

Women's Perception Regarding Screening For Early Detection Of Breast Cancer

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Abstract:

Back ground: Screening for Early Detection of Breast Cancer remains the primary way to prevent the development of life-threatening breast cancer that are detected non-palpable more treatable and thus are associated with more favorable prognosis. **The aim of the study:** to assess women's perception regarding screening for early detection of breast cancer. **Research Design:** Descriptive approach was used in this study. **Setting:** The study was conducted Makkah hospitals. **Sample:** convenient sample consist of 150 women from the previous mentioned setting. **Tools:** 2 tools used the first tool structured interviewing questionnaire used to assess general characteristics, history of breast health problem and screening and early detection of breast cancer. Second tool health belief model used to assess women knowledge and attitude regarding screening for early detection of breast cancer. **Result:** there was more than one third of studied women had good knowledge and nearly half of them had positive attitude regarding screening for early detection of breast cancer. Positive correlation between total knowledge of the studied women and their total attitude. **Conclusion:** the present study was concluded that more than one third of women had good knowledge regarding screening for early detection of breast cancer. Nearly half of them have positive attitude regarding screening for early detection of breast cancer. More ever it was positive correlation between their total knowledge and total attitude regarding screening for early detection of breast cancer. **Recommendation:** add Educational program to educate women in primary health care setting / hospital about new screening and its importance procedure for breast cancer screening through work shop / booklet. **Further study:** Barriers for practice of screening of breast cancer among high risk groups.

Key words: Breast cancer, Screening, Early detection, Perception

Introduction:

Breast cancer is the most common cancer among all women and is the second leading cause of cancer death after lung cancer (**World Health Organization, 2015**). Breast is a very vital

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organ of a female's body and females are very conscious about it as they will be depressed if they have any disease or illness related to this organ. So prevention of diseases related to breast is very important (**Omoyeni, Oluwafeyikemi, and Irinoye, 2014**).

Higher rates of survival from the disease have been reported in high-income regions of the world, nevertheless, survival remains low in middle- and low-income countries where the risk continues to increase. The variation in survival outcomes is mostly due to differences in the level of awareness, availability and access to early detection techniques and treatment modalities (**Alwan et al., 2014**).

Early detection of women's breast cancer leads to increase their survival rates after diagnosis and reduces the related mortality. So, promotion of breast cancer screening behavior decreases breast cancer morbidity and mortality through early diagnosis of the disease. Breast cancer is a prevalent disease of women and also a public concern that threatens lives of women (**Naz et al., 2018**).

Screening refers to procedures and exams used to find a disease in people who don't have any symptoms. Early detection means finding and diagnosing a disease earlier than if you'd waited for symptoms to start. Screening procedures for breast cancer are to find it before it causes symptoms (like a lump that can be felt). Breast cancers found during screening procedures are more likely to be smaller and still confined to the breast. The size of a breast cancer and how far it has spread are some of the most important factors in predicting the prognosis (outlook) of a woman with this disease (**Oeffinger, et al., 2015**).

Screening tests for breast cancer include the following history taking, breast self-examination, mammogram, Clinical breast examination ultrasound, magnetic resonance imaging and biopsy (**Mandelblatt et al., 2016**). More advanced in breast cancer screening as smart bra, breast light, Elastography, Molecular breast imaging, Positron Emission Mammography and Electrical impedance tomography (**Muller et al., 2016**).

Perception is the mental process of doing selection and organization, sensory information and meaning them dynamically. Based on researches, perception can be considered as a process from sense to act and classify its functionalities in a layer form which information is being processed in a particular way in each layer so that a mental model is built in order to recognize the world around within generating a pattern from the environment and processing that. Perception towards breast cancer and screening methods is a crucial determinant of early detection (**Mohammadi and Banirostam, 2015**).

Nurses who provide women's health care need ready access to evidence-based information and should be able to translate scientific evidence into their own clinical practice. Nurses should encourage all women to take active roles in monitoring their own breast health. So nurses who work with women must be also able to effectively educate women about normal breast anatomy; abnormalities; breast cancer risk factors; and the benefits, limitations, and risks of breast cancer screening techniques., also nurses support women in making informed decisions about the screening methods best suited to their individual situations in this way can improve women perception regarding screening for early detection of breast cancer (**American Cancer Society, 2017**).

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Aim of the study:

This study was aimed to assess women's perception regarding screening for early detection of breast cancer.

This aim was achieved through:

- 1) Assessing women's knowledge regarding screening for early detection of breast cancer.
- 2) Assessing women's attitude regarding screening for early detection of breast cancer.

Research Questions:

- 1- What is the level of women's knowledge regarding screening for early detection of breast cancer?
- 2- What is the women's attitude regarding screening for early detection of breast cancer?

Subjects and methods: Technical design: Research Design:

Descriptive approach was used in this study.

