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AWARENESS OF BREAST CANCER SYMPTOMS IN IRAQI FEMALES ATTENDING PRIMARY HEALTH CARE CENTERS IN BAGHDAD AL KARKH DIRECTORATE 2023-2024

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Abstract

1.Background : Breast cancer is the most common cancer diagnosed in women, accounting for more than 1 in 10 new cancer diagnoses each year. It is the second most common cause of death from cancer among women in the world. Breast cancer evolves silently, and most disease is discovered on routine screening. This activity reviews the pathophysiology, presentation and diagnosis of breast cancer and highlights the role of screening and early diagnosis in its management.

Aims of the study : To assess the level of awareness about signs ,symptoms , risk factors and age of presentation of breast cancer and determine the association between awareness and certain variables among Iraqi females attending primary health care centers in Baghdad Health Directorate -Al-Karkh 2023-2024.

Methods :A cross sectional study, a convienent sample for womens who attended primary health care centers for routine care visits or health problems and agree to participate in this study. The study will be conducted in Baghdad (alkarkh) primary healthcare center from November 2023 to march 2024.

Result : Age distribution is categorized into five groups, with the largest cohorts being 41-50 years and 51-60 years, each comprising 25% of the population. The youngest age group (21-30 years) constitutes 18.4% of the population, while the oldest age group (61-70 years) comprises 10%.Educational status is classified into Illiterate, Primary education, Secondary education, and College, with the majority (46.3%) having attained college education. Notably, 18.8% of the population is illiterate, Occupation-wise, the population is split between Housewives (48.1%) and Working individuals (51.9%),Residence status shows a majority in urban areas (76.9%) compared to rural areas (23.1%). Regarding family history of breast cancer, most individuals (96.3%) report no history, while a minority (3.8%) have a positive family history. Marital status reveals that the majority are married (76.9%), followed by unmarried (16.3%) and divorced (6.9%). Parity indicates a majority of multiparas (86.3%) compared to nulliparous individuals (13.8%). Breastfeeding history shows that the majority (62.2%) have breastfed, while a minority (37.8%) have not. lumps or thickening in the breast (248 "Yes" responses) and under the armpit (203 "Yes" responses), discharge from the nipple (253 "Yes" responses) and changes in nipple appearance (e.g., pulling in or change in position) (132 and 127 "Yes" responses, respectively), pain in one breast or armpit (250 "Yes" responses) is commonly associated with breast cancer.

Conclusion: Cancer imposes a huge burden on people around the world.164 This study investigated the epidemiological aspects and the risk factors associated with breast cancer in the world. The trace of breast cancer as one of the most common form of cancer and causes of mortality among women is seen all over the world, and the mortality rate of breast cancer is higher in less developed countries.

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Key word : Breast cancer, Awareness, cross sectional study, Signs, lump under armpit , nipple discharge

Introduction

Breast cancer is the most prevalent site-specific cancer in women and the primary cause of cancer-related mortality for women between the ages of 20 and 59. It is the cause of 14% of female cancer-related fatalities as well as 29% of all newly diagnosed cases of cancer in women [(1)]. Breast cancer comes first in Iraq in 2011, according to the Ministry of Health's Iraqi Cancer Registry, with a proportion of 34.44% [(2,3)].Unfortunately, a large number of Iraqi patients still show up for diagnosis with advanced stages. In low- and middle-income nations like Iraq, early detection and prompt treatment continue to be the main control options that can enhance the survival and quality of life of the affected patients in the absence of specific primary prevention strategies for reducing the incidence of breast cancer [(4).]The clear increase in incidence rates, the higher frequencies of younger ages and advanced stages at the time of presentation, and the probable prevalence of more aggressive tumors with high mortality/incidence ratios are the characteristics that support stepping up efforts to control breast cancer in the EMR [(5).]These variables contribute to low five-year survival rates (10–50%) for breast cancer in many low- and middle-income countries (LMC), while high-income nations have five-year survival rates of above 85% [(6).]In developing nations, the prevalence of breast cancer is rising as a result of rising life expectancies, increased urbanization, and adoption of western lifestyles [(7).]In order to facilitate referrals to diagnosis and treatment, early diagnosis programs based on knowledge of risk factors, early symptoms and signs, and breast-self-examination (BSE) should be implemented [(8).]Raising public knowledge of the disease's risk factors, symptoms, and indicators, as well as the available screening techniques, is one of the primary goals of the National Program for Early Detection and Down Staging Breast Cancer in Iraq [(9).]Increasing access to adjuvant hormone, radiotherapy, chemotherapy, and surgery as multi-modality breast cancer treatments is recommended. The pathological characteristics of breast cancer, the clinical and demographic traits of the patients, and the likelihood of recurrence all play a role in the therapeutic decision-making process. The latter necessitates routine follow-up in order to quickly diagnose any localized relapse [(10).]Although the precise origin of carcinogenesis is still unknown, there are a number of risk factors that have been linked to the development of breast cancer.One of the most crucial factors is a country's gender, age, and level of economic growth, as well suggested by the epidemiological statistics discussed above[(11).]Hormonal variables, which mostly pertain to the duration of estrogen exposure, and procreative factors, such as the number of children born, the age at which the first kid is born, or nursing, are equally significant. Genetics, hormone replacement medication, poor nutrition, and obesity are all major contributors to the development of breast cancer [(12).] Traditionally recognized risk factors for breast cancer development include older age, low parity, early menarche, late menopause, obesity, drinking, and increased height.Among the factors associated with nutritional status, body composition factors such as obesity and/or being overweight and an inappropriate distribution of body fat, particularly in the postmenopausal period, are significant[(13).]

