JOURNAL OF THE BEST AVAILABLE EVIDENCE IN MEDICINE

https://doi.org/10.63720/brgg8q0o

Breast Cancer Knowledge and Practice Among Women Attending Health Centres During Breast Cancer Awareness Campaign

Amina Muftah Elsaid[1*], Othman Hammad Tajoury, [2] and Jamal Alsharef [3]

Abstract

Background: Breast cancer is a leading cause of morbidity and mortality among women globally, with late-stage diagnosis being particularly prevalent in low- and middle-income countries such as Libya. Despite ongoing health education and recurrent awareness campaigns, there remains a gap between knowledge of breast cancer and actual screening practices among Libyan women. This study aimed to evaluate the level of knowledge and screening practices related to breast cancer among women attending healthcare centers in Benghazi, Libya, during Breast Cancer Awareness month, October 2022.

Patients and Methods: A descriptive cross-sectional study was conducted using a self-administered questionnaire to 262 women aged 20–75 years. Participants were recruited from eight healthcare centers during October 2022. Ethical approval was obtained from the Libyan International University Research Ethics Committee.

Results: The majority of participants demonstrated good knowledge of breast cancer (82.8%) and its screening methods, including breast self-examination (BSE: 73.3%), clinical breast examination (CBE: 74.4%), and mammography (60.3%). However, only 32% exhibited adequate screening practices: 26% practice BSE, 39.7% underwent CBE, and 30.5% have had mammography. Marital status and age significantly influenced both knowledge and practice levels.

Conclusion: While awareness of breast cancer and early detection methods are high among Libyan women participating in awareness campaigns, significant gaps persist in translating this knowledge into practice. Targeted interventions are urgently needed to improve screening uptake and reduce late-stage diagnoses.

Key Words: Breast, Cancer, Screening, Awareness, Knowledge, Self-Examination

Received: 01/03/2025

OPEN ACCESS

Accepted: 24/03/2025

Published online: 26/04/2025

1 Department of Community Medicine, Program of Medicine, Faculty of Health and Medical Science, Libyan International University, Benghazi, Libya
2 Department of Surgery, Program of Medicine, Faculty of Health and Medical Science, Libyan International University, Benghazi, Libya
3 Department of Surgery, Faculty of Medicine, University of Ajdabiya, Libya

***Corresponding Author:**

elsaidamina33@gmail.com

Introduction

Breast cancer is the most frequently diagnosed cancer globally in women and a leading cause of cancer-related deaths among them, particularly in low- and middle-income countries (LMICs).[1,2] In Libya, breast cancer accounts for over 25% of all females diagnosed with cancer, and tumors are often presented at advanced stages due to delayed diagnosis.[3-5] Early detection through methods such as breast self-examination (BSE), clinical breast examination (CBE), and mammography can significantly improve survival rates.[6,7] However, studies indicate that despite awareness campaigns, screening uptake remains low in Libya, attributed to gaps in knowledge, cultural barriers, and fragmented healthcare systems.[8-10]

The problem addressed by this study is the persistent gap between breast cancer awareness and actual screening practices among Libyan women, even during Breast Cancer Awareness Month - a critical period for promoting early detection. Understanding the factors contributing to this gap is essential for designing effective educational campaigns and improving health outcomes.[11,12] This study aims to assess the level of knowledge and screening practices related to breast cancer among women attending healthcare centers in Benghazi, Libya, during Breast Cancer Awareness Month.[8,13] By identifying barriers to screening and evaluating current awareness levels, this research seeks to inform targeted interventions that promote early detection and reduce late-stage diagnoses.[5,14]

Materials and Methods

A descriptive cross-sectional study was conducted among 262 women aged 20–75 years who attended eight healthcare centers in Benghazi, Libya, during October, 2022. Ethical approval was obtained from the Libyan International University Research Ethics Committee. Written informed consent was obtained from all participants before data collection.

Study Population and Sampling: Women attending healthcare centers for breast cancer awareness activities were recruited. Participants were included if they were aged 20 years or older and willing to participate. Women who declined participation were excluded.

Data Collection Tool: A structured, self-administered questionnaire was used to collect data. The questionnaire consisted of three sections: (a) socio-demographic characteristics (age, education level, marital status, and history of breast cancer); (b) knowledge about breast cancer, its symptoms, and screening methods; and (c) practices related to early detection methods (BSE, CBE, and mammography). A copy of the survey is available on request.