Setting:

The study was conducted in Makkah hospitals

Subjects:

Sample type: convenient sample

Sample size:

Women were included in study not diagnosis with breast cancer and coming only for screening within six months from the previous mentioned setting which represent 15% flow rate of cases in the previous year (2021).

(N= 1500) the estimated sample size is 150 women's , at confidence level 95% and precision rate at 0.05 by using Steven equation, 2012 (**Steven .,2012**).

Tools for data collection:

Two tools were used for Data collection:

Tool I: A structured interviewing questionnaire; it was designed by the researcher and divided into the following parts:

Part I:

- **General characteristics of the women as** (age, education. Occupation, marital status, monthly income, place of residence
- **Part II: History of Breast health problem as** (DO you have history of breast problem? And Have you done any special tests on this problem, Have you ever had any previous breast feeding?)

- **Part III: screening and early detection of breast cancer:** (Do you know methods that used for early screening for breast cancer?)

Tool II: Health belief model assessment: adapted from (Foad, 2015) it was used to assess knowledge and attitude of women regarding screening for early detection of breast cancer, it included the following parts.

Part I:

Women's knowledge regarding screening for early detection of breast cancer. It included 10 questions starting from Q1-Q10 focus on general information about breast cancer as, (such as define of breast cancer, importance of screening for breast cancer and knowledge about methods of practice breast self-examination) total degree 30.

Scoring system:

Its Scoring system responses ranged from (0- 3) in which score (3) for correct answer; (2) for incomplete answer

(1) for incorrect answer (0) for don't know. This indicates poor level of knowledge "<50.0%", average level of knowledge "50.0% - 75.0%" and good level of knowledge ">75.0%-100%".

Part II:

It is used to assess women attitude regarding breast cancer screening; by using Likert scale which included 16 statements with three responses: disagree, neutral, agree. The attitude scale composed of 5 groups of questions; the first group related to susceptibility (Q1- Q5), the second group related to benefits (Q6-Q8), third group related to barriers (Q9-Q11), while the fourth group related to fears (Q12-Q15) and the fifth group related to cues to action (Q16).

Scoring system:

The scoring system ranged from (1-3) in which score (1) denote disagree; score (2) denote neutral and score of (3) denotes agree and the total attitude score was (48) which divided into three categories: A score from (1-23) denote negative attitude "< 50.0%", score from (24-36) denote neutral attitude "50.0%-75.0%" and score from (37-48) denote positive attitude ">75.0%".

Validity

After construction of data collection tools, face and content validity of the study tools were assessed

Reliability:

Reliability: internal consistency reliability was assessed in the present study tools via Cronbach's Alpha reliability analysis to indicate how well the items in an instrument fit together conceptually (alpha Cronbach's test scores were 0.88 and 0.29 for the questionnaire about women perception regarding screening for early detection of breast cancer.

Ethical considerations:

The research approval was obtained. The aim of the study was explained to each woman before applying the tools to gain her confidence and trust. An oral consent was obtained from each woman prior to participate in the study. Data was confidential and using coding system for it. The study does not cause any harmful effects on participating women. Each woman has right to withdraw from the study at any time.

- **Pilot study:**

A pilot study was conducted two weeks at January 2020. The aim of pilot study was used to evaluate study process, to examine the simplicity and clarity of language, test the feasibility and suitability of designed tools, estimate the time needed to complete the tools by each study subjects and identifying any obstacles and problem that may be faced during data collection .the pilot study represent 10% from total number of subject 15 women and those women were excluded from the main study sample. The time for filling the questionnaire and to test study process took around 25-30 minutes. According to the results of the pilot study no modifications were done. And the researcher make a replacement by another 15 cases.

- **Field work:**

Data collection of the study took six months started at the beginning of February and completed at the end of August 2022.

Administrative design:

An official written approval letter was done

Statistical design:

Data collected from the studied sample was revised, coded and entered using Personal Computer (PC). Computerized data entry and Statistical analysis were fulfilled using the Statistical Package for Social Sciences (SPSS) version 22. Data were presented using descriptive statistics in the form of frequencies, percentages. Chi-square test (X^2) was used for comparisons between qualitative variables. Spearman correlation measures the strength and direction of association between two ranked variables.

Significance of the results:

Highly significant at p-value <0.01.

Statistically significant was considered at p-value <0.05

Non-significant at p-value >0.05

Results:

Table (1): showed that women age ranging from 15 ≥ 45 years and the mean age is 35.1 ± 12 years, in relation to place of residence 78% of them live in urban areas, 57.3% of them are married, 20% of them have highly education, moreover 50% of them are working and 40 % of them don't have enough family income.