Subjects And Methods

Study design

A cross sectional study From November 2023 To Maerch 2024.

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Data collection time

The Data was collected from November 2023 to march 2024 , Study population and Sampling technique The study included a sample of 365 women who attended Baghdad provice Al-Karkh primary health care centers in Baghdad visits or health problems and agree to participate in this study.

Data collection procedure

Data was collected by directly interviewing the participants, the time needed for each interview was 10-15 minutes, About four days per week (from Sunday to Wednesday) start at 8:30 a.m. to 2 p.m. About twenty samples had been collected per a week.

Result

Demographic Distribution

Table 1 provides a comprehensive overview of various demographic, educational, occupational, and health-related characteristics within the studied population. Age distribution is categorized into five groups, with the largest cohorts being 41-50 years and 51-60 years, each comprising 25% of the population. The youngest age group (21-30 years) constitutes 18.4% of the population, while the oldest age group (61-70 years) comprises 10%. This suggests a relatively balanced representation across different age brackets, with a slight skew towards middle-aged individuals. Educational status is classified into Illiterate, Primary education, Secondary education, and College, with the majority (46.3%) having attained college education. Notably, 18.8% of the population is illiterate, indicating diverse educational backgrounds. Occupation-wise, the population is split between Housewives (48.1%) and Working individuals (51.9%), reflecting a balance between domestic roles and the workforce. Residence status shows a majority in urban areas (76.9%) compared to rural areas (23.1%). Regarding family history of breast cancer, most individuals (96.3%) report no history, while a minority (3.8%) have a positive family history. Marital status reveals that the majority are married (76.9%), followed by unmarried (16.3%) and divorced (6.9%). Parity indicates a majority of multiparas (86.3%) compared to nulliparous individuals (13.8%). Breastfeeding history shows that the majority (62.2%) have breastfed, while a minority (37.8%) have not. This comprehensive dataset offers valuable insights for further analysis and interpretation of the population's characteristics.

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Table 1: Demographic Distribution and Breast Cancer Risk Factors: Insights from Survey Data

Variables		Number	Percent
Age (years)	21-30 years	59	18.4%
	31-40 years	69	21.6%
	41-50 years	80	25.0%
	51-60 years	80	25.0%
	61- 70 years	32	10.0%
Education state	Illiterate	60	18.8%
	Primary education	47	14.7%
	Secondary education	49	15.3%
	College	148	46.3%
	Higher education	16	
Occupation	Housewife	154	48.1%
	Working	166	51.9%
Residence	Urban	246	76.9%
	Rural	74	23.1%
Family history of breast cancer	Yes	12	3.8%
	No	308	96.3%
Marital status	Married	246	76.9%
	Unmarried	52	16.3%
	Divorced	22	6.9%
Parity	Nulliparous	44	13.8%
	Multiparas	276	86.3%
Breast feeding history	Yes	199	62.2%
	No	121	37.8%

