ORIGINAL ARTICLE

Awareness Level and Attitudes regarding Breast Self-Examination and Breast Cancer among Women in Saudi Arabia

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Abstract

Aim: This study aimed to evaluate the attitudes and the level of awareness of women in Saudi Arabia regarding breast self-examination and breast cancer. Females must conduct breast self-examination regularly to observe any changes in their breast. **Materials and Methods:** This is a retrospective research that was conducted using a survey that was adapted from previously published studies conducted in Jordan and Northeast Nigeria. The questionnaire was validated by content validation and by face validation, and after that, the survey was prepared online using online electronic forms. **Results:** Approximately 95% of the respondents said that they are aware of breast cancer, mainly by social media (53.62%). The main risk factor of breast cancer, as reported by females, was family history (50.98%) followed by radiation exposure (35.04%). Change in the shape or size of the breast is the most common symptoms of breast cancer (66.93%). Moreover, 62.2 % of females stated that they heard about the self-examination but did not practice it. **Conclusion:** Although the females reported that their knowledge about breast cancer and self-examination was good, the majority did not practice breast self-examination. It is recommended to increase females' awareness of breast cancer and self-examination by workshops, community services activities, and lectures.

Keywords: Attitudes, awareness, breast self-examination, breast cancer

INTRODUCTION

Globally, the incidence of breast cancer is more than 1.15 million reported patients yearly. These cases cause a cumulative mortality rate of 502,000 losses annually; it is second cancer-related deaths among females next only to lung cancer, as reported by the World Health Organization.[1]

For women, the most common cancers are lung, breast, and colorectal. Breast cancer alone accounts for about 30% of all female cancers. Siegel *et al*. reported that for female breast cancer, the death rate has dropped from its peak by 40% (between 1989 and 2017).[2]

Delay in breast cancer diagnosis and treatment can lead to the diagnosis of the disease at a more advanced stage, an increase in death rate, and a reduction in the chance of survival.[3,4] Many cases of cancer are detected in the late stages, resulting in the poor prognosis of the patients. Early cancer diagnosis improves the patient's quality of life and survival.[5] To detect breast cancer in its earliest stages, regular screening of all women is recommended. Breast cancer that is detected early, when it is small and has not spread, is easier to treat effectively. Getting regular screening tests are the most trustworthy way to detect breast cancer early.[6]

In Nigeria, Okobia *et al*. and Gwarzo *et al*. reported that the practice of BSE ranged from 19% to 43.2%.[7,8] Furthermore, in India, it is reported that the practice of BSE varied from 0 to 52%.[9,10]

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Several studies in the Kingdom of Saudi stated that although breast cancer is a common cancer, the knowledge of females regarding breast cancer and breast self-examination and its screening is poor.[11,12]

In general, females must have enough knowledge and understanding of breast cancer and breast self-examination to help them in conducting breast self-examination regularly and to help in the early diagnosis if they notice any changes in their breast. Therefore, this study aimed to evaluate the attitudes and the level of awareness of women in Saudi Arabia regarding breast self-examination and breast cancer.

MATERIALS AND METHODS

This is a retrospective research that was conducted to examine the awareness of females in Saudi Arabia regarding breast self-examination in addition to their knowledge regarding breast cancer.

This study was conducted using a survey that was adapted from previously published studies conducted in Jordan and Northeast Nigeria.[13,14] The survey was translated into Arabic to help the public in its completion, and after that, the survey was modified to be applicable in Saudi Arabia.

The questionnaire was validated both by content validation and by face validation, and after that, the survey was prepared online using Google forms.

The questionnaire involved 14 questions and included four sections: The personal data of the respondent, the respondent's knowledge of breast cancer and BSE, the participants' attitude toward risk factors for breast cancer, and their present practice for breast cancer screening and BSE.

Data collection took place between February and March 2020. All responses of participants were confidential in compliance with the Saudi Ministry of Health Institutional Review Board Committee. Furthermore, the participation of the females in this study was voluntary.

Excel software was used to collect and analyze the data, and after that, the descriptive data were represented by percentages and numbers.