Items	No	%
Age		
15-<25	30	20
25-<35	58	38.7
35-<45	38	25.3
≥ 45	24	16
Mean SD 35.1±12		
Place of Residence		
Rural	33	22

Urban	117	78
Marital status		
Single	45	30
Married	86	57.3
Widow	15	10
Divorce	4	2.7
Educational Level		
Cannot read and write	5	3.3
Read and write	15	10
Primary	19	12.7
Secondary	81	54
Highly educated	30	20
Occupation		
Working	75	50
House wife	75	50
Income		
Enough	75	50
Barely enough	15	10
Not enough	60	40

Table (2): showed that reveals that only 25.7% of studied women hadn't previous breast feeding for some reasons as 33.3% had breast problem, 22.2% had child rejection and 11.2% had congenital anomalies of baby respectively. Also, 9.3% of studied women had history of breast problem, 35.7% of them had swollen breast, only 64.3% of them done special test for this problem, 55.6% of them done breast self-examination.

Items	No	%
Previous Breastfeeding? (N=105)		
Yes	78	74.3
No	27	25.7
If No, why causes of no breast feeding? (N=27)		
Breast problem	9	33.3
Child rejection	6	22.2
Congenital anomalies of baby	3	11.2
Other (breast anomalies, admitted to hospital)	9	33.3
History of breast problem?		
Yes	14	9.3
No	136	90.7
If Yes, what types of breast problem?(N=14)		
Swollen breast	5	35.7
Abscess	3	21.4
Breast discharge	4	28.6
redness, nodules	2	14.3
Done any special tests for this problem? (N=14)		
Yes	9	64.3
No	5	35.7
If yes, what types of test?(N=9)		
Self-examination of the breast	5	55.6
Physical examination	2	22.2
Mammography	2	22.2

Table (3): this table showed that 27.3% of women were know new methods that used for early screening for breast cancer, 46.3% of them select breast self- examination. Also, 24% of women preform tests for screening early detection of breast cancer. As 29.5% for being of high risk group, 27.3% had family history, 22.7% done routine checkup, respectively.

Do you know new methods that used for early screening for breast cancer?		
Yes	41	27.3
No	109	72.7
If yes, what's the method? (N=41)		
Mammogram	8	19.5
Breast self-examination	19	46.3
Breast bra	4	9.8
Breast cancer screening device	10	24.4
Preform tests for screening and early detection of breast cancer?		
Yes	36	24
No	106	70.7
If yes, reasons of early screening? (N=36)		
For being of high risk group	13	29.5
irregular menstrual cycle	1	2.3
family history	12	27.3
Other (routine checkup)	10	22.7

Table 4: shows that reveals that 28% of studied women had correct answer regarding concept of breast cancer, more ever 50.7% have correct answer for high risk groups of breast cancer, 38% have correct answer for importance of screening, 27.3% have correct answer of tests used for detecting breast cancer early and 48% have incomplete answer related age of starting breast screening.

Items	Correct answer		Incorrect answer		Incomplete answer		I don't know	
	No	%	No	%	No	%	No	%
Define of breast cancer?	42	28	40	26.7	35	23.3	33	22
High risk groups of breast cancer?	76	50.7	32	21.3	22	14.7	20	13.3
Importance of screening for breast cancer?	57	38	38	25.3	36	24	19	12.7
Tests are used to detect breast cancer early?	41	27.3	27	18	37	24.7	45	30
Suitable age for starting breast screening?	25	16.7	10	6.7	72	48	43	28.7

Table 4 cont: shows that 38.7% of studied women selected incorrect answer concerning knowledge about methods of practicing breast self-examination, 50.7% of them had correct answer related to time of performing breast self-examination after stopping menstrual cycle,

31.3% of studied women selected incorrect answer concerning time of performing breast self-examination for menstrual women and 40% of them have incorrect answer related to abnormal symptom during practicing breast self-examination.

Items	Correct answer		Incorrect answer		Incomplete answer		I don't know	
	No	%	No	%	No	%	No	%
Knowledge about methods of practicing breast self-examination	39	26	58	38.7	32	21.4	21	16
Time of performing breast self-examination after stopping menstrual cycle?	76	50.7	37	24.7	2	1.3	35	23.3
Time of performing breast self-examination for menstrual women?	25	16.7	47	31.3	38	25.3	40	26.6
Abnormal symptom during practicing breast self-examination?	40	26.7	60	40	32	21.4	18	12

Figure (1): shows that 47% of the studied women had their sources of knowledge from media and 27% of them from nurses, while 23% of them from physician and 3% of them from others.

