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# Awareness and Attitudes Regarding Breast Self-Examination and Breast Cancer among Females in Alkharj

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***Authors' contributions***

*This work was carried out in collaboration among all authors. Authors SMA and NJA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors SMA, NJA and AA managed the analyses of the study. Author AA managed the literature searches. All authors read and approved the final manuscript.*

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## ABSTRACT

**Aim:** A large proportion of females diagnosed with progressed phases of the disease, which can be related to knowledge deficiency about screening importance. This study aimed to assess the awareness and attitudes about breast self-examination and breast cancer among females in Alkharj.
**Methodology:** This study was conducted using a self-administered survey that was adapted from previous studies conducted in Northeast Nigeria and Jordan. The data were collected using excel software and the descriptive data were represented as frequencies and percentages. Using Raosoft sample size calculator, the recommended sample size was 200.
**Results:** The majority of the respondents were in the age level between 20-39 (71.75%). Approximately 89% of the respondents said that they are aware of breast cancer but social media

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is the main source of their information (76.82%). About 54% of the females who filled the survey said that they heard about breast self-examination but without practicing it.
**Conclusion:** Females in Alkharj had good knowledge about BSE and breast cancer but social media is the main source of their information. Moreover, a significant percentage of females don't practice BSE.

*Keywords: Attitudes; awareness; breast cancer; breast self-examination.*

## 1. INTRODUCTION

Breast cancer is a global health issue and a leading cause of death among females globally [1-3]. A total of 411,000 deaths yearly are caused by breast cancer, these deaths account for 14% of total female cancer deaths worldwide [4,5]. In the Arab World, breast cancer is a common type of cancer among young age. This regionally developed disease is quite prevalent and the most frequently used treatment for it is overall mastectomy [6].

Regular screening of all women is recommended for the detection of breast cancer in its earliest stages. There are three methods used for breast cancer screening which are: clinical breast examination, breast self-examination (BSE) and mammography [7]. BSE is very important because by performing it, females have an opportunity to observe and to feel their breast, to be familiar with the texture of normal breast tissue, and also they can know how it changes at different times of the month and with age. Moreover, BSE gives an opportunity to report and changes without postponement, and to attend for breast screening when aged 50 and over [8].

While BSE is a quick, simple and cost-free procedure, the practice of BSE among females is low and varies in different countries. A study by Philip et al in England reported that only 54% of the study respondents practiced BSE [9]. The prevention and the identification of breast cancer at an earlier time is therefore very important because it leads to save and improve the quality of life [10].

Breast cancer is the most common type of cancer among females in Saudi Arabia [11-13], nevertheless several studies were conducted in Saudi Arabia and have revealed poor knowledge of females regarding breast cancer, breast self-examination, and its screening [14-16].

Unfortunately, a large proportion of females diagnosed with progressed phases of the disease, which can be related to knowledge deficiency about screening importance [17]. As a result, all women must have adequate knowledge and understanding of breast cancer to affect their communities and families in the future. Therefore, this study aimed to assess the awareness and the attitudes about breast self-examination and breast cancer among females in Alkharj

## 2. METHODOLOGY

This is a cross-sectional study examined the awareness of females in Alkharj with regards to breast self-examination in addition to their knowledge regarding breast cancer.

The target population of the study was females in Alkharj with an age range between 20 – 70 years Females who are less than 20 or more than 70 years old were excluded. Additionally, Females who already suffering from breast cancer were excluded from this study. Using Raosoft sample size calculator with margin of error 5.81% and confidence level of 90% with a response distribution of 50%, the recommended sample size was 200.

This study was conducted using a self-administered survey that was adapted from previous studies conducted in Northeast Nigeria and Jordan [18,19], after that the survey was translated into Arabic, and modified to be applicable in Saudi Arabia.

The questionnaire was validated both by face validation (expert looking at the items in the questionnaire) and content validation (systematic examination of the survey content) and after that, the survey was distributed to female patients attending the primary health care center of Alkharj region.