Scoring System: Knowledge questions were scored out of 5 points, with ≥3 considered "good" knowledge. Practice questions were scored out of 3 points, with ≥2 considered "good" practice.

Data Analysis: Statistical analysis was performed using IBM SPSS Statistics, Version 23, 2021. Descriptive statistics were used to summarize sociodemographic characteristics, knowledge, and practice levels. Inferential statistics, including chi-square tests, were conducted to identify associations between demographic variables and knowledge/practice scores. A p-value less than 0.05 was accepted to confer statistical significance.

Results

The mean age of the 262 participants was 47.2 ± 10.2 years, with most participants aged 41–50 years (38.5%). 35.5% had university-level education, 71.4% were married, and 24.8% reported a family history of breast cancer (Table 1).

Table 1: Sociodemographic Profile of Study Participants

Variable		Frequency	%
Age Group			
	20-30	16	6.1
	31-40	51	19.5
	41-50	101	38.5
	51-60	69	26.3
Education Level			
	Primary School	55	21
	Secondary School	29	11.1
	College	50	19.1
	Diploma	35	13.4
	University	93	35.5
Job			
	Housewife	115	43.9
	Student	4	1.5
	Medical	59	22.5
	Non – Medical	84	32.1
Marital Status			
	Single	39	14.8
	Married	187	71.4
	Widow	23	8.8
	Divorced	13	5

Regarding knowledge, 95.4% of participants had prior awareness of breast cancer, and 64.5% recognized its signs and symptoms. Awareness of screening methods was reported for BSE (73.3%), CBE (74.4%), and mammography (60.3%) (Table 2). Overall, 82.8% demonstrated good knowledge of breast cancer (Table 3).

In terms of practices, only 26% performed BSE, 39.7% underwent CBE, and 30.5% had mammography (Table 4). Overall, 32% exhibited adequate screening practices. Marital status and age were significantly associated with both knowledge and practice levels ($p < 0.05$) (Table 3).

Table 2: Awareness of Breast Cancer and Screening Methods Among Patients

Question	Yes		No	
	Frequency	%	Frequency	%
Have you heard of breast cancer?	250	95.4	12	4.6
Do you know the signs and symptoms of breast cancer?	169	64.5	93	35.5
Do you know about breast self-examination (BSE)?	192	73.3	70	26.7
Do you know about clinical breast examination (CBE)?	195	74.4	67	25.6
Do you know about mammograms?	158	60.3	104	39.7

Table 3: Breast Cancer Knowledge and Screening Practice Scores

		Frequency	%
Knowledge			
	Poor	45	17.2
	Good	217	82.8
Practice			
	Poor	180	68.7
	Good	82	31.3
	Total	262	100

Table 4: Breast Cancer Screening Practices Among Participants

Question	Yes		No	
	Frequency	%	Frequency	%
Do you practice BSE?	68	26	194	74
Have you received CBE?	104	39.7	158	60.3
Have you received a mammogram?	80	30.5	182	69.5

Discussion

This study highlights the gap between breast cancer awareness and screening practices among women in Benghazi, Libya, during Breast Cancer Awareness Month in 2022. While the majority of participants demonstrated good knowledge of breast cancer and its screening methods, only a minority translated this knowledge into practice. These findings align with previous studies in Benghazi and Derna, which also reported high awareness but low screening uptake.[5,8]

The persistence of this knowledge-practice gap underscores the need for targeted interventions.[9] Factors such as cultural barriers, lack of access to healthcare resources, and insufficient emphasis on practical guidance during awareness campaigns may contribute to this issue.[10,11] Older women and those who were married were more likely to engage in screening practices, suggesting that tailored strategies focusing on younger and unmarried women could be beneficial.[11]

Comparisons with studies from other regions revealed disparities in awareness and practices. For example, higher screening uptake has been reported in Saudi Arabia and India, highlighting the importance of context-specific interventions.[11,15] Structured educational programs that emphasize practical skills, such as how to perform BSE and navigate healthcare systems, could bridge this gap.[9]

This study provides valuable insights into the challenges faced by Libyan women in adopting early detection practices. However, limitations include the use of a convenience sample, which may limit generalizability, and the reliance on self-reported data, which could introduce bias. Future research should explore longitudinal trends and evaluate the impact of targeted interventions on screening uptake. In conclusion, while awareness campaigns have succeeded in educating women about breast cancer, greater effort is needed to translate this knowledge into action. Ongoing evaluations of these programs are critical to ensure their effectiveness in improving early detection and reducing breast cancer morbidity.