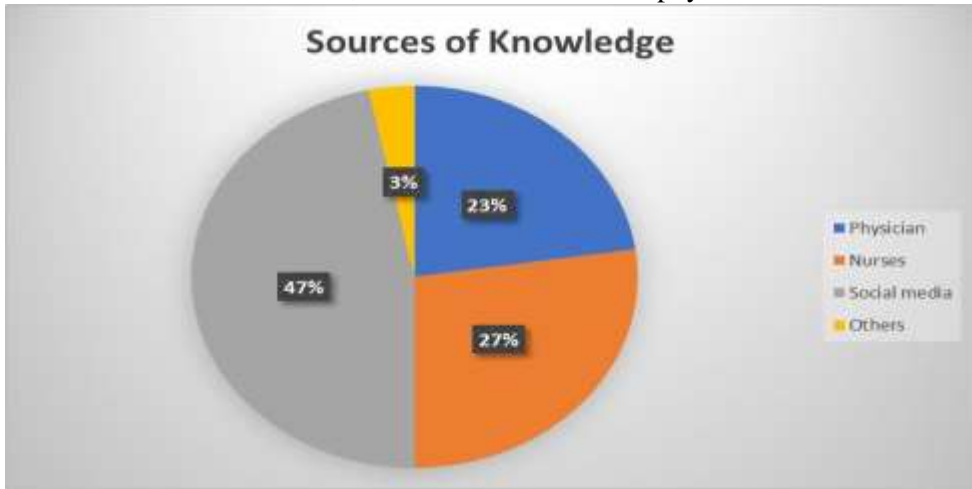


Figure (2): showed that 44% of studied women had good knowledge regarding screening for early detection of breast cancer. While respectively 23%, 33% had average and poor knowledge regarding screening for early detection of breast cancer.

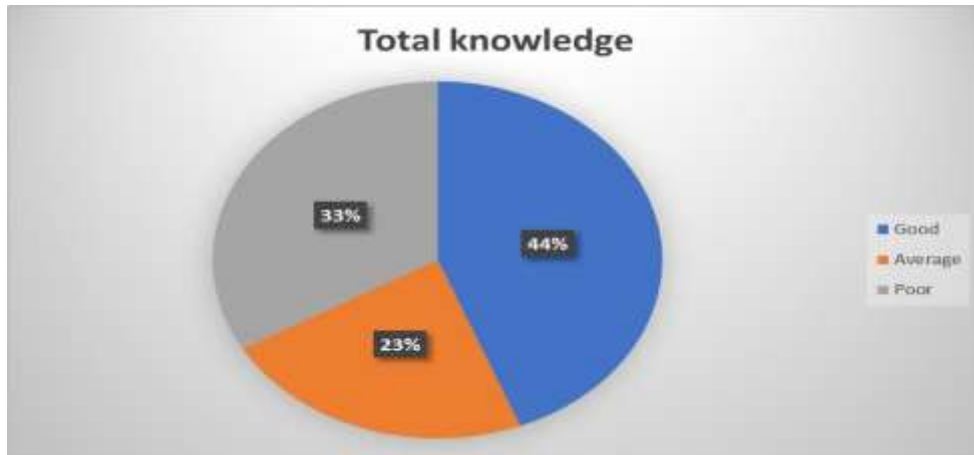


Table (5): showed that 72.7% of studied women disagree that aging is one of the factors that increases the chance of breast cancer and 64.7% of them agreed with acquiring information that helps in the early detection of breast cancer, while 1.3% of them selected somewhat for breast examinations routinely do not cause any embarrassment, furthermore 4% of them selected somewhat for necessary to regularly perform breast self-examination for the early detection of breast cancer.

Items	Disagree		some what		Agree	
	No	%	No	%	No	%
Susceptibility						
Family history of breast cancer is the cause of screening for early detection?	22	14.7	81	54	47	31.3
It's important to perform screening tests for early detection of breast cancer?	35	23.3	22	14.7	93	62
Is aging one of the factors that increases the chance of breast cancer?	109	72.7	8	5.3	33	22
Do you think that breast exams easily to practicing?	25	16.7	89	59.3	36	24
Think that you are susceptible to breast cancer in the future; does it make you do more than one check screening for early detection of breast cancer?	58	38.7	74	49.3	18	12
Benefits						
Are you keen on acquiring information that helps in early detection of breast cancer?	46	30.6	7	4.7	97	64.7
Does breast examination make you feel safe and comfortable with your health?	57	38	7	4.7	86	57.3
Does breast exams help you in early detection and reduce complications?	40	26.7	53	35.3	57	38
Barriers						
Breast examinations do not consume much time and	42	28	53	35.3	55	36.7

effort.						
Breast examinations routinely do not cause any embarrassment.	76	50.7	2	1.3	72	48
Breast examination is not desirable for the husband.	53	35.3	49	32.7	48	32
Fears						
You think that identification exposure to radiation make you see that doing these tests is important?	46	30.7	47	31.3	57	38
Does not knowing enough about the breast tests make you afraid of doing it?	48	32	38	25.3	64	42.7
Think that breast cancer will be a threat to your marital relationship and look at others, so see that doing these tests is important?	46	30.7	39	26	65	43.3
Fear from breast screening testing because you may discover breast cancer, so make you it's important to practicing breast screening tests?	62	41.3	16	10.7	72	48
Cues to action						
Is it necessary to perform regularly breast self-examination for the early detection of breast cancer?	65	43.3	6	4	79	52.7

Figure (3): showed that 44.7 % of studied women had positive attitude regarding screening for early detection of breast cancer. While, 28% had neutral attitude. Moreover, 31.3% had negative attitude.