Warning Signs Of Breast Cancer Among The Respondents

Table 2 responses the survey questions provide insights into the awareness of various potential warning signs of breast cancer among the respondents. While there is generally good recognition of classic indicators such as lumps or thickening in the breast (248 "Yes" responses) and under the armpit (203 "Yes" responses), awareness varies for other symptoms. For instance, while bleeding or discharge from the nipple (253 "Yes" responses) and changes in nipple appearance (e.g., pulling in or change in position) (132 and 127 "Yes" responses, respectively) are generally

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acknowledged, there is uncertainty regarding the association of symptoms like a rash on or around the nipple (58 "Yes" responses), redness of breast skin (28 "Yes" responses), and dimpling of breast skin (101 "Yes" responses) with breast cancer. Additionally, while pain in one breast or armpit (250 "Yes" responses) is commonly associated with breast cancer, it's worth noting that it's not typically a primary symptom. This highlights the importance of ongoing education and awareness campaigns to enhance understanding of all potential signs of breast cancer among the public.

Table 2: Understanding Awareness of Breast Cancer Symptoms: Insights from a Public Survey

Can You Tell Me Whether You Think Any Of These Are Warning Signs Of Breast Cancer Or Not?	Yes	No	Don't Know
Do You Think A Lump Or Thickening In Your Breast Could Be A Sign Of Breast Cancer?	248(77.5%)	20(6.25%)	52(16.25%)
Do You Think A Lump Or Thickening Under Your Armpit Could Be A Sign Of Breast Cancer?	203(63.44%)	29(9.06%)	88(27.5%)
Do You Think Bleeding Or Discharge From Your Nipple Could Be A Sign Of Breast Cancer?	253(79.06%)	16(5%)	51(15.94%)
Do You Think The Pulling In Of Your Nipple Could Be A Sign Of Breast Cancer?	132(41.25%)	32(10%)	156(48.75%)
Do You Think A Change In The Position Of Your Nipple Could Be A Sign Of Breast Cancer?	127(39.69%)	34(10.63%)	159(49.69%)
Do You Think A Rash On Or Around Your Nipple Could Be Asign Of Breast Cancer?	58(18.13%)	72(22.5%)	190(59.38%)
Do You Think Redness Of Your Breast Skin Could Be A Sign Of Breast Cancer?	28(8.75%)	114(35.63%)	178(55.63%)
Do You Think A Change In The Size Of Your Breast Or Nipple Could Be A Sign Of Breast Cancer?	71(22.19%)	76(23.75%)	173(54.06%)
Do You Think A Change In The Shape Of Your Breast Or Nipple Could Be A Sign Of Breast Cancer?	86(26.88%)	60(18.75%)	174(54.38%)
Do You Think Pain In One Of Your Breasts Or Armpit Could Be A Sign Of Breast Cancer?	250(78.13%)	32(10%)	38(11.88%)
Do You Think Dimpling Of The Breast Skin Could Be A Sign Of Breast Cancer?	101(31.56%)	63(19.69%)	156(48.75%)

Relationship Between Breast Cancer Warning Signs And Various Demographic Variables

Table 5 presents the results of chi-square tests examining the association between respondents' perceptions of breast cancer warning signs and various demographic variables. Significant associations were found across multiple factors. Age demonstrated a significant association ($X2 = 20.32$, $p = 0.009$, HS), with older age groups showing higher recognition of warning signs. Education level also showed a significant association ($X2 = 58.55$, $p < 0.001$, HS), indicating

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that respondents with higher education levels were more likely to recognize certain factors as warning signs. Occupation (X2 = 7.64, p = 0.022, S) and residence (X2 = 23.84, p < 0.001, HS) similarly exhibited significant associations, with housewives and urban residents more attuned to warning signs. Family history of breast cancer (X2 = 6.23, p = 0.044, S) and marital status (X2 = 16.11, p = 0.003, HS) also displayed significant associations, highlighting higher awareness among those with a family history and married individuals. However, breastfeeding history and parity showed no significant association (p > 0.05, NS). Overall, these findings underscore the importance of considering demographic factors in breast cancer awareness initiatives.

