



Knowledge toward breast cancer among secondary school female student in Mosul city

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Abstract

Background: Early detection methods of breast cancer plays an important role in reducing mortality rates and improving the prognosis, most common presentation breast mass, pain, change in skin, change in nipple and discharge. The comments diagnostic methods was mammogram and improve by biopsy.

Aim: To assess the level of knowledge among female secondary school students in Mosul city toward breast cancer.

Subject and method: A Cross-sectional study design involved 1000 female student. The study extended for two months during 2019, using standardized questionnaire form consist from four items. Simple percentage calculated and the answer are scaled according to three-point Likert scale as (yes, uncertain, and no), the mean score was calculated.

Result: The study revealed that 83% of study sample agreed that breast cancer can be treated if discover in early stages, 78% of them reported that commonest cancer among Iraqi women and worldwide. The study concluded fourth fifth of study sample recorded that breast –self-examination is comments method of early detected of breast cancer then clinical breast examination and the least method of detection was MIR as 39%. The most common symptom reported was mass, Change in shape and size of breast, and pain in breast or axilla as (89.0%, 70%, and 65%) respectively. The most common source of information of breast cancer among study sample were TV program and health professional as 33.8% and 33.7%, respectively.

Conclusion: Secondary school female student has level of knowledge was just above cut-of point and main source of information was TV program and health professional while school book, and teachers has least source of information.

Recommendation: Wide expanding of education program to help student to transport a mission that breast cancer is a treatable disease if discover early.

Keywords: breast awareness, knowledge of breast cancer, secondary school females

Introduction

Breast cancer commonest cancer in women worldwide [1]. Globally, approximately one-quarter of female cancers are cancer of the breast and over than one million women each year are diagnosed with the disease [2], highest risk among women in industrialized countries and lowest among Asian and African races [3]. This cancer is the leading cancer among the Iraqi population in general, accounting for approximately one third of the registered female malignancies according to Iraqi Cancer Registry in 2012 [4]. Breast cancer is the top ten cancer cases (the incidence rate 20.21) and death rate (4.29) among female in Mosul 2014 [5]. The most common symptom of breast cancer is a new lump or mass, that is painless, hard, and has irregular edges at the same time tender, soft, or rounded not exclude malignancy, other possible signs of breast cancer include: Breast swelling, pain, skin irritation, dimpling, and /or nipple pain, retraction, redness, scaliness, thickening, and discharge [6]. Early detection methods of breast cancer plays an important role in reducing mortality rates and improving the prognosis such as breast-self-examination (BSE) is a tool that may help the women to know what is normal for her by looking at and feeling, and reported any changes to the professional to do clinical breast examination (CBE) to check both breasts and lymph nodes in armpit, feeling for any lumps or other abnormalities [7]. The recommended diagnostic methods of this fatal disease are: Diagnostic mammogram is an X-ray of the breast, ultrasound uses sound waves to determine whether a breast lump is a solid mass or a fluid-filled cyst, Magnetic Resonance Imaging (MRI) machine uses a magnet and radio waves i.e.,

doesn't use radiation to create the images, and biopsy is the only definitive way to make a diagnosis of breast cancer using a specialized needle device guided by X-ray or another imaging test to extract a core of tissue from the suspicious area [2, 8].

The aim of present study to assess the level of knowledge of female secondary school students in Mosul city regarding breast cancer general information, symptom, and detection methods.

Subjects and Methods

All work is approved by the ethical and scientific committee of Nineveh Health Directory / MOH / Iraq by licenses' Number (7436) in date (14 / 3 / 2019). A cross sectional study design was carried out at 4 randomly selected female secondary school, including 1000 female student who had no history of breast disease or family history of breast cancer. The study was extended for two months from (15th March – 15th May) 2019. Using self-administer standardize data collection form consist from four part as follow.

1. Breast cancer general information consist from 4 items include: (Breast cancer can be treated if discover in early stages, It is commonest cancer among Iraqi women and worldwide, It is abnormal growth of breast cell tissue, and It rank the second common cancer after lung cancer regarding the prevalence).
2. Knowledge regarding early detection and diagnostic methods of breast cancer consist from 6 items include: (Breast self-examination (BSE), clinical breast examination (CBE), X-ray (Mammogram), Ultrasound,

- fine needle aspiration cytology, and MIR).
- Knowledge of student regarding symptom of breast cancer consist from 9 items include: (Mass, change in shape and size of breast, pain in breast or axilla, change color of skin of breast, discharge from nipple, presence of wrinkle, itching, increase thickness of skin of breast, change direction of nipple).
 - Source of information include: (TV, health professional, reading printed material, friends, social media, and school book and/or teachers)

Statistical analysis

The information regarding each women was transferred into a code sheet. Data were tabulated, categorized, and analyzed using SPSS (version 23) software program. Simple percentage is used. The answer of Part I, II and III are scaled according to three-point Likert scale as (yes, uncertain, and no), the mean score was calculated as follows:

(No. of students said correct answer × 3 + No. of students said uncertain answer × 2 + No. of students said incorrect answer × 1) / 1000 which is the total No. of sample size. The deviation of the score using the following formula: Cut-of point (3+2+1)/3=2.