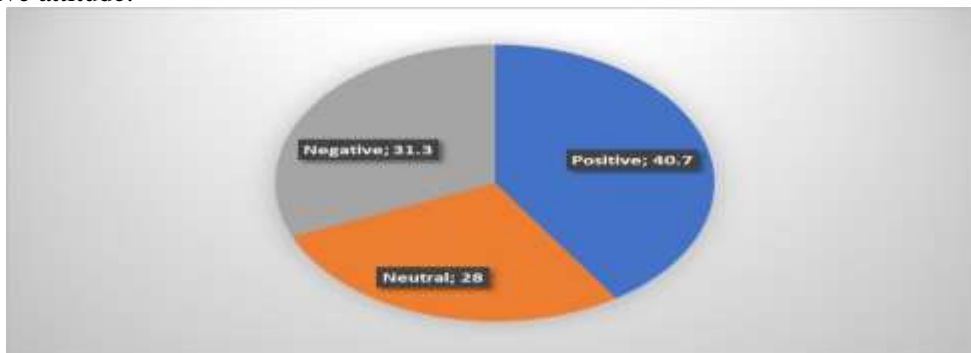


Table (6): showed that illustrates a highly positive correlation between total knowledge of the studied women and their total attitude.

Item	Total attitude Calculated R	P value
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Total Knowledge	.942	.000**
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Discussion:

Finding breast cancer early are the most important strategies to prevent deaths from breast cancer. Breast cancer that's found early, when its small and has not spread, is easier to treat successful (Senkus, 2015).

Regarding general characteristics of the studied women, the finding of the current study revealed that, the mean age of the studied women was 35.1 ± 12 year. This result similar with the result of study performed by **Al-Zalabani et al., (2018)** about Breast cancer knowledge and screening practice and barriers among women in Madinah, Saudi Arabia, who stated that, the mean age of the studied sample was 35.9 ± 3.08 year. This may be due to this age group considered high risk for exposure to breast cancer.

Regarding marital status, the finding of the current study revealed that more than half of them were married. This results are accordance with **Othman, Ahram, Al-Tarawneh, & Shahrouri, (2015)** who perform a study entitled Knowledge, attitudes and practices of breast cancer screening among women in Jordan, which revealed that majority of sample were married.

But these results disagreement with the study done by **Al-Zalabani et al. (2018)**, which entitled Breast cancer knowledge and screening practice and barriers among women in Madinah, Saudi Arabia, who reported that slightly less than half of women were single.

According to the **educational level** of the studied women, the finding of the current study revealed that, one fifth of them had highly educated. The present study is consistent with **Farouk et al., (2016)** in the study entitled "Breast cancer characteristics in very young Egyptian women ≤ 35 years", who reported that slightly more than one fifth of the studied sample had high education. This congruence of the results may be due to the social similarity of sample

While these results disagreement with the study achieved by **Jahan, Al- Saigul, & Abdelgadir, (2015)** about Knowledge, attitude and practice of Nigerian women towards breast cancer who mentioned that one fifth of the studied sample were illiterate. It's may be due to difference between study samples.

Regarding occupation, the finding of the current study revealed that, half of the studied women were housewife. This result approved with the study performed by **Kohler et al., (2017)** about A framework for improving early detection of breast cancer in sub-Saharan Africa, who stated that half of the studied women were housewife.

While, this result is disagreement with the study done by **Yan, (2019)** about Breast cancer: knowledge and perceptions of Chinese women in Hong Kong, who found that two thirds of the studied women were housewife. Because our culture as Chinese husband not prefer working of his wife.

Concerning **monthly family income**, the finding of the current study revealed that, two fifth of the studied women had not enough income. These results supported with the study done **Solikhah, Promthet & Hurst, (2019)** in their study entitled Awareness Level about Breast

Cancer Risk Factors, Barriers, Attitude and Breast Cancer Screening among Women, who found that, two fifth of the studied women had not enough income.

But this result is disagreement with the result of study performed by **Abu-Helalah, Alshraideh Al-Serhan, Kawaleet & Nesheiwat, (2015)** in their study about Knowledge, barriers and attitudes towards breast cancer mammography screening in Jordan, who reported that more than three quarters of the studied sample had not enough income. It is may be due to difference in culture between Egyptian and Jordan people.

Concerning the **history of breast health problems**, the finding of the current study revealed that, less than tenth of studied women had history of breast problem, more than one third of them had swollen breast. These results similar with the results of study performed by **Al- Zalabani et al., (2018)** about Breast cancer knowledge and screening practice and barriers among women in Madinah, Saudi Arabia who stated that, about tenth of the studied women had history of breast problem.