FIGURE : Warning Signs Across Demographic Variables

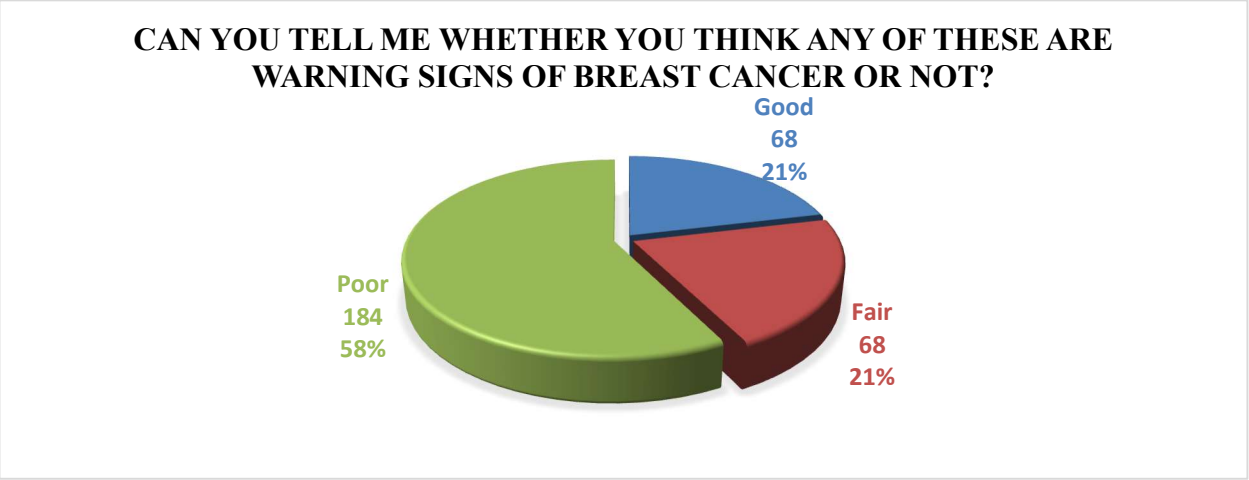

Table 3: Perceptions of Breast Cancer Warning Signs Across Demographic Variables: Chi-squared Test Analysis		Variables	Can you tell me whether you think any of these are warning signs of breast cancer or not?			Chi-square test	P value
			Good	Fair	Poor		
1	Age	21-30 years	6(1.88%)	20(6.25%)	33(10.31%)	20.32	0.009
		31-40 years	16(5%)	8(2.5%)	45(14.06%)		
		41-50 years	22(6.88%)	14(4.38%)	44(13.75%)		
		51-60 years	20(6.25%)	14(4.38%)	46(14.38%)		
		61- 70 years	4(1.25%)	12(3.75%)	16(5%)		
2	Education state	Illiterate	4(1.25%)	18(5.63%)	38(11.88%)	58.55	<0.001
		Primary education	0(0%)	20(6.25%)	27(8.44%)		
		Secondary education	8(2.5%)	14(4.38%)	27(8.44%)		
		College	54(16.88%)	14(4.38%)	80(25%)		
		Higher education	2(0.63%)	2(0.63%)	12(3.75%)		

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3	Occupation	Housewife	24(7.5%)	40(12.5%)	90(28.13%)	7.64	0.022
		Working	44(13.75%)	28(8.75%)	94(29.38%)		
4	Residence	Urban	64(20%)	40(12.5%)	142(44.38%)	23.84	<0.001
		Rural	4(1.25%)	28(8.75%)	42(13.13%)		
5	Family history of breast cancer	YES	6(1.88%)	2(0.63%)	4(1.25%)	6.23	0.044 S
		NO	62(19.38%)	66(20.63%)	180(56.25%)		
6	Marital status	Married	58(18.13%)	42(13.13%)	146(45.63%)	16.11	0.003
		Unmarried	4(1.25%)	18(5.63%)	30(9.38%)		
		Divorced	6(1.88%)	8(2.5%)	8(2.5%)		
7	Breast feeding history	YES	44(13.75%)	44(13.75%)	111(34.69%)	0.638	0.727
		NO	24(7.5%)	24(7.5%)	73(22.81%)		
8	Parity	Nulliparous	8(2.5%)	14(4.38%)	22(6.88%)	3.40	0.182
		Multiparas	60(18.75%)	54(16.88%)	162(50.63%)		