Result

General information toward breast cancer among study

sample presented in Table (1) as 83% of study sample agreed that Breast cancer can be treated if discover in early stages, 78% of them reported that commonest cancer among Iraqi women and worldwide and two third of them know it is abnormal growth of breast cell tissue the grand mean assessment was 2.6. Table (2) revealed that breast self-examination is comments method of early detected of breast cancer as fourth fifth of study sample recorded, then clinical breast examination ranked the second method as more than half of student also reported. The least method of detection of breast cancer among students was MIR, it was 39%. In general the secondary school student had good knowledge regarding early detection methods of breast cancer as Grand mean assessment above the cut-off point 2.3 The most common symptom reported by study sample was mass, Change in shape and size of breast, and pain in breast or axilla as (89.0%, 70%, and 65%) respectively. Although 51% of student answer unknown for increase thickness of skin of breast and change direction of nipple, but mean of score was just above the cut-of point 2.1, this seen in table (3). Fig (1) revealed that most common source of information of breast cancer among study sample were TV program, health professional, and reading book as 33.8%, 33.7%, and 24.3% respectively. While social media and school book and teachers reported the least source of information as 16.3% and 11.1% respectively.

Table 1: General information toward breast cancer among study sample.

Category	Total No. of student (1000)			Mean of score	Grand mean assessment
	% of Yes	% of Unknown	% of No		
1- Breast cancer can be treated if discover in early stages.	83	12	5	2.78	2.6
2- It is commonest cancer among Iraqi women and worldwide.	78	14	8	2.7	
3- It is abnormal growth of breast cell tissue.	65	31	4	2.61	
4- It rank the second common cancer after lung cancer regarding the prevalence.	58	32	10	2.48	

Table 2: Knowledge regarding early detection and diagnostic methods of breast cancer

Early detection method of breast cancer	Total No. of student (1000)			Mean of score	Grand mean assessment
	% of Yes	% of Unknown	% of No		
1- BSE	81	14	5	2.8	2.3
2- CBE	58	30	12	2.4	
3- X-ray (Mammogram)	47	34	19	2.2	
4- Ultrasound	42	40	18	2.2	
5- Cytology	41	45	14	2.2	
6- MIR	39	39	22	2.1	

Table 3: Knowledge of student regarding common presentation of breast cancer.

Symptom	Total No. of student (1000)			Mean of score	Grand mean assessment
	% of Yes	% of Unknown	% of No		
1- Mass	89	7	4	2.8	2.37
2- Change in shape and size of breast	70	19	11	2.5	
3- Pain in breast or axilla	65	23	12	2.5	
4- Change color of skin of breast	52	29	19	2.3	
5- Discharge from nipple	49	39	12	2.3	
6- Presence of wrinkle	39	40	21	2.1	
7- Itching	38	46	16	2.2	
8 Increase thickness of skin of breast	32	51	17	2.1	
9- Change direction of nipple	31	51	18	2.1	

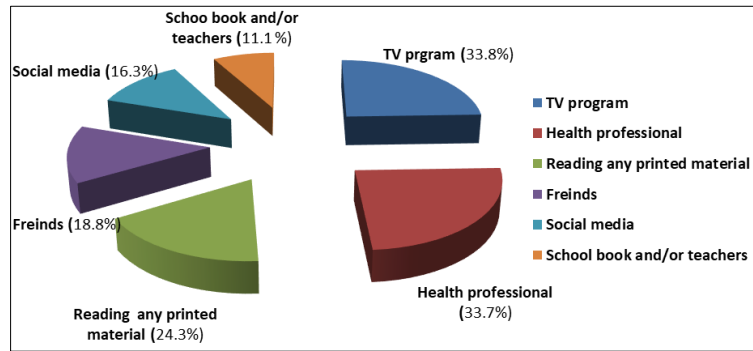


Fig 1: Source of information of breast cancer among study sample

Discussion

1. Socio-demographic characters

The present study implemented among secondary school students in Mosul city aimed to assess knowledge regarding breast cancer (general information, symptom, early detection methods). The study sample included female student aged between 16-20 years, all from urban area in Mosul, Muslim, single, and had no personal history or family history of first degree relative of breast cancer. Although its lack generalization to community but the purpose of choosing young female help to build up a healthy behaviors during adolescence and enhance future health and sooner or later adapted for the entire life course.

