Original Article

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Attitudes and practices related to breast-cancer screening among female doctors in the province of Babylon

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ABSTRACT

Background: Breast cancer is the most common cancer and the leading cause of cancer-related deaths among Iraqi women. Lack of early detection and inadequate diagnostic and treatment facilities contribute to low survival rates in less developed countries such as Iraq. The WHO states that early screening and proper treatment can significantly reduce breast cancer mortality. **Aim**: This study aimed to assess the attitudes and practices related to breast-cancer screening among female doctors in the province of Babylon. **Methods**: A descriptive cross-sectional method was used to survey 175 female doctors in Babylon from April to July 2021, using an adapted questionnaire. The questionnaire included three parts: socio-demographic data, a 15-question section on attitudes, and a 7-question section on practices regarding breast self-examination. The sample was randomly selected from a total of 734 female doctors in the province. **Results**: In this study of 175 female doctors in Babylon, most of the women studied were around 29 years (67%) old with a bachelor's degree, and 50% were married. Attitudes towards breast self-examination were mostly average (94%), but practice was generally poor (55%) or average (36%), with only 9% rated as good. A minority had a family history of breast cancer (17% second-degree, 7% first-degree relatives). **Conclusions**: This is the first research study on Iraqi female physicians' attitudes and practices related to breast-cancer screening. This study has found that most female physicians had an average attitude and poor practice vis-a-vis self-screening for breast cancer. Based on the findings, the study has suggested improving breast-cancer screening practices among female doctors, and further research on female practitioners in the medical field.

Keywords: attitude, practice, breast cancer, screening, female doctors, Babylon province

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INTRODUCTION

Breast cancer significantly impacts women's health worldwide, emerging as the most prevalent malignancy among women.[1] As the second leading cause of cancer-related deaths after lung cancer, breast cancer accounts for about 23% of all female cancers.[2] In 2018, over two million new cases were diagnosed worldwide, making up 11.6% of all cancer cases. Predominantly, the disease affects postmenopausal women in high-income countries, wherein roughly 75% of cases are diagnosed. However, a smaller yet significant portion (5–7%) is constituted by affected women under 40.[3] The incidence rates differ between developed and developing countries. Developed countries generally have a higher incidence, exceeding 80 cases per 100,000 women,

compared to fewer than 40 per 100,000 in the developing world. Survival rates also vary drastically. While North America, Sweden, and Japan boast of over 80% survival rates, middle-income countries report around 60%, and low-income regions have rates below 40%.[4] The disparities in survival rates are primarily attributed to lack of awareness, late-stage diagnosis, and insufficient medical facilities in less developed countries. Moreover, early detection and effective treatment play a crucial role in enhancing survival rates.[5] In the Eastern Mediterranean Region (EMR), cancer ranks as the fourth leading cause of death after cardiovascular diseases, infectious diseases, and injuries (6). Breast cancer tops the list of most common cancers among women in the region, contributing to nearly 99,000 cases. The disease tends to affect middle-aged women more frequently and is often diagnosed at the advanced stages.[6] Breast cancer has become a serious cause of concern in Iraq. According to a study by Alwan, 19.8% of 721 women who presented with palpable breast masses in a screening center in Iraq were diagnosed with breast cancer. Despite detecting the lumps themselves, only 32% sought medical advice within a month, and 16% took a year to consult a physician.[7] In terms of mortality, breast cancer is the second leading cause of cancer-related deaths among women, accounting for 15% of all cancer-related deaths, followed by lung cancer at 26%.[8,9] The incidence of breast cancer is rising in developing countries: a trend attributed to increased urbanization, longer life expectancy, and adoption of Western lifestyles.[10,11] In Iraq, breast cancer accounts for roughly one-third of all registered female cancer cases and nearly a quarter of cancer-related female deaths. Over the past two decades, there has been a notable increase in the incidence rates of breast cancer, making it a significant threat to women's health in Iraq.[12] This study aimed to assess the attitudes and practices related to breast-cancer screening among female doctors in the province of Babylon.