The survey divided into five parts: the first part includes demographic data, the second part includes questions related to breast cancer awareness, the third part includes questions related to the respondents' scientific background on breast cancer, the fourth part includes

knowledge of breast self-examination and the fifth part includes questions related to attitude towards breast self-examination.

The data was collected between February and March 2020. The survey was hand-delivered to the female patients in a primary health care center with suitable instructions regarding its completion and picked up after completion. Participation in the study was voluntary and their response would be confidential.

The data were collected using excel software and the descriptive data were represented as frequencies and percentages.

## 3. RESULTS

This study was conducted in Alkharj city – Saudi Arabia, the survey was filled by 262 female respondents. The majority of them were in the age level between 20-39 (71.75%). Table 1 shows the age of the respondents.

**Table 1. Age of the respondents**

| Age | Number | Percentage |
|---|---|---|
| 20-29 | 109 | 41.60 |
| 30-39 | 79 | 30.15 |
| 40-49 | 43 | 16.41 |
| 50-59 | 25 | 9.54 |
| 60-69 | 6 | 2.29 |

Most of the respondents are married (52.67%) and the majority of them aren't employees (64.88%). The Demographic data are shown in Table 2.

Approximately 89% of the respondents said that they are aware of breast cancer but social media is the main source of their information (76.82%). Table 3 shows the respondents' awareness of breast cancer.

The respondents said that family history (42.37%) and no breastfeeding (52.67%) are the main risk factors of breast cancer. Moreover, they stated that change in breast size/shape and breast lumps are the main symptoms of breast cancer. The respondents' scientific background on breast cancer is shown in Table 4.

About 54 % of the females who filled the survey said that they heard about breast self-examination but without practicing it. Knowledge of breast self-examination is shown in Table 5.

Most of the respondents agreed that the early detection of breast cancer increases the chance of recovery (96.56%). Table 6 shows the attitude towards breast self-examination.

## 4. DISCUSSION

The majority of the respondents were in the age level between 20-39. Approximately 89% of them said that they are aware of breast cancer but social media is the main source of their information.

Alhaji and Moawed indicated that in their study, none of the secondary school students had an excellent knowledge regarding breast cancer; 98.8% of the respondents had a fair level of knowledge about breast cancer. He also reported that the media was the most common source of information about breast cancer [20].

The respondents in the present study said that family history, no breastfeeding, diet, and intake of oral contraceptives are the main risk factors of breast cancer. Moreover, they stated that change in breast size/shape, breast lumps, Nipple secretions, and changes are the main symptoms of breast cancer.

**Table 2. Demographic data**

| Variable | Category | Number | Percentage |
|---|---|---|---|
| Marital status | Single | 98 | 37.40 |
| | Married | 138 | 52.67 |
| | Divorced | 19 | 7.25 |
| | Widowed | 7 | 2.67 |
| Educational status | Graduate degree | 168 | 64.12 |
| | High school | 54 | 20.61 |
| | less than High school | 33 | 12.60 |
| | Postgraduate degree | 3 | 1.14 |
| | Illiterate | 4 | 1.53 |
| Occupation | Employ | 92 | 35.11 |
| | Housewife | 110 | 41.98 |
| | Student | 60 | 22.90 |

**Table 3. Breast cancer awareness**

| Variable | Category | Number | Percentage |
|---|---|---|---|
| Are you aware | Yes | 233 | 88.93 |
| | No | 29 | 11.07 |
| Source of breast cancer information (n=233) | Social media | 179 | 76.82 |
| | Relative – friend | 37 | 15.88 |
| | Medical staff | 51 | 21.89 |
| | Television | 50 | 21.46 |
| | Others | 47 | 20.17 |