2. General information toward breast cancer

information toward breast cancer among study sample in general was above the cutoff point (cut – off point = 2). The grand mean assessment was (2.6). Four fifth of study sample agreed that breast cancer can be cure if discover in early stages and 78% of them reported that commonest cancer among Iraqi women and worldwide. This acceptable rate of knowledge due to wide expanding of national educational program since 2000, by MoH and enhancing it during 2009 by MoHESR, its objectives was to educate school teachers and used them as a tool to transport the information to the students and their families^[9].

Many studies show that knowledge plays an important role in behavioral change and dramatically enhance screening practice^[10, 11], a similar finding was seen among sample of educated Iraq population, 2012 as 75% of participant belief that early detection improve prognosis in presence of effective management, 44.1% and 30% of participant reported breast cancer commonest cancer in world, and breast cancer rank the 1st in Iraq respectively^[12]. These finding seen among student in Egypt in 2014, as 98.7% believe that early detection improves treatment outcome and as many as 87.7% agreed that there is an effective treatment for breast Cancer^[13]. In contrast a study among 50 women attending Breast Oncology Clinic at AL-Diwanyia Teaching Hospital/ Iraq in 2019, revealed that the study sample had low level of knowledge concerning breast cancer^[14].

3. Knowledge regarding early detection and diagnostic methods of breast cancer

breast self-examination is comments method of early detected of breast cancer as fourth fifth of study sample recorded then clinical breast examination as more than half of student reported and mammogram 47%.

A study done in Egypt 2014, revealed that BSE is commonest diagnostic methods of breast cancer followed by

mammogram and breast ultrasound, 74.2%, 52.1, and 48.3% respectively^[13]. While a majority of participants in a study done in Saudi Arabia 2007, did not recognize the most common methods of breast cancer screening mammography and CBE 9.3%, 28.2% respectively this could be attributed to the absence of a national periodic examination program for breast cancer screening tests^[15].

4. Common presentation of breast cancer

In the current study the most common presentation of breast cancer reported by participants were mass, change in shape and size of breast, and pain in breast and/ or axilla as (89.0%, 70%, and 65%) respectively. A cross section study among 543 female students at Ain Shams University, in Egypt, 2014 concluded that commonest warning sign of breast cancer were mass, breast pain, change in breast shape/ size as 81.%, 74.2%, 51.7% respectively^[13] This finding agreed by a study was seen among Kurdish Women in Sulaimani Governorate/Iraq, 2017, who attended to Maternity Teaching Hospital^[16]. Contrary to that, a study done among Jordanian under graduate female student, 2002 reported that painless lump, nipple retraction, bloody discharge from the nipple were not well known among participant, these wrong information's or assumptions about breast lumps may account for some of the reasons why some of their patients present late to the hospital^[17]. Two third of study sample agreed that breast or armpit pain are symptom of breast cancer, this very good as pain obligate women for seeking medical care early, unlike study done in Sulaimani Governorate/Iraq, 2017, as more than two third of study sample reported pain is not sign of breast cancer this lack of information may be due to poor knowledge about symptoms of breast cancer as more than two third of study sample was illiterate^[16].

5. Source of information of breast cancer

The study revealed that T.V. program rank the top of six source of information, and school book and teachers rank least one this finding agreed by study done among student in Egypt, in 2014, Mass media such as TV and/or radio were identified as the main source of information on breast cancer by 89.1% of students followed by relatives 39.2%^[13].

A survey was done among Iraqi women in Baghdad 2012, included 387 teachers and students aged between 18-62 years, half of sample agreed that TV programmes were the main source of knowledge followed by the doctors in 21.5% and magazines in 18.1%^[12]. While a study in Qassim University Saudi Arabia, 2017 concluded that social media was the commonest source of information toward breast cancer among study sample^[18].

Limitation

Choosing young females with nearly equal socio-demographic characters may affect generalizability of the study

Conclusion

Secondary school female student has level of knowledge regarding general information, symptoms, screening of breast cancer was just above cut-off point and main source of information was TV program and health professional while school book, and teachers has least source of information.

Recommendation

1. Increase sample size and include wide range of female age with different socio-demographic characters to ensure generalizability.
2. increase effort to elevate the level of information of secondary school student by introducing principle of breast cancer in curriculum in secondary school book (risk factors, detection of symptom, screening methods, and management).
3. Wide expanding of health education by help of school teacher to transport a mission breast cancer is a treatable disease if discover early.

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