MATERIALS AND METHODS

This descriptive cross-sectional study was conducted on female doctors in the province of Babylon, Iraq, from April 1st to July 1st, 2021. The study aimed to explore the attitudes and practices of these professionals regarding breast self-examination. A total of 175 doctors were randomly selected from the 734 female doctors working in both the central and peripheral hospitals as well as the primary health centers in the province. Data were collected through direct interviews and Google forms, with each session taking approximately 15-20 minutes. The response rate was 50%. The study employed a pre-designed, self-administered questionnaire adapted from previous research[1]: the data collected by a Diploma in Family Medicine student. The questionnaire was divided into three parts: the first part collected socio-demographic data, such as age, experience, education levels, specialization, marital status, and history of breast cancer. The second part consisted of 15 questions on attitudes towards breast self-examination, rated on a 5-point scale ranging from "strongly disagree" to "strongly agree". The third part assessed practices concerning breast self-examination through a 7-question observational checklist. Practices were categorized as "good" if the score was greater than 75%, "average" if the score ranged between 50-75%, and "poor" if it was less than 50%. The inclusion criteria for the study comprised all female doctors serving in Babylon province, with no exclusion criteria. A pilot study was initially conducted on approximately 15 doctors to assess the clarity of the questions in the questionnaire; this took around 3 days for data collection. Some questions were subsequently modified, based on the feedback received. One limitation of this study was the impact of the COVID-19 pandemic, which limited the sample size and forced the researchers to collect data online due to curfews and other pandemic-related restrictions. Statistical analysis was carried out using SPSS version 20.0. Descriptive statistics were employed to summarize the characteristics of the study subjects, such as frequency, percentages, mean, and standard deviation. Chi-square tests were used to assess associations between categorical variables, with a p-value of 0.05 or less being considered significant.

RESULTS

In this cross-sectional study of 175 female doctors, the following demographics were noted: age of 29±5 years; education with 63% bachelors, 22% board, 15% diploma; 50% married and 50% single. With regard to history of breast cancer, 77% had no history of breast cancer, 17% had second-degree relative history of breast cancer, 7% had first-degree relative history of breast cancer. The age group division was as follows: 76% ≤30 years and 24% above 30 years of age. Their experience was as follows: 90% ≤ 10 years and 10% with more than 10 years of experience. The age of marriage was as follows: 58% at less than 25 years of age, 40% between 25 to 35 years of

age, and 2% at over 35 years of age. Attitude response was recorded thus: 94% average, 3% good, and 3% poor. On the other hand, practice response was as follows: 55% poor, 36% average, and 9% good. The aforementioned findings are shown in Table 1.

According to Table 2, there is no significant association between attitude and the following factors: education, marital state, history of breast cancer, age of females, experience, and age of marriage.

According to Table 3, there exists significant association between practice of female doctors with regard to themselves and the following factors: history of breast cancer, age of females, experience, age of marriage. A total of 76.9% of female doctors demonstrated poor to average practice and had no previous history of breast cancer. Further, 79.4% showed poor to average practice, with age <30 years. Again, 94.4% had poor to average practice with experience of ≤10 years. Finally, 30.6% of female doctors had poor to average practice and had been married at 25 years and below. There was no significant association between the practice of female doctors vis-a-vis themselves and their education and marital status.

Table 1: Distribution of the studied doctors according to selected variables (n=175)

Variables		Frequency	%
Education	Bachelor Board Diploma	110 39 26	62.9 22.3 14.9
Marital status	Married Single	88 87	50.3 49.7
History of breast cancer	First-degree relative No history of breast cancer Second-degree relative	12 134 29	6.9 76.6 16.6
Age	≤ 30 years > 30 years	133 42	76.0 24.0
Experience	≤ 10 years > 10 years	158 17	90.3 9.7
Age of marriage	<25 years 25-35 years >35 years	51 35 2	58.0 39.8 2.3
Attitude	poor to average good	169 6	96.6 3.4
Practice	poor to average good	160 15	91.4 8.6