But these current research results disagreement with the study achieved by **Kohler et al., (2017)** entitled A framework for improving early detection of breast cancer in sub-Saharan Africa: A qualitative study of help-seeking behaviors among Malawian women, who stated that, two thirds of the women had history of breast problem, more than two fifth of them had swollen breast. It's may be due to study sample know previous breast problem may be leading to breast cancer this one of causes make women preform screening.

Concerning **done special tests for breast problems**, the finding of the current study revealed that, less than two thirds of them were done special test for this problem, more than half of them done breast self-examination. These results supported with the study done by **Shakweer & Hamza, (2016)** about Practicing breast self-examination and early detection of breast cancer, who stated that, less than one fifth of the studied sample did special test for this problem, slightly less than two thirds of them did breast self-examination. In my point of view these results may be due to breast self-examination is one of the simplest screening method used to detect breast cancer and other breast diseases early.

Regarding screening and early detection of breast cancer, the finding of the current study revealed that, less than three quarters of studied women didn't know the new methods that used for early screening for breast cancer. This result supported with the study done by **Ahmed, (2018)** about Awareness and practice of breast cancer and breast-self-examination among women, who stated that, two thirds of the studied sample didn't know the new methods that used for early screening for breast cancer. In my point of view this results may be due to less than three quarter of women didn't do screening tests for early detection of breast cancer so, less than three quarters of studied women didn't know the new methods that used for early screening for breast cancer.

According screening and early detection of breast cancer, the finding of the current study revealed that, less than three quarters of women didn't perform tests for screening and early detection of breast cancer. This result supported with the study done by **Fortner et al., (2019)** about Parity, breastfeeding, and breast cancer risk by hormone receptor status and molecular phenotype, who stated that, less than three quarters of studied women didn't do tests screening for early detection of breast cancer.

Regarding sources of knowledge, the current study revealed that, nearly half of the

studied women attained their source of knowledge from social media. This finding is similar with the result of study performed by (Akuoko et al., 2017) in their study about Barriers to early presentation and diagnosis of breast cancer among African women living in sub-Saharan Africa who reported that half of the participants attained their knowledge from social media. In my point of view this result may be referred to the frequent means of communication and awareness such as internet and, mobile that become easier and accessible.

Regarding total knowledge: Regarding total knowledge about screening for early detection of breast cancer, the current study revealed that, one third of the women in the study had poor level of knowledge regarding screening for early detection of breast cancer. Also, less than one quarter of them had average level. While, nearly half of them had good level of knowledge. This result is similar with the result of study performed by Naqvi et al., (2018) about Awareness, knowledge and attitude towards breast cancer, breast screening and early detection techniques among women, who stated that, one third of the studied sample had poor level of total knowledge regarding the breast screening and early detection techniques. because women of the current study have enough information of breast cancer .

But this result is disagreement with the study done by Alwan et al ., (2015) about Knowledge, attitude & practice towards breast cancer & breast self-examination, who illustrated that more than half of the studied women had poor level of knowledge. It's may be due to characteristics of the study sample as educational level & place of residence.

Regarding total attitude about screening for early detection of breast cancer, the finding of the current study revealed that, more than two fifth of the studied women had positive attitude regarding to screening for early detection of breast cancer. Moreover, more than one quarter of them had neutral attitude. While, less than one third of them had negative attitude. These results supported with the study done by Badakhsh et al., (2018) about Attitude and practice regarding breast cancer early detection among Iranian women, who stated that, about half of the studied women had positive attitude regarding to screening for early detection of breast cancer.

Also, these results agreement with the study achieved by Korkut, (2019) about Assessment of knowledge, attitudes, and behaviors regarding breast and cervical cancer among women in western Turkey, who stated that, more than two thirds of the studied sample had positive attitude regarding to screening for early detection of breast cancer.

But this result disagreement with the study achieved by Alshahrani et al., (2018) which entitled Knowledge, Attitudes, and Practices of Breast Cancer Screening Methods Among Female Patients in Primary Healthcare Centers, who stated that, more than three quarters of the studied sample had positive attitude regarding to screening for early detection of breast cancer. Could be this difference may be due to variation between study sample of the study as residence.

Regarding the correlation between total knowledge of the women and their total attitude regarding screening for early detection of breast cancer. The present study revealed that, there was a highly significant positive correlation between total knowledge of the women and their total attitude. This result supported with the study performed by Bonsu, Ncama & Bonsu, (2019) about Breast cancer knowledge, beliefs, attitudes and screening efforts by micro-community of advanced breast cancer patients, who stated that, there was a highly significant positive correlation between total knowledge of the women and their total

attitude. It may explain as good knowledge was more encountered among those the women with positive attitude. Point of view may be due to some of women aware by breast cancer screening because media done adverting about free breast cancer screening through health unit this help increase awareness of women about breast cancer and its early detection.