**Table 4. The respondents' scientific background on breast cancer**

| Variable | Category | Number | Percentage |
|---|---|---|---|
| Risk factors of breast cancer. | Family history | 111 | 42.37 |
| | Use of brassieres | 93 | 35.50 |
| | First child at a late age | 44 | 16.79 |
| | Medical condition | 52 | 19.85 |
| | Diet | 95 | 36.26 |
| | Stress and anxiety | 65 | 24.81 |
| | Radiation exposure | 93 | 35.50 |
| | Intake of oral contraceptive | 95 | 36.26 |
| | No breastfeeding | 138 | 52.67 |
| | Old age | 83 | 31.68 |
| | Late menopause | 60 | 22.90 |
| | Excessive breastfeeding | 1 | 0.38 |
| | Don't know | 19 | 7.25 |
| Symptoms of breast cancer | Nipple changes | 131 | 50.00 |
| | Nipple secretions | 135 | 51.53 |
| | Breast lump | 166 | 63.36 |
| | Itching in the breast | 42 | 16.03 |
| | Change in breast size and shape | 174 | 66.41 |
| | Breast Pain and soreness | 116 | 44.27 |
| | Don't know | 14 | 5.34 |

**The respondents can choose more than one answer so the total for some questions' answers may be more than 100%*

**Table 5. Knowledge of breast self-examination (BSE)**

| Variable | Category | Number | Percentage |
|---|---|---|---|
| Knowledge of breast self-examination (BSE) | Never heard about BSE | 58 | 22.14 |
| | Heard without the practice of BSE | 141 | 53.82 |
| | Heard about BSE and practice it | 63 | 24.04 |
| Why not practice BSE (n=141) | Too Busy | 62 | 43.97 |
| | Not necessary | 27 | 19.15 |
| | Not convenient | 1 | 0.71 |
| | Others | 51 | 36.17 |
| Purpose of BSE practice (n=63) | Advice from a health worker | 8 | 12.70 |
| | Noticed a breast lump | 7 | 11.11 |
| | Routine medical examination | 36 | 57.14 |
| | One of my family members had cancer | 7 | 11.11 |
| | Medical reason | 5 | 7.94 |

**Table 6. Attitude towards breast self-examination (BSE)**

| Variable | Category | Number | Percentage |
|---|---|---|---|
| Early detection of breast cancer increases the chance of recovery | Agree | 253 | 96.56 |
| | Disagree | 1 | 0.38 |
| | Don't know | 8 | 3.05 |
| Female more than 20 years should practice BSE regularly | Agree | 179 | 68.32 |
| | Disagree | 28 | 10.69 |
| | Don't know | 55 | 20.99 |
| Female must be educated about BSE | Agree | 225 | 85.88 |
| | Disagree | 5 | 1.91 |
| | Don't know | 32 | 12.21 |

Alomair et al. reported that the majority of the respondents in their study showed a moderate level of knowledge regarding breast cancer [21]. They also said that family history, no breastfeeding, intake of oral contraceptives, diet, use of brassieres and radiation exposure are the main risk factors of breast cancer.

Elsayed and Mohammed reported that early menarche, late menopause, radiation exposure, and family history are the main risk factors of breast cancer. Moreover, they stated that change in breast size/shape, breast lumps, nipple secretions, nipple changes, and breast pain and soreness are the main symptoms of breast cancer [10].

Additionally, Godfrey et al. reported that the main signs and symptoms of breast cancer include nipple discharge, change in breast shape and size, painless breast lump and a lump under the armpit. They also stated that the main risk factors for breast cancer were family history of breast cancer, cigarette smoking, a low-fat diet, the use of oral contraceptives and exposure to radiation [22].

CDC reported that there are risk factors of breast cancer that cannot be changed such as getting older, genetic mutations, some reproductive history, having dense breasts, personal history of breast cancer or certain non-cancerous breast diseases, family history of breast cancer, previous treatment using radiation therapy and women who took the drug diethylstilbestrol [23].

CDC also reported that there are risk factors of breast cancer that can be changed such as not being physically active, being overweight or obese after menopause, taking hormones, some reproductive history, not breastfeeding, and never having a full-term pregnancy, drinking alcohol [23].