Table 2: Association between attitudes towards breast self-examination and the following factors: education, marital status, history of breast cancer, age, experience, and age of marriage

Variables	Attitude		P-value
	Poor to average	Good	
Education			
Bachelor	106 (62.7%)	4 (66.7%)	0.94
Board	38 (22.5%)	1 (16.7%)	
Diploma	25 (14.8%)	1 (16.7%)	
Marital status			
Married	84 (49.7%)	4 (66.7%)	0.68
Single	85 (50.3%)	2 (33.3%)	
History of breast cancer			
First-degree relative	12 (7.1%)	0 (0.0%)	0.46
No history	130 (76.9%)	4 (66.7%)	
Second-degree relative	27 (16.0%)	2 (33.3%)	
Age			
≤ 30 years	128 (75.7%)	5 (83.3%)	1.000
> 30 years	41 (24.3%)	1 (16.7%)	
Experience			
≤ 10 years	152 (89.9%)	6 (100.0%)	1.000
> 10 years	17 (10.1%)	0 (0.0%)	
Age of marriage			
<25 years	48 (28.4%)	3 (50%)	0.77
25-35 years	34 (20.4%)	1 (16.7%)	
>35 years	2 (1.2%)	0 (0.0%)	
Not married	85 (51%)	2 (33.3%)	
Total (%)	169 (100.0%)	6 (100.0%)	

P-value ≤0.05 (significant)

Table 3: Association between attitudes towards breast self-examination and the following factors: education, marital status, history of breast cancer, age, experience, and age of marriage

Variables	Practice		P-value
	Poor to average	Good	
Education			
Bachelor	103 (64.4%)	7 (46.7%)	0.31
Board	35 (21.9%)	4 (26.7%)	
Diploma	22 (13.8%)	4 (26.7%)	
Marital status			
Married	80 (50.0%)	8 (53.3%)	1.000
Single	80 (50.0%)	7 (46.7%)	
History of breast cancer	9 (5.6%)	3 (20.0%)	0.05
First-degree relative	123 (76.9%)	11 (73.3%)	
No history	28 (17.5%)	1 (6.7%)	
Second-degree relative			
Age			
≤ 30 years	127 (79.4%)	6 (40.0%)	0.002
>30 years	33 (20.6%)	9 (60.0%)	
Experience			
≤10 years	151 (94.4%)	7 (46.7%)	0.0001
> 10 years	9 (5.6%)	8 (53.3%)	
Age of marriage			
<25 years	49 (30.6%)	2 (13.3%)	0.033
25-35 years	30 (18.75%)	5 (33.3%)	
>35 years	1 (1.25%)	1 (6.7%)	
Not married	80 (50%)	7 (46.7%)	
Total (%)	160 (100.0%)	15 (100.0%)	

P-value ≤0.05 (significant)

DISCUSSION

This study examined the knowledge, attitudes, and practices concerning breast-cancer screening among 175 female doctors in Babylon province, Iraq. Such focus on healthcare professionals is vital, as their role in health education can significantly impact societal health outcomes. This study is particularly relevant, given that breast cancer incidence has been rising in the Middle East, often diagnosed at later stages compared to Western countries. The mean age of participants was 29 ± 5 years, similar to studies in Saudi Arabia [1,3] and Turkey.[13] The marital status was balanced, with 50% married, comparable to other studies.[14,15] Educational qualifications were predominantly bachelor's degrees (63%), mirroring previous research.[14] Family history of breast cancer was present in 24% of participants, aligning it with other studies.[16-18] The attitude towards breast-cancer screening was mostly average (94%), differing from more varied attitudes in other studies.[1,19,20] The attitude towards breast-cancer screening may be different in this study, compared to others, due to low sample size. The study found that 55% of participants had poor practice, 36% average, and 9% good, similar to other Middle-Eastern studies but worse than some Western data.[21-23] Significant associations were found between practice and various factors, including history of breast cancer, age, experience, and age at marriage. This has been corroborated by studies from Nigeria [24] and Jordan,[25] which found that higher age, experience, and a family history of breast cancer were associated with better breast-cancer screening practices. Another Iranian study[26] also found that education level and marital status were linked to better knowledge and practices regarding breast-cancer screening. This study was conducted during the COVID-19 pandemic; therefore, data collection was limited and the response rate was average due to the heavy workloads of doctors. Training programs about breast cancer and screening measures for its early detection should be conducted for the female doctors in the province of Babylon, to improve their knowledge, attitudes, and practices. The present study should be replicated on a larger sample, and across varied settings.