But this result disagreement with the study achieved by **Alshahrani et al., (2018)** about Knowledge, Attitudes, and Practices of Breast Cancer Screening Methods Among Female Patients in Primary Healthcare Centers who mentioned that, there was highly significant negative correlation between total knowledge of the women and their total attitude. Because difference may be due to variation between study sample and setting and area of residence.

Conclusion:

In the light of the previous study was concluded that more than one third of women had good knowledge regarding screening for early detection of breast cancer. Nearly half of them have positive attitude regarding screening for early detection of breast cancer. More ever it was positive correlation between their total knowledge and total attitude regarding screening for early detection of breast cancer.

Recommendations:

In the light of findings of this study, the following recommendations are suggested:

1. Add Educational program to educate women in primary health care setting / hospital about new screening procedure and its importance for breast cancer screening through workshop / booklet

Abu Reference:

- **-Helalah, M., Alshraideh, H., Al-Serhan, A., Kawaleet, M., & Nesheiwat, A. (2015):** Knowledge, barriers and attitudes towards breast cancer mammography screening in Jordan. *Asian Pac J Cancer Prev*, 16(9): 3981-3990.
- **Ahmed, B. (2018):** Awareness and practice of breast cancer and breast- self-examination among women in Yemen. *Asian Pacific journal of cancer prevention: APJCP*, 11(1): 101-105.
- **Akuoko, C., Armah, E., Sarpong, T., Quansah, D., Amankwaa, I., & Boateng, D. (2017):** Barriers to early presentation and diagnosis of breast cancer among African women living in sub-Saharan Africa. *PloS one*, 2 : 17- 24.
- **Al-Alwan N., Hussain, I., Abdul Wahid H., Aziz I., Shakir A., Hamza W., Gasim M. (2014).** Evaluating the Accuracy of the "Breastlight" as a Screening Tool for Breast Cancer in Iraq, *International Journal of Advanced Research*, 233: 522-531.
- **Alshahrani, M., Alhammam, S., AlMunyif, H., Alwadei, A., Alwadei, A., Alzamanan, S., & Aljohani, N. (2018):** Knowledge, Attitudes, and Practices of Breast Cancer Screening Methods Among Female Patients in Primary Healthcare Centers in Najran, Saudi Arabia. *Journal of Cancer Education*; 4: 1-6.
- **Alwan, N., Al-Diwan, J., Wafa'M, A., & Eliessa, R. (2015):** Knowledge, attitude & practice towards breast cancer & breast self examination in Iraq. *Asian Pacific Journal of Reproduction*, 178: 308-311.

- **Al-Zalabani, A., Alharbi, K., Fallatah, N., Alqabshawi, R., Al-Zalabani, A., & Alghamdi, S. (2018):** Breast cancer knowledge and screening practice and barriers among women in Madinah, Saudi Arabia. *Journal of Cancer Education*, 33(152): 201-207
- **American Cancer Society. (2017):** American Cancer Society recommendations for the early detection of breast cancer. https://www.breast-surgen.org/new_layout/statements/.
- **Asare, E.A., Washington, M.K., Gress, D.M., Gershenwald, J.E., Greene, F.L. (2015):** Improving the quality of cancer staging. *CA Cancer J Clin*; 65:261-263.
- **Badakhsh, M., Balouchi, A., Taheri, S., Bouya, S., Ahmadidarehsima, S., & Aminifard, M. (2018):** Attitude and practice regarding breast cancer early detection among Iranian women: A systematic review. *Asian Pacific journal of cancer prevention: APJCP*, 19: 9.
- **Bonsu, A., Ncama, B., & Bonsu, K. (2019):** Breast cancer knowledge, beliefs, attitudes and screening efforts by micro-community of advanced breast cancer patients in Ghana. *International Journal of Africa Nursing Sciences*, 65:5-10
- **Eltwansy M.S. (2018).** Early detection of breast cancer: knowledge, perception and barriers, *The Egyptian Journal of Community Medicine*, 36:11-22.
- **Farouk, O., Ebrahim, M., Senbel, A., Emarah, Z., Abozeed, W., Seisa, M.,... & Abdelhady, S. (2016):** Breast cancer characteristics in very young Egyptian women \leq 35 years. *Breast Cancer: Targets and Therapy*, 88: 53.
- **Foad, M.A. (2015):** Knowledge and beliefs of women regarding health screening of detection breast cancer in El Gharbia governorate, Cairo university, master thesis: 85-90
- **Fortner, R., Sisti, J., Chai, B., Collins, L., Rosner, B., Hankinson, S.,... & Eliassen, A. (2019):** Parity, breastfeeding, and breast cancer risk by hormone receptor status and molecular phenotype: results from the Nurses' Health Studies. *Breast Cancer Research*, 1: 40.
- **Haque, A.T.M.E., Hisham, M., Bin, M.A., Ahmad Adzman, NALB., Azudin NAB., Shafri, N.B., Haque, M. (2016):** Cognizance and utilization about breast cancer screening among the health professional female students and staffs of University Kuala Lumpur, Royal College of Medicine Perak, Malaysia; 37:286-292.
- **Jahan, S., Al-Saigul, A.M., & Abdelgadir, M.H. (2015):** Knowledge, attitudes and practices of breast self examination among women in Qassim region of Saudi Arabia. *Saudi Med J*, 11: 1737-1741.
- **Kohler, R., Gopal, S., Miller, A., Lee, C., Reeve, B., Weiner, B., & Wheeler, S. (2017):** A framework for improving early detection of breast cancer in sub-Saharan Africa: A qualitative study of help-seeking behaviors among Malawian women. *Patient education and counseling*, 1: 167-173.
- **Korkut, Y. (2019):** Assessment of knowledge, attitudes, and behaviors regarding breast and cervical cancer among women in western Turkey. *Journal of International Medical*