DISCUSSION

The changing lifestyle of the population in developing countries is considered one of the major contributors to the increasing incidence of breast cancer[(1)].The increasing incidence of the disease among women in developing countries may be related to the higher predisposition to risk factors among the increasing proportion of women. The risk factors are related to advancing age, reproductive factors, environmental factors, and lifestyle behavior, in addition to exogenous hormone intake, postmenopausal obesity, and alcohol [(14,15,16)]. In our study a questionnaire-based assessment was utilized under several sections including sociodemographic data, knowledge of breast cancer, details on BSE practicing, to investigate attitudes and knowledge on breast cancer among undergraduate female students in Iraq from this selected sample. Age distribution is categorized into five groups, with the largest cohorts being 41-50 years and 51-60 years, each comprising 25% of the population. The youngest age group (21-30 years) constitutes 18.4% of the population, while the oldest age group (61-70 years) comprises 10%.Educational status is classified into Illiterate, Primary education, Secondary education, and College, with the majority (46.3%) having attained college education. Notably, 18.8% of the population is illiterate. Occupation-wise, the population is split between Housewives (48.1%) and Working individuals (51.9%), Regarding family history of breast cancer, most individuals (96.3%) report no history, while a minority (3.8%) have a positive family history. Marital status reveals that the majority are married (76.9%), followed by unmarried (16.3%) and divorced (6.9%). Parity indicates a majority of multiparas (86.3%) compared to nulliparous individuals (13.8%). Breastfeeding history shows that the majority (62.2%) have breastfed, while a minority (37.8%) have not. Women at age (45-54) years were more affected with breast cancer. This agrees with [(17)] reported that risk of breast cancer increases with age. It's rare in women under 35, and 8 out of 10 breast cancers (80%) occur in women aged 50 or over[(18)] .The burden of breast cancer is unevenly distributed by geographic location and the incidence

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rates vary six fold between developed regions of the world and less developed countries [19]. The study findings showed that the marital status (married women); number of pregnancy; number of delivery, number of dead babies were significant. These results were cancer were associated with better results. study involving secondary-school female students in Jeddah, Saudi Arabia, which showed that only 14.4% and 7.1%, respectively, knew the correct frequency and timing of BSE [20].Residence status shows a majority in urban areas (76.9%) compared to rural areas (23.1%). Another study by Ashokamala and Weerakoon in Sri Lanka (2014), which found no significant correlation between participant demographics and knowledge and awareness of breast cancer risk factors and symptoms [21].Regarding knowledge about the signs and symptoms of breast cancer. The most common breast cancer symptom mentioned by survey participants was lumps or thickening in the breast (248 "Yes" responses) and under the armpit (203 "Yes" responses), awareness varies for other symptoms. For instance, while bleeding or discharge from the nipple (253 "Yes" responses) and changes in nipple appearance (e.g., pulling in or change in position) (132 and 127 "Yes" responses, respectively) in addition rash on or around the nipple (58 "Yes" responses), redness of breast skin (28 "Yes" responses), and dimpling of breast skin (101 "Yes" responses) with breast cancer. Additionally, while pain in one breast or armpit (250 "Yes" responses). Our statistics and the reports from Ethiopia were comparable [22] . The most common warning early signs of breast cancer was pain in breast 38% followed by often visible to the naked eye and irritation or dimpling of breast skin, and either 8% believe that there is no single symptom can be identified as an early sign of BC. Therefore, the study has unveiled the significance of assessing awareness among females since their younger ages, so as to undertake necessary steps in ameliorating the knowledge and breast self-examination practices among youth[23]. A study conducted by Akram et al. in 2017, showed that negligence of breast selfinspection and clinical examinations may advance the risk of getting BC among females [24].Another study of Hadi et al in Malaysia[25](dimpling of breast skin 58.5%, change in the breast shape 81.5%, painless breast lump 72%, lump under armpit 78.5% and nipple discharge 74.5%) also in Boulos DNK. etal[26,27,28], 81.6% of students identified breast lump, change in shape or retraction of the nipple and bloody nipple discharge accounting for (25.6% and 24.7%) respectively.The difference between both studies may be attributable to the sample's level of education in this study, which would explain the variation.

Conclusion

Cancer imposes a huge burden on people around the world.164 This study investigated the epidemiological aspects and the risk factors associated with breast cancer in the world. The trace of breast cancer as one of the most common form of cancer and causes of mortality among women is seen all over the world, and the mortality rate of breast cancer is higher in less developed countries. The findings of this study showed that various factors affect the incidence of breast cancer, of which genetic factors, environmental factors, and lifestyle are the most important ones, and also many factors such as parities, lactation, and exercise play important roles in reducing the risk of this disease.

Recommendation

- ✓ We recommended more study on breast cancer.
- ✓ Encourage the women to visit hospitals to screening the breast cancer and this will make the cure is possible.
- ✓ Increase awareness and risk perception by making lectures and interview in TV and social media.

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