CONCLUSIONS

To the best of our knowledge, this is the first study to investigate the attitudes and practices of female doctors toward breast-cancer screening in Iraq. We anticipate that it will provide a baseline to monitor changes over time. Based on the results of the present study, it can be concluded that, the majority of female doctors have average attitudes and poor practices about screening of breast cancer with reference to themselves. As part of the recommendations based on the findings, we suggest improving breast-cancer screening practices among female doctors and further research studies on female medical practitioners.

REFERENCES

1. Abdel-Sattar, S. A. L., Ibrahim, H. A. F., & El, H. A. E. Knowledge, attitude and practices of working women in Tabuk University

regarding breast cancer. International Journal of Pharmaceutical Research and Allied Sciences, 2018, 7(3), 198–208.
2. Bray F., Ferlay J., Soerjomataram I., Siegel R.L., Torre L.A., & Jemal A. Global cancer statistics: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin. 2018; 68(6):394–424.
3. Heena, H., Durrani, S., Riaz, M., AlFayyad, I., Tabasim, R., Parvez, G., & Abu-Shaheen, A. Knowledge, attitudes, and practices related to breast-cancer screening among female health care professionals: A cross-sectional study. BMC Women's Health, 2019, 19(1), 122.
4. Al-Alwan, N. A., & Mualla, F. H. Promoting clinical breast examination as a screening tool for breast cancer in Iraq. Iraqi National Journal of Nursing Specialties, 2014, 27(1).
5. Ghoncheh, M., Pournamdar, Z., & Salehiniya, H. Incidence and mortality and epidemiology of breast cancer in the world. Asian Pacific Journal of Cancer Prevention: APJCP, 2016, 17(S3), pp.43–46.
6. World Health Organization. Towards a strategy for cancer control in the Eastern Mediterranean region (ed. 1). Cairo, Egypt, Regional Office for the Eastern Mediterranean. World Health Organization, 2010.
7. Alwan, N.A.S. Breast cancer: demographic characteristics and clinico-pathological presentation of patients in Iraq. EMHJ-Eastern Mediterranean Health Journal, 2010, 16 (11), 1159–1164, 2010.
8. Alwan, N. A., Tawfeeq, F. N., & Mallah, N. A. Demographic and clinical profiles of female patients diagnosed with breast cancer in Iraq. Journal of Contemporary Medical Sciences, 2019, 5(1), 14–19.
9. Mutar, M. T., Goyani, M. S., Had, A. M., & Mahmood, A. S. Pattern of presentation of patients with breast cancer in Iraq in 2018: A cross-sectional study. Journal of Global Oncology, 2019, 5, 1–6.
10. World Health Organization Cancer. 2018 https:// www.who.int/en/news-room/fact-sheets/detail/cancer/ September 12,
11. Fitzmaurice, C., Dicker, D., Pain, A., Hamavid, H., Moradi-Lakeh, M., MacIntyre, M.F., Allen, C., Hansen, G., Woodbrook, R., Wolfe, C., & Hamadeh, R.R. The global burden of cancer 2013. JAMA Oncology, 2.15, 1(4), pp.505–527.
12. Ghoncheh M., Mohammadian-Hafshejani A., Salehiniya H. Incidence and Mortality of Breast Cancer and their Relationship to Development in Asia. Asian Pac J Cancer Prev, 2015, 16, pp. 6081–