RESULTS

Out of 508 participants, there were 328 in the age level of 10–19 (64.57%). The age of the participant is shown in Table 1.

Most of the respondents were single (87.60 %) and only 9.45 % were employees. Demographic data are shown in Table 2.

Table 1: Age of the participants

Age	Number	Percentage
10–19	328	64.57
20–29	150	29.53
30–39	25	4.92
More than 40	5	0.98

Table 2: Demographic data

Variable	Category	Number	Percentage
Marital status	Single	445	87.60
	Married	47	9.25
	Divorced	14	2.76
	Widowed	2	0.39
Educational status	Bachelor degree	146	28.74
	High school	281	55.31
	Less than high school	66	12.99
	Postgraduate degree	13	2.56
	Uneducated	2	0.39
Occupation	Employed	48	9.45
	Unemployed	47	9.25
	Student	413	81.30

About 95% of the respondents said that they are aware of breast cancer, mainly by social media (53.62%). Table 3 shows breast cancer awareness of the respondents.

Many of the participants reported that the main risk factor of breast cancer was family history (50.98%) followed by radiation exposure (35.04%). Change in the shape or size of the breast is the most common symptom of breast cancer (66.93%). Table 4 shows the respondents' scientific background on breast cancer.

Regarding the knowledge of breast self-examination, 62.2% stated that they heard about the self-examination but did not practice it. Table 5 shows the knowledge of breast self-examination.

About 95.28% agreed that early detection of breast cancer increases the chance of recovery, and 76.18% agreed that female more than 20 years should practice BSE regularly. Table 6 shows the attitude toward breast self-examination.

DISCUSSION

About 95% of the respondents said that they are aware of breast cancer, mainly by social media (53.62%) followed by medical staff (18.84%). On the other hand, Ewaid *et al*. reported that the main source of breast cancer information

was TV and radio.[15] Dundar *et al*. reported that the main source of breast cancer information was health-care professionals.[16] Ibnawadh *et al*. stated that social media were the most reported source of BSE information (50.14%).[17]

The majority of the participants in this study described the main risk factor of breast cancer as family history (50.98%) followed by radiation exposure (35.04%) and no breastfeeding (34.84%). However, Suleiman AK reported that the main risk factor of breast cancer is a medical condition, followed by old age, lack of breastfeeding, and heredity.[13]

Table 3: Breast cancer awareness

Variable	Category	Number	Percentage
Are you aware	Yes	483	95.08
	No	25	4.92
Source of breast cancer information (*n*=483)*	Social media	259	53.62
	Family and friend	64	13.25
	Medical staff	91	18.84
	Television	38	7.87
	Others	83	17.18

*This question answered by 483 respondents, but in this question, the respondents can choose more than one answer, so the sum of percentages more than 100%.

Godfrey *et al*. reported that the main risk factors for breast cancer were family history followed by cigarette smoking, a low-fat diet, and the use of oral contraceptives.[18] Elsayed and Mohammed reported that early menarche, followed by late menopause, radiation exposure, and family history are the main risk factors of breast cancer.[19]

The most common symptoms of breast cancer, as reported by the participants, were change in the shape or size of the breast (66.93%) followed by breast lump (56.30%) and nipple secretions (52.76%). Godfrey *et al*. reported that the main signs and symptoms of breast cancer are nipple discharge followed by a change in breast shape or size and painless breast lump.[18] Elsayed and Mohammed stated that the main symptom of breast cancer is a change in breast size or shape followed by breast lumps, nipple secretions, and nipple changes.[19]

Regarding the knowledge of breast self-examination, 62.2% stated that they heard about the self-examination but did not practice it, and only 23.62% heard about BSE and practicing it. Dundar *et al*. reported that only 56.1% of the women had enough knowledge of breast cancer.[16]

Ewaid *et al*. reported that the knowledge of women about breast cancer was poor, and the BSE practice was very low and that only 25.4% of the students practiced BSE.[15] Alwan *et al*. reported that only 48.3% of the females practiced BSE.[20] Zavare *et al*. reported that Iranian women's

