

Original article

Evaluation of the Level of Awareness and Knowledge of Self-Examination and Mammography Examination among a Group of Libyan Women in Misurata City

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ABSTRACT

Cancer is one of the significant public health problems in the world. Also, breast cancer is a malignant cell, which may start in the breast tissue. Breast self-examination (BSE) is a simple, non-invasive, and low-cost, to detect any changes in breast tissue at an early time. This study aims to assess the awareness and knowledge of BSE and mammography examination among females with different levels of education in city of Misurata-Libya. This study used validated questionnaire divided into two sections. The data collection was from December 2021 to May 2022. 550 questionnaires were distributed to adult volunteers who attending an out-patient clinic at a hospital clinic and/or students and teaching staff at Faculty of medical technology in Misurata. There was a high return rate with 460 (83.63%) returned in total. Statistical analyses were performed using the Statistical Package for the Social Sciences, version 24 (IBM, Armonk NY). Statistical significance was set at $p < 0.05$. The study showed that 14.8% of the participants practiced BSE practice as a monthly routine. However, the majority of respondents 251 (54.6%) in this study were rarely do the BSE practice. 92.17% of participants had very low knowledge about the mammography examination. The results of this study have demonstrated the extremely low level of awareness of breast mammography examination and performing BSE was particularly low among Misurata Libyan woman community.

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INTRODUCTION

Cancer is one of the significant public health problems in the world, and according to estimates from the World Health Organization (WHO) in 2019, cancer is the first or second leading cause of death before the age of 70 years in 112 of 183 countries, Breast cancer is the most common malignancy among women in both developed and developing countries, accounting for 2,261,419 new cases and 684,996 deaths worldwide, although breast cancer is less frequently in developing country than developed world, the mortality rate is higher in the developing countries [1]. In Libya, the exact number of cancer cases diagnosed each year is uncertain that is due to lack of complete cancer registry, the incidence estimated as 18.8 new cases per 100,000 women annually. Majority of patients were in advanced stage, which might lead to high mortality [2]. Several studies data have indicated that breast cancer in

Libyan women has taken the first rank among all types of female cancer, influencing more than 25% of all females to have cancer [3]. A previous studies stated that Libyan women are often younger than Europe women, in line with the manner common in the Middle East and North Africa (MENA) [2,4]. The breast cancer in Libya is one of the leading causes of death with an estimated age standardized mortality rate around 10.9 per 100000 [5]. Diagnosis delay of breast cancer is very serious problems in Libya. Diagnosis delay associated with complex interactions between social, medical and other patient-associated [5] factors leading to advanced stages, potentially resulting in a high mortality [6]. There is a need to improve breast cancer awareness and training of general practitioners to reduce breast cancer mortality by promoting early detection. In fact, that the early discovery of breast cancer is very important to avoid the risks of the cytotoxic agents, and will be better quality of life in order of offering successful treatment. Moreover, early detection breast changes by screening, that is offers a chance for curing since breast cancer diagnosed in advanced stages can spread to other organs and become uncontrolled [7]. Whereas, despite the advantages of screening to detect any abnormality in an early stage, and that breast cancer may identify at a younger age, many women still do not know how to regularly breast self-examination (BSE) practice. BSE and clinical breast examinations will increase detection of breast cancer [8]. Breast self-examination is a simple, non-invasive, and low-cost, to detect any changes in breast tissue at an early time. That involves the woman checking and notice at and feeling for any change in their breast shape as early as possible, yielding a better survival rate [9]. This should be done for all women ladies older than 20 years.

Moreover previous studies have stated that there is inadequate level of knowledge about screening methods including mammography, even among healthcare providers and the educated women [10,11]. According to the WHO (2020), mammography is the most useful method to discover breast cancer in its early stage, In addition, mammography examination is playing as the best method for breast screening procedure for which there is evidence exists to have significantly reduced breast tumors mortality by about 63% [12]. Azianey Yusof et al., (2014) pointed out that around half of Malaysian women were aware of mammography screening to discover any breast tissue abnormality. Only 1 out of 7 Malaysian women were ever done mammography screening. Positive beliefs and good knowledge do not seem to have any impact on uptake. Whereas, previous clinical breast examination might lead to a discovered breast mass. Thus every effort should be made to do CBE for the patients who are already attending care clinics [13]. Thus, this study aimed to assess Breast self-examination practice and the acceptance of breastfeeding among females with different levels of education. Also, to evaluate participants' knowledge about breast mammography examination in Misurata Libya. That's by answering the questionnaire distributed to some Libyan women attending their appointments in the radiology department at the oncology Centre.