13. Akpınar, Y.Y., Baykan, Z., Naçar, M., Gün, İ. & Çetinkaya, F. Knowledge and attitude about breast cancer and practice of breast-cancer screening among female health care professionals: A study from Turkey. Asian Pac J Cancer Prev, 2011, 12(11), pp.3063–3068.
14. Saeedi, M.Y., Al Amri, F., Ibrahim, A.K., & Kassim, K. Knowledge, attitude and practice of breast-cancer screening among female general practitioners in Riyadh, Saudi Arabia. Cancer Res J, 2014, 2(6), pp.108–113.
15. Elshamy, K.F. & Shoma, A.M. Knowledge and practice of breast cancer screening among Egyptian nurses. African Journal of Hematology and Oncology, 2010, 1(4).
16. Nemenqani, D. M., Abdelmaqsoud, S. H., Al-Malki, A.-H. A., Oraija, A. A., & Al-Otaibi, E. M. Knowledge, attitude, and practice of breast self-examination and breast cancer among female medical students in Taif, Saudi Arabia. Open Journal of Preventive Medicine, 2014, 04, 69–77.
17. Abu-Shammala BI. & Abed Y. Breast cancer knowledge and screening behavior among female school teachers in Gaza city. Asian Pac J Cancer Prev. 2015; 16 (17):7707–11.
18. Al-Sharbatti, S.S., Shaikh, R.B., Mathew, E. & Al-Biate, M.A.S. Breast self-examination practice and breast cancer risk perception among female university students in Ajman. Asian Pacific Journal of Cancer Prevention, 2013, 14(8), pp.4919–4923.
19. Abolfotouh, M.A., BaniMustafa A.A., Mahfouz A.A., Al-Assiri M.H., Al-Juhani A.F., & Alaskar A.S. Using the health belief model to predict breast self-examination among Saudi women. BMC Public Health, 2015, 15: 1163. Published 2015, Nov 23. doi:10.1186/s12889-015-2510-y
20. Nde, F.P., Assob J.C., Kwenti T.E., Njunda A.L., & Tainenbe T.R. Knowledge, attitude and practice of breast self-examination among female undergraduate students in the University of Buea. BMC Res Notes. 2015, Feb 15; 8:43. doi: 10.1186/s13104-015-1004-4. PMID: 25889644; PMCID: PMC4414436.
21. Hasan, T.N., Shah, S.A., Hassan, M.R., Safian, N., Azhar, Z.I., Syed Abdul Rahim, S.S. & Ghazi, H.F. Poor knowledge and practice towards breast cancer among women in Baghdad City, Iraq. Asian Pacific Journal of Cancer Prevention, 2015, 16(15), pp.6669–6672.
22. Gilani, S.I., Khurram, M., Mazhar, T., Mir, S.T., Ali, S., Tariq, S. & Malik, A.Z. Knowledge, attitude and practice of a Pakistani female cohort towards breast cancer. JPMA. The Journal of the Pakistan Medical Association, 2010, 60(3), p.205.
23. Travasso C. Rural living in India is linked to lower risk of breast cancer, study finds. BMJ. 2014;349:g7685. Published 2014, Dec 15. doi:10.1136/bmj.g7685
24. Akhigbe, A.O. & Omuemu, V.O. Knowledge, attitudes and practice of breast-cancer screening among female health workers in a Nigerian urban city. BMC Cancer 9, 203 (2009). https://doi.org/10.1186/1471-2407-9-203
25. Bello T.O., Olugbenga-Bello A.I., Oguntola A.S., Adeoti M.L., & Ojemakinde O.M. Knowledge and practice of breast cancer screening among female nurses and lay women in Osogbo, Nigeria. West Afr J Med. 2011; 30(4):296–300.
26. Kotepui, M., Piwkham, D., Chupeerach, C. & Duangmano, S. Knowledge, attitudes and practice of breast cancer screening among female personnel of Walailak University. Health Expectations, 2015, 18, 3069–3078.