Acknowledgements

We would like to express our gratitude to the managers and staff of the participating clinics for their invaluable assistance in this study. The authors acknowledge the use of artificial intelligence (AI) tools for providing linguistic support and assisting in refining the structure, clarity, and flow of the manuscript.

Disclosure Statement

The authors have no conflicts of interests to declare.

References

1. Ferlay J, Soerjomataram I, Dikshit R, Eser S, et al. Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. Int J Cancer. 2015;136(5):E359-86. doi: 10.1002/i-jc.29210.
2. Bray F, McCarron P, Parkin DM. The changing global patterns of female breast cancer incidence and mortality. Breast Cancer Res. 2004;6:229-239. doi: 10.1186/bcr932.
3. Bodalal Z, Azzuz R, Bendardaf R. Cancers in Eastern Libya: first results from Benghazi Medical Center. World J Gastroenterol.2014;20(20):6293-301. doi: 10.3748/wjg.v20.i20.6293.
4. El Mistiri M, Verdecchia A, Rashid I, et al. Cancer incidence in eastern Libya: the first report from the Benghazi Cancer Registry, 2003. Int J Cancer. 2007;120(2):392-397. doi: 10.1002/ijc.22273.
5. Ermiah E, Abdalla F, Buhmeida A, et al. Diagnosis delay in Libyan female breast cancer. BMC Res Notes. 2012;5:452. doi: 10.1186/1756-0500-5-452.
6. Black E, Richmond R. Improving early detection of breast cancer in sub-Saharan Africa: why mammography may not be the way forward. Global Health. 2019;15:3. doi: 10.1186/s12992-018-0446-6.
7. Rahimzadeh M, Baghestani AR, Gohari MR, et al. Estimation of the cure rate in Iranian breast cancer patients. Asian Pac J Cancer Prev. 2014;15:4839-4842. doi: 10.7314/apjcp.2014.15.12.4839.
8. Elzahaf RA, Mekraz EI, Arhaim SM, et al. Knowledge, attitude, and practice regarding breast cancer among female students at college of medical technology/Derna. 2018;2(4):142-146. doi: 10.4103/L-JMS.LJMS_21_18.
9. Cohen M, Azaiza F. Increasing breast examinations among Arab women using a tailored culture-based intervention. Behavioral Medicine. 2010;36(3):92-99. doi: 10.1080/08964280903521313.
10. Baloushah S, Salisu WJ, Elsous A, et al. Practice and Barriers toward Breast Self-Examination among Palestinian Women in Gaza City, Palestine. Scientific World Journal. 2020;2020:7484631. doi: 10.1155/2020/7484631.
11. Pal A, Taneja N, Malhotra N, et al. Knowledge, attitude, and practice towards breast cancer and its screening among women in India. J Cancer Res Ther. 2017;17(6):1314-1321. doi: 10.4103/jcrt.-JCRT_922_20.
12. Solikhah S, Promthet S, Hurst C. Awareness Level about Breast Cancer Risk Factors, Barriers, Attitude and Breast Cancer Screening among Indonesian Women. Asian Pac J Cancer Prev. 2019;20(3):877-884. doi: 10.31557/APJCP.2019.20.3.877.
13. Erashdi M, Al-Ani A, Mansour A, et al. Libyan cancer patients at King Hussein Cancer Center for more than a decade, the current situation, and a future vision. Front Oncol. 2023;12:1025757. doi: 10.3389/fonc.2022.1025757.
14. K M, Kaphle HP. Breast self-examination: Knowledge, practice and associated factors among 20 to 49 years aged women in Butwal sub-metropolitan, Rupandehi, Nepal. PLoS One. 2023;18(6):e0286676. doi: 10.1371/journal.pone.0286676.
15. Heena H, Durrani S, Riaz M, et al. Knowledge, attitudes, and practices related to breast cancer screening among female health care professionals: a cross sectional study. BMC Womens Health. 2019;19:122. doi: 10.1186/s12905-019-0819-x.