METHODS

Study design

A cross-sectional study was carried out among Libyan women and the data collection was from December 2021 to May 2022. The inclusion criteria were women aged between 20 to 74 years.

Data collection

This study used a validated questionnaire divided into two sections, the first being related to respondents' demographics. The second section addressed respondents about the mammography examination, self-examination and the acceptance of natural breastfeeding. A total of 550 questionnaires were distributed to adult volunteers as follows: (Group 1): 200 women adults attending an out-patient clinic at a hospital clinic in Misurata, which is one of the main hospitals in the central region of Misurata Libya, and 50 female students and teaching staff at Faculty of medical technology Misurata in Libya, (Group 2): 75 adult female who is attending their appointment at Misurata medical Centre, (Group 3): 200 adult female who attended to their appointment at different medical centers in Misurata and 25 to the female staff at the Misurata University). The questionnaire was in Arabic for all. There was a high return rate with 460 (83.63%) returned in total.

The survey asked questions around demographics including age, gender and educational attainment level, the knowledge of breast cancer, the family history of breast cancer, self-examination and the acceptance of natural breastfeeding also to evaluate the knowledge about breast mammography examination and the knowledge of participants of participants about the mammograph examination.

Statistical analysis

Descriptive statistics were used to summaries and display respondent's demographics, and comparison between groups were made by chi-squared test to find out whether a difference between categorical variables

is due to change or a relationship between them. Statistical analyses were performed using the Statistical Package for the Social Sciences, version 26 (IBM, Armonk NY). Statistical significance was set at 0.05 level.

RESULTS

The questionnaire was distributed to 550 women who attended the different clinics during the study period but only 460 respondents this study. The age of participants was around $20 \leq$ to $68 \geq$ years old and the mean age of the subjects was 35.9 ± 14.3 (\pm SD) (Table 1).

Table 1. Age groups of the study population.

Age	No	Percentage	P- value
20 ≤	33	7.2 %	0.00
21-30	161	35 %	
31-40	121	26.3 %	
41-50	74	16.1 %	
51-60	43	9.3 %	
61 ≥	28	6.1 %	

45.7% of participants were married while 41.1% were single and 13.2 % were divorced. The majority were married 210 (45.7 %) (Table 2). The level of education of the participants were 222 (48.3 %) studying at university but 38 (8.3 %) of participants had graduated as table (3).

Table 2. The marital status of participants.

Marital status	Number	Percentage	P value
Married	210	45.7	0.00
Single	189	41.1	
Divorced	61	13.2	

Table 3. the level of education of participants.

Level of Education	Number	Percentage	P value
Primary or secondary school	200	43.5%	0.00
University	222	48.3%	
Graduated	38	8.3%	

This study also evaluated the BSE and stated that 39 of the participants practiced BSE regularly and 141 were rarely practiced BSE, but 281 of the participants never practiced a self-examination as the table 4 shows.

Table 4. The number of participants who do the breast self-examination.

How often do you do self-examination?	Number	Percentage	P value
Always	68	14.8 %	0.00
Never	392	85.21 %	

About 92.17% of participants had very low knowledge about the mammography examination. Whereas 7.8 % of participants have a good knowledge as shown in table 5. In this study, all the participants 100 % agreed to acceptance of breastfeeding.

Table 5. The level of knowledge about the mammography examination.

The knowledge about the mammography examination	Number	Percentage	P-value
High level of knowledge	36	7.8 %	0.000
Low level of knowledge	424	92.17 %	

DISCUSSION

In this study 460 participants were the age of these groups ($20 \leq$ and $61 \geq$) with different levels of education. Breast self-examination is one of the essential methods to discover the changes in breast tissue in the early stage, also, there is not cost-effective and is non-invasive. The present study showed that 14.8% of the participants practiced BSE practice as a monthly routine. However, the majority of respondents 392 (85.2%) with different levels of educations in this study were never do the BSE practice. This lack of BSE practice may be related to knowledge, missing training, and/or related to the level of education.

A study conducted among South Asian women found results similar to our study that in women aged above 40 years that only 16% of participants practiced BSE as monthly [14]. This result was supported by a study conducted in Turkey which stated that theoretical education about breast cancer awareness and BSE training were effective even in low-educated women or illiteracy [15].