Table 4: The scientific background of breast cancer

Variable	Category	Number	Percentage
Risk factors of breast cancer.	Family history	259	50.98
	Brassieres use	127	25.00
	First child at the late age	71	13.98
	Medical condition	126	24.80
	Diet	122	24.02
	Anxiety and stress	74	14.57
	Radiation exposure	178	35.04
	Consumption of oral contraceptive	97	19.09
	No breastfeeding	177	34.84
	Advanced age	92	18.11
	Late menopause	63	12.40
	Excessive breastfeeding	27	5.31
	Do not know	97	19.09
Symptoms of breast cancer	Changes in nipple	263	51.77
	Nipple secretions	268	52.76
	Breast lump	286	56.30
	Itching in the breast	99	19.49
	Change in the shape or size of the breast	340	66.93
	Breast pain and soreness	240	47.24
	Do not know	53	10.43

Table 5: Knowledge of breast self-examination

Variable	Category	Number	Percentage
Knowledge of breast self-examination (BSE)	Never heard of BSE	72	14.17
	Heard about BSE but without BSE practice	316	62.20
	Heard of BSE and practicing it	120	23.62
Why not practice BSE (*n*=316)	Too busy	197	62.34
	Not needed	75	23.73
	Inconvenient	44	13.92
	Others	0	0
Purpose of BSE practice (*n*=120)	Advice from a health care professional	13	10.83
	Noticed a breast lump	11	9.17
	Routine examination	61	50.83
	One of my relatives had cancer	8	6.67
	Medical reason	27	22.50

Table 6: Attitude toward breast self-examination

Variable	Category	Number	Percentage
Early detection of breast cancer increases the chance of recovery	Agree	484	95.28
	Disagree	3	0.59
	Neutral	21	4.13
Female more than 20 years should practice BSE frequently	Agree	387	76.18
	Disagree	33	6.50
	Neutral	88	17.32
Female must be educated about BSE	Agree	491	96.65
	Disagree	8	1.57
	Neutral	9	1.77

knowledge regarding breast cancer and the practice of BSE is inadequate.[21] Suleiman Ak said that 34.9% of women were aware of BSE, but only 11% had performed it.[13] In addition, Jahan *et al*. reported that 69.7% of the women had never heard of BSE, and 18.7% reported that they practice BSE.[22] Ahmed *et al*. said that although 71.4% of the women knew what BSE was, only 33.1% had performed it.[23] Dadzi *et al*. stated that 64.9% of the females had good or sufficient knowledge of breast cancer, and only 37.6% practice BSE.[24]

Among the females who heard about BSE but did not practice it, the main reason for not practicing was that they were too busy (62.34%), and about 23.73% said that the BSE is not needed. Alwan *et al*. stated that the most common reason for not doing BSE was a lack of knowledge of how to perform the technique correctly.[20]

Regarding the purpose of BSE practicing, 50.83% stated that they conduct the BSE as a routine examination and 22.50% said that the purpose of practicing was due to medical reason.

In general, the participants showed a positive attitude toward breast self-examination. About 95.28% agreed that early detection of breast cancer increases the chance of recovery, 76.18% agreed that female more than 20 years should practice BSE regularly and 96.65% said that female must be educated about BSE.

CONCLUSION

This study showed that there is a good level of breast cancer awareness. However, BSE was not an adequate practice which is the main factor that contributes to limit the level of morbidity and mortality of breast cancer. Social media were the main source of information regarding breast cancer. For that, it must be effectively employed in teaching women the best way of BSE, especially for housewives who do not reach campaigns and awareness activities.