Alhaji and Moawed reported that regarding knowledge about the signs and symptoms of breast cancer, the respondents said that the presence of a mass in the breast, sense of mass under the armpit and pain in the breast area are the warning signs of breast cancer [20]. Furthermore, Elsayed and Mohammed reported that lump in the breast, change in size, pain, soreness, and inverted nipple were the most common symptoms of breast cancer [10].

CDC reported that different people have different symptoms of breast cancer and that some people do not have any signs or symptoms at all [23]. CDC reported also that the most common warning signs of breast cancer include a new lump in the breast or underarm, thickening or swelling of part of the breast, irritation or dimpling of breast skin, redness or flaky skin in the nipple area or the breast, pulling in of the nipple or pain in the nipple area, nipple discharge other than breast milk, including blood, any change in the size or the shape of the breast, pain in any area of the breast [23].

Elsayed and Mohammed reported that most of the university female students had inadequate information on the symptoms of breast cancer, factors as well as preventive measures and early detection methods [10].

About 54% of the females in the present study said that they heard about breast self-examination but without practicing it. Unfortunately, only 24.04% heard about BSE and practice it. Alhaji and Moawed reported that the majority of respondents did not perform breast self-examination 80.8% and that only 3.4% perform (BSE) monthly [20]. Alomair et al reported that the majority of the students frequently performed BSE and that only 8% never do BSE [21]. Moreover, Jahan et al reported that 69.7% of the respondents had

never heard of BSE and that only 18.7% practice BSE [24].

Koc et al reported that a total of 73.3% of the subjects' students had heard about BSE and that only about half stated, however, that they practice BSE [25]. Furthermore, Godfrey et al revealed a high awareness of breast cancer (98.0%) and BSE practices (76.5%) among female students [22].

Out of the 141 respondents who heard about BSE without practicing it, most of them said that the reason for not practicing BSE is that they are too busy (43.97%) and some of them said that the examination is not necessary (19.15 %).

Out of the 63 respondents who heard about BSE and practice it, 57.14% of them said that the reason for practicing BSE is that it is only a routine medical examination and only 12.7% said that it is advice from a health worker.

Most of the respondents agreed that early detection of breast cancer increases the chance of recovery (96.56%), females more than 20 years should practice BSE regularly (68.32%) and that female must be educated about BSE (85.88%). Similarly, Jahan et al reported that most of the respondents agreed that early detection increases the chance of recovery from breast cancer, the females must be educated about BSE and that female more than 20 years should practice BSE frequently [24].

## 5. CONCLUSION

The results of this study indicate that females in Alkharj had good knowledge about BSE and Breast cancer but social media is the main source of their information. A significant percentage of the females don't practice BSE, this might be an obstacle to screening programs and early diagnosis of breast cancer. Recommendations are suggested to raise women' level of knowledge toward breast cancer and practice of breast self-examination and to encourage them to perform BSE frequently through more intensified awareness programs conducted by trusted sources such as health care professionals.

## CONSENT

As per international standard or university standard, patients' written consent has been collected and preserved by the author(s).

## ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

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## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Shibuya K, Mathers CD, Boschi-Pinto C, Lopez AD, Murray CJ. Global and regional estimates of cancer mortality and incidence by site: II. Results for the global burden of disease 2000. BMC Cancer. 2002;2(1):37.
2. Althuis MD, Dozier JM, Anderson WF, Devesa SS, Brinton LA. Global trends in breast cancer incidence and mortality 1973-1997. Int J Epidemiol. 2005;34(2): 405-412.
3. Hortobagyi GN, De la Garza Salazar J, Pritchard K, Amadori D, Haidinger R, Hudis CA, et al. The global breast cancer burden: Variations in epidemiology and survival. Clin Breast Cancer. 2005;6(5):391-401.
4. Akpo EE, Akpo MO, Akhator A. Breast cancer knowledge and screening practices among Nigerian medical students. IJH. 2010;11(2):6-9.
5. Battaglia F, Plotti F, Zullo M, Panici P, Plotti G, Brown L et al. Gynecologic cancer. Cancer. 2006;16:29-35.
6. El Saghir NS, Khalil MK, Eid T, El Kinge AR, Charafeddine M, Geara F, et al. Trends in epidemiology and management of breast cancer in developing Arab countries: A literature and registry analysis. Int J Surg. 2007;5(4):225-233.
7. International Agency for Research on Cancer-World Health Organization IARC handbooks of cancer prevention; 2002.
8. Austoker J. Screening and self examination for breast cancer. BMJ. 1994; 309(6948):168–174.
9. Philip J, Harris WG, Flaherty C, Joslin CA. Clinical measures to assess the practice