As the study carried out by Osborne, et al (2005) stated that when women get married the risk for mortality after a diagnosis of breast cancer might be decrease [16]. Also, Goldman et al (1990) pointed out that Married women enjoy generally better health and increased life expectancy compared with the unmarried in different situations (divorced, separated, never married) [17]. The result of this study showed that 210 of the participants were married, 189 were never married and 61 were divorced. The study conducted by Osborne, et al (2005) recommended that healthcare providers have to recognize that older unmarried leads are at special risk with respect to diagnosis and treatment of, and survival from breast Cancer [16].

The study showed that 124 (27.0%) of the participants have a family history of breast cancer. The risk of breast cancer was associated with the type of cancer, and it is playing a very important factor when found in first-degree relatives and with the person's relationship or with the family member with cancer [18].

Breastfeeding might be having some benefits for women to reduce the risk factor of breast cancer. In this study, all the participants 100 % agreed to acceptance of breastfeeding. This may be related to the social customs of Arab society. However, Butt et, al (2014) pointed out that breastfeeding duration was not linked with breast cancer risk and no strong results were observed with the status of breast cancer sub-groups in that study [19,20].

This study found that most of the participants were unaware of the importance of mammography examination which might reduce the chances of detecting breast tissue changes at an early time. These findings are similar to a studies done in Nigeria, the awareness among women regarding mammography was very poorer [21,22]. Yusof et, al (2014) stated that only 206 out of 447 of women who attended a primary care clinic were aware of mammography examinations [13].

CONCLUSION

The study has demonstrated that the level of awareness of breast mammography examination and performing BSE was low among Misurata Libyan woman community. This highlights the importance of increasing awareness about breast cancer, breast mammography examination, and BSE among women at different levels of education in Misurata Libya.

Conflict of interest. Nil

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تقييم مستوى الوعي والمعرفة بالفحص الذاتي وفحص الثدي بالأشعة السينية بين مجموعة من النساء الليبيات بمدينة مصراتة

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المستخلص

يعد السرطان أحد مشاكل الصحة العامة في العالم. كما أن سرطان الثدي عبارة عن خلية خبيثة قد تبدأ نموها في أنسجة الثدي. ويعتبر الفحص الذاتي للثدي فحص بسيط وغير جراحي ولا يوجد به تكلفة مالية حيث تقوم به المرأة لاكتشاف أي تغيرات في أنسجة الثدي مبكراً. حيث تهدف هذه الدراسة إلى تقييم الوعي والمعرفة بمرض سرطان الثدي وكذلك تقييم المعرفة بالفحص بالتصوير الشعاعي للثدي بين الإناث بمستويات تعليمية مختلفة في مدينة مصراتة-ليبيا. حيث استخدمت هذه الدراسة استنباطاً تم التحقق منه مقسماً إلى قسمين. وتم جمع البيانات في الفترة ما بين ديسمبر 2021 إلى مايو 2022. حيث تم توزيع 550 استبياناً على المشاركات البالغات اللاتي كانت لهن مواعيد بالعيادات الخارجية بالمستشفى وكذلك الطالبات وأعضاء هيئة التدريس الإناث في كلية التقنية الطبية بمصراتة. حيث أظهرت هذه الدراسة معدل استجابة مرتفع بلغ إجمالي العائدات 460 (83.63%). ولقد تم إجراء التحليلات الإحصائية باستخدام برنامج التحليل الإحصائي الإصدار (SPSS 24) (IBM, Armonk NY) وتم تحديد الأهمية الإحصائية عند $P < 0.05$ حيث أظهرت هذه الدراسة أن 14.8% من المشاركات أجرن الفحص الذاتي للثدي بشكل روتيني شهرياً ومع ذلك، فإن غالبية المشاركات 251 (54.6%) في هذه الدراسة كُنن نادراً ما يقمن بالفحص الذاتي للثدي. 92.17% من المشاركات لديهن معرفة منخفضة جداً بفحص التصوير الشعاعي للثدي. أظهرت نتائج هذه الدراسة أن مستوى الوعي كان منخفض للغاية حول فحص الثدي بالأشعة السينية وكذلك أداء الفحص الذاتي للثدي كان منخفضاً بشكل خاص بين مجتمع المرأة الليبية في مصراتة.

الكلمات المفتاحية: الممارسة، الفحص الذاتي للثدي، الرضاة الطبيعية، فحص الثدي بالأشعة السينية، سرطان الثدي، طريقة الكشف المبكر