	N	%	N	%	X ²	P
Attitude Level								
Negative	120	93.8	121	69.1	97	47.3	77.117	<0.001**
Positive	8	6.3	54	30.9	108	52.7		
Practice Level								
Unsatisfactory	127	99.2	120	68.6	78	38.0	130.381	<0.001**
Satisfactory	1	0.8	55	31.4	127	62.0		

Table 6. Association between total attitude level and total practice level

Variables	Negative (n=338)		Positive (n=170)		Chi-Square	
	N	%	N	%	X ²	P
Practice Level						
Unsatisfactory	267	79.0	58	34.1	98.840	<0.001**
Satisfactory	71	21.0	112	65.9		

Discussion:

This study was designed to explore knowledge, attitude, and practice toward Breast Self-Examination (BSE) at Abha city. This aim was achieved through the findings of this study; one third of the subjects under study had fair knowledge and fourth of them had poor knowledge, more than half of them had unsatisfactory practice related to BSE, and more than two thirds of female had negative attitude towards BSE. Thus, the research questions had been answered.

Regarding the studied females' level of knowledge, less than half of them had good

knowledge, one third of them had fair knowledge, and fourth of them had poor knowledge. The current research findings was consistent with the results of **Dagne et al., (2019)** in Ethiopia who reported that majority of the participants scored more than half of the knowledge question. In agreement with a study from southern Saudi Arabia had presented a low knowledge about BSE **Alshahrani et al., (2019)**. Also, **Eldessouki et al., (2019)** mentioned that there were more than half of participants who had either very good or good knowledge about BSE. This is may be due to social culture of female in Arabian country still there is shame in discussion of certain topics related to female body like breast.

In the present study, the main source of information about BSE was from medical team followed by social media, which was similar to a previous study **Salem et al., (2020)**. While the sources were different in another study among Saudi women as the primary source of information about BSE was Radio or TV then doctor or nurse, while the internet was representative only more than tenth of information) **Gonzales et al., 2018)**. This may be due to medical providers were trusting person for getting information among females and in the same line now a days , the social media is attractive and available at all time for all population as a source of getting information.

In relation to practice of breast self-examination, about two third of the studied women had unsatisfactory level of practice. Also, according to the result of this study, more than half of participants did not practice breast self-examination. This might be due to negative attitude toward BSE and unsatisfactory knowledge. The current research findings was consistent with the results of **Dagne et al., (2019)** in Ethiopia who reported that about one third of participants had ever practiced breast self-examination and this practice was generally low. Also, **Elasbali et al., (2019)** study in Saudi Arabian in Qurayyat stated that only more than one third of female had experienced a previous BSE.

The majority of female in the current study did not perform Mammogram. In Saudi Arabia, the government provides mammograms free to the population through healthcare providers and other charity organizations, such as the Zahra Breast Cancer Association. Even though the government provides mammograms for free, still the majority of women do not utilize these services (**Alshahrani et al., (2019)**). The present result may be due to it is embarrassing and uncomfortable procedure. In contrast most of female reported practicing breast self-examination but in agreement with our study and 18.7% had ever undergone mammography in study done **Heena et al., (2019)**. This difference could be due to the participants were care providers.

The present practicing of BSE was low or incorrect manner and this indicating little

adherence to the recommendation of American Cancer Society in performing BSE monthly, because Arab women find breast examination inconvenient and embarrassing. Therefore, encouraging women to practice BSE is suggested by providing clear, simple instructions to perform BSE.

Concerning to the level of attitude toward BSE, more than two thirds of female had negative attitude towards BSE. Incongruent with our study another study confirmed that Saudi women had a negative attitude towards BSE and their practice **Abolfotouh et al., (2015)**. Similar **Heena et al., (2019)** stated that more than half of the participants believed that they could not detect abnormalities in breast by self-examination.

Detailed analysis of the data revealed that was a significant relationship between attitude and knowledge level and there was a significant relationship between attitude level and practice level. The current research findings were consistent with the results of **Asmare, Birhanu & Wako, (2022)** who reported that significantly associated with knowledge, attitudes, and practices towards breast self-examination respectively.

But, **Kalliguddi, Sharma, & Gore, (2019)** study in Silicon Valley of India stated knowledge and attitude were not correlated, attitude and practice were not correlated; but knowledge and practice were extremely correlated.

Conclusion

This study concluded that most of female had unsatisfactory knowledge, more than of half of them had unsatisfactory practice and more than two third of them had negative attitude toward breast self-examination.

Recommendation

- Additional effort put forth upon health care provider to improve awareness of female about breast self-examination.

- Further study to explore the deep rooted barriers and facilitators of breast self-examination.

- Additional effort by health care provider to conduct campaign program in primary health care centers and university to improve awareness of female about breast self-examination.

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