and efficiency of breast self-examination. Cancer. 1986;58(4):973-977.
10. Elsayed AA, Mohammed H. Prevention of breast cancer: Effects of early education on knowledge and practice of university students in Saudi Arabia. IOSR JNHS. 2019;8(5):1-9.
11. National Cancer Registry. Cancer incidence report, 1999-2000; 2004. Available:https://nhic.gov.sa/eServices/Documents/Incidence%20Report%201999-2000.pdf
Accessed 15 September 2020
12. Al Tamimi TM, Ibrahim EM, Ibrahim AW, Al-Bar AA, Assuhaimi SA, Gabriel GS et al. Cancer in the eastern region of Saudi Arabia: A population-based study (1987-1988). Ann Saudi Med. 1997;17(1):53-65.
13. Koriech OM, Al-Kuhaymi R. Profile of cancer in Riyadh armed forces hospital. Ann Saudi Med. 1994;14(3)1:87-194.
14. Millat WA. Knowledge of secondary-school female students on breast cancer and breast self-examination in Jeddah, Saudi Arabia. East Mediterr Health J. 2000; 6(2-3):338-344.
15. Abdel Hadi MS. Breast cancer awareness among health professionals. Ann Saudi Med. 2000;20(2):135-136.
16. Kashgari RH, Ibrahim AM. Breast cancer: Attitude, knowledge and practice of breast self examination of 157 Saudi women. J Fam Comm Med. 1996;3(1):10-13.
17. Yılmaz M, Sayın Y, Cengiz HÖ. The effects of training on knowledge and beliefs about breast cancer and early diagnosis methods among women. Eur J Breast Health. 2017; 13(4):175–182.
18. Suleiman AK. Awareness and attitudes regarding breast cancer and breast self-examination among female Jordanian students. J Basic Clin Pharm. 2014;5(3): 74-78.
19. Omotara B, Yahya S, Amodu M, Bimba J. Awareness, attitude and practice of rural women regarding breast cancer in Northeast Nigeria. J Community Med Health Educ. 2012;2(5):1-4.
20. Al-Haji KM, Moawed SA. Breast cancer, breast self-examination knowledge among female high school students in Riyadh City. Middle East J. Nurs. 2015;101(1643): 1-9.
21. Alomair AN, Felemban DGM, Felemban MS, Awadain JA, Altowargi ASJ, Alfawzan NF et al. Knowledge, attitude and practice of breast self-examination toward breast cancer among female students at king Saud University in Riyadh, Saudi Arabia. EC Gynaecology. 2020;9(1):01-08.
22. Godfrey K, Agatha T, Nankumbi J. Breast cancer knowledge and breast self-examination practices among female university students in Kampala, Uganda: A Descriptive Study. Oman Med. J. 2016; 31(2):129-134.
23. Centers for Disease Control and Prevention. Basic Information about Breast Cancer.
Available:https://www.cdc.gov/cancer/breast/basic_info/index.htm
Accessed 16 September, 2020.
24. Jahan S, Al-Saigul AM, Abdelgadir MH. Breast cancer. Knowledge, attitudes and practices of breast self examination among women in Qassim region of Saudi Arabia. Saudi Med J. 2006;27(11):1737-1741.
25. Koc G, Gulen-Savas H, Ergol S, Yildirim-Cetinkaya M, Aydin N. Female university students' knowledge and practice of breast self-examination in Turkey. Niger J Clin Pract. 2019;22(3):410-415.



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