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REFERENCES

1. Breast Cancer: Prevention and Control. World Health Organization; 2020. Available from: https://www.who.int/cancer/detection/breastcancer/en. [Last accessed on 2020 Aug 16].
2. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2020. CA A Cancer J Clin 2020;70:7-30.
3. Fouladi N, Amani F, Sharghi A, Nayebyazdi N. Five year survival of women with breast cancer in Ardabil, North-West of Iran. Asian Pac J Cancer Prev 2011;12:1799-801.
4. Rastad H, Khanjani N, Khandani BK. Causes of delay in seeking treatment in patients with breast cancer in Iran: A qualitative content analysis study. Asian Pac J Cancer Prev 2012;13:4511-5.
5. World Health Organization. Strategy for Cancer Prevention and Control in the Eastern Mediterranean Region 2009-2013; 2020. Available from: https://www.apps.who.int/iris/handle/10665/116672?locale=en&mode=full. [Last accessed on 2020 Aug 16].
6. ACS Breast Cancer Early Detection Recommendations; 2020. Available from: https://www.cancer.org/cancer/breast-cancer/screening-tests-and-early-detection/american-cancer-society-recommendations-for-the-early-detection-of-breast-cancer.html. [Last accessed on 2020 Aug 16].
7. Okobia MN, Bunker CH, Okonofua FE, Osime U. Knowledge, attitude and practice of Nigerian women towards breast cancer: A cross-sectional study. World J Surg Oncol 2006;4:11.
8. Gwarzo UM, Sabitu K, Idris SH. Knowledge and practice of breast self-examination among female undergraduate students of Ahmadu Bello university Zaria, Northwestern Nigeria. Ann Afr Med 2009;8:55-8.
9. Gupta SK. Impact of a health education intervention program regarding breast self-examination by women in a semi-urban area of Madhya Pradesh, India. Asian Pac J Cancer Prev 2009;10:1113-7.
10. Yadav P, Jaroli DP. Breast cancer: Awareness and risk factors in college going younger age group women in Rajasthan. Asian Pac J Cancer Prev 2010;11:319-22.
11. Abdel Hadi MS. Breast cancer awareness among health professionals. Ann Saudi Med 2000;20:135-6.
12. Milaat WA. Knowledge of secondary-school female students on breast cancer and breast self-examination in Jeddah, Saudi Arabia. East Mediterr Health J 2000;6:338-44.
13. Suleiman AK. Awareness and attitudes regarding breast cancer and breast self-examination among female Jordanian students. J Basic Clin Pharm 2014;5:74-8.
14. 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;2:148.
15. Ewaid SH, Shanjar AM, Mahdi RH. Knowledge and practice of breast self-examination among sample of women in Shatra/Dhi-Qar/Iraq. Alex Med J 2018;54:315-7.
16. Dündar PE, Ozmen D, Oztürk B, Haspolat G, Akyildiz F, Coban S, *et al*. The knowledge and attitudes of breast self-examination and mammography in a group of women in a rural area in Western Turkey. BMC Cancer 2006;6:43.
17. Ibnawadh SK, Alawad MA, Alharbi SS, Alduawihi NA, Alkowiter FS, Alsalhy AE, *et al*. Knowledge, attitude and practice of breast self-examination among females in medical and non-medical colleges in Qassim university. J Health Spec 2017;5:219.
18. 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;31:129-34.
19. Elsayed AA, Mohammed HH. Prevention of breast cancer: Effects of early education on knowledge and practice of university students in Saudi Arabia. IOSR JNHS 2019;8:1-9.
20. Alwan NA, Al Attar WM, Eliessa RA, Madfaic ZA, Tawfeeq FN. Knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population in Iraq. East Mediterr Health J 2012;18:337-45.
21. Akhtari-Zavare M, Ghanbari-Baghestan A, Latiff LA, Matinnia N, Hoseini M. Knowledge of breast cancer and breast self-examination practice among Iranian women in Hamedan, Iran. Asian Pac J Cancer Prev 2014;15:6531-4.
22. Jahan S, Al-Saigul AM, Abdelgadir MH. Knowledge, attitudes and practices of breast self-examination among women in Qassim region of Saudi Arabia. Saudi Med J 2006;27:1737-41.
23. Ahmed A, Zahid I, Ladiwala ZF, Sheikh R, Memon AS. Breast self-examination awareness and practices in young women in developing countries: A survey of female students in Karachi, Pakistan. J Educ Health Promot 2018;7:90.
24. Dadzi R, Adam A. Assessment of knowledge and practice of breast self-examination among reproductive age women in Akatsi South district of Volta region of Ghana. PLoS One 2019;14:e0226925.

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