Research, 4: 1660-1666.

- **Mamamdou, H.M., EL-Mancyh., Karboush, I.F., Ismail, H.M., Tawfik, M.M. (2014):** Barriers to breast cancer screening among a sample of Egyptian females, 2: 119-124.
- **Mandelblatt, J.S., Stout, N.K., Schechter, C.B., Van den Broek, J.J., Miglioretti, D.L., Krapcho, M. (2016):** Breast cancer screening strategies; 164: 215-225.
- **Mohamed, H., Ibrahim, Y., Lamadah, S. and Abo El-Magd, M. (2016):** Application of the Health Belief Model for Breast Cancer Screening and Implementation of Breast Self-Examination Educational Program for Female Students of Selected Medical and Non-Medical Faculties at Umm al Qura University, Life Science Journal. 13: 21-33.
- **Mohammadi, S., and Baniroostam, T. (2015):** A Perceptual Meta-model based on the Ontology of Mental Models. The International Journal of Humanities & Social Studies. 3: 122-128.
- **Muller, F.H., Farahati, J., Muller A.G., Gillman E., and Hentschel, M. (2016):** Positron emission mammography in the diagnosis of breast cancer. Is maximum PEM uptake value a valuable threshold for malignant breast cancer detection Nuklearmedizin, 1: 15-20.
- **Naqvi, A.A., Zehra, F., Ahmad, R., Ahmad, N., Yazdani, N., Usmani, S.,... & Khan, S.J. (2018):** Awareness, knowledge and attitude towards breast cancer, breast screening and early detection techniques among women in Pakistan. JPMA. The Journal of the Pakistan Medical Association, 68: 576-586.
- **Naz, M., Ghare, S., Simbar, M., Fakaril, F.R, and Ghasemi, V. (2018).** Effects of Model-Based Interventions on Breast Cancer Screening Behavior of Women: Asian Pacific Journal of Cancer Prevention, 19: 34-38.
- **Oeffinger, K.C., Fontham, E.T., Etzioni, R., Herzig, A., Michaelson, J.S., Shih, Y.C., American Cancer Society. (2015):** Breast cancer screening for women at average risk: guideline update from the American Cancer Society. Journal of the American Medical Association, 15: 1599-1614.
- **Omoyeni, O.M., Oluwafeyikemi, P.E., Irinoye, O.O. (2014):** Assessment of the Knowledge and Practice of Breast Self Examination among Female Cleaners in Obafemi Awolowo University Ile Ife, Nigeria. International Journal; 199 : 239.
- **Othman, A., Ahram, M., Al-Tarawneh, M., & Shahrouri, M. (2015):** Knowledge, attitudes and practices of breast cancer screening among women in Jordan. Health care for women international, 36: 578-592.
- **Senkus. (2015):** 'Primary breast cancer: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up', Annals of Oncology, 5: 8-30.
- **Shakweer, T., & Hamza, M. (2016):** Practicing breast self-examination and early detection of breast cancer. J Nurs Sci, 22: 1-6.
- **Solikhah, S., Promthet, S., & Hurst, C. (2019):** Awareness Level about Breast Cancer

Risk Factors, Barriers, Attitude and Breast Cancer Screening among Indonesian Women. Asian Pacific Journal of Cancer Prevention, 20:877-884.

- **Steven K. Thompson., (2012):** Sampling'3rd ed, John Wiley & Sons, p59-60.
- **World Health Organization (WHO), (2015** [http://www.who.int/cancer/prevention/diagnosis- screening/breast-cancer/en/](http://www.who.int/cancer/prevention/diagnosis-screening/breast-cancer/en/).
- **Yan, Y. (2019):** Breast cancer: knowledge and perceptions of Chinese women in Hong Kong. Global journal of health science, 45: 97.