

Study of Breast Cancer and the Most Important Risk Factors Affecting of the Disease in Al-Diwaniyah City, Iraq

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ABSTRACT

This study illustrates several possible causes of Breast cancer, a highly perilous affliction impacting women worldwide. Although there is no evidence to back the attributions, studies conducted globally have shown numerous variables that women with breast cancer attribute to their illness. Therefore, we looked into a number of possible risk factors for breast cancer. Our study show the category most affected by breast cancer were (40-49) and the least affected were under the age of 30 years,14(42%) of them developed the disease after menopause, while 19(57%) before it, 18 (54.5%)of the women under study had this disease in their family history,22(66%) not having children or having them after turning thirty and only 11(33%) have not children after this age , Out of 30 married and have children women 18(60%) of them were breastfeeding and 12(40%) of them were not, 30(90.9%) were non-smokers, 28(84.8%) of them did not engage in any physical activity, compared to 5(15%) only who engaged in various sports activities. As for the educational level, (60%) are illiterate or have completed primary school only, (24%) have completed secondary school and (15%) have obtained higher education, 90% were married , 6% were Widow and 3% were Single. This study's goal was to make women aware of the several possible causes of breast cancer and to help them avoid them.

Keywords: Women, Breast cancer, Risk factors, Al-Diwaniyah City, Iraq

INTRODUCTION

Breast cancer impacts women globally and is the leading cause of cancer-related mortality among females, affecting in 2022, more than 2.3 million women , making it the most common cancer diagnosed in women globally[1]. Breast cancer is primarily a systemic illness, with estrogens significantly implicated in its etiology; it is the most prevalent neoplastic disease among women globally[2]. It ranks as the fifth leading cause of cancer-related mortality globally, while being the most prevalent in underdeveloped regions and the second most common in developed areas, following lung cancer [3]. In 2022, it was the primary reason why women died from cancer, with 670,000 fatalities attributed to this condition [4]. This constitutes roughly 7% of all cancer fatalities globally. In rich countries such as Europe, North America, Australia, and New Zealand, incidence rates exceed 80 per 100,000, whereas in impoverished nations, they fall to 40 per 100,000 [5,6]. But, underreporting may be the cause of some underdeveloped countries' numbers [7]. Different demographic groups' exposure to environmental risk factors, as well as their behavior and lifestyle choices, may be the cause of the variations in incidence between nations [8]. The predominant causes of breast cancer in women are nonhereditary variables and risk elements, while the precise causes remain unidentified [9]. These are often referenced as risk factors and include early menarche, hormone consumption, diet, alcohol use, smoking, and obesity [8]. Only 5–10% of instances of breast cancer are due to heredity, while 30% of cases of inheritable breast cancer are caused by germ line mutations in BRCA1 or BRCA2 [9]. According to a 2017 study that looked at the relationship between environmental factors like radiation and chemicals and the incidence of breast cancer, exposure to these substances may raise the risk of getting the disease [10]. As is well known, our nation has seen numerous wars,

particularly the most recent one, in which a large number of chemical and radioactive weapons were employed. These events all played a part in the disease's yearly rise. Nonetheless, a number of studies have found that a woman's physiologic characteristics, dietary practices, the quality and content of her meals, the late age of her first full-term (if any) pregnancy, short breastfeeding durations, a later menarche, and a lower age at menarche are breast cancer risk factors[11]. On the other hand, physical activity and breastfeeding are recognized protective factors [10].

The goal of this study was to find out more about the causes and risk factors for breast cancer that could be identified with confidence, eliminating hereditary reasons in women. Unfortunately, we did not receive very good replies from a thorough literature review. Women's breast cancer causes are still mostly unknown.

MATERIALS AND METHODS

This is descriptive study conducted through the interviews of 33 patients with breast cancer . They went to the Al-Diwaniyah Teaching Hospital for treatment where a special survey form was designed containing (10) question about risk factors, attached later, It included the period from 1\10\2024 until the end of 1\3\ 2025.

The name	
The age	
Menopausal(pre- or post)	
Breast feeding	
Family history of breast cancer	
Schooling	
Marital status	
Physical activity (sports)	
Tobacco use	
Having children later in life (beyond the age of thirty) or not at all	

RESULTS

The ages of women under the current study was ranging from 20 to 72 years and they were divided into categories as shown in Table 1. The category most affected by breast cancer were (40-49) and the least affected were under the age of 30 years.

Table 1. Age-specific breast cancer percentage distribution

Age at cancer	Number) Percentade (
<30	1 (3.3 %)
30-39	4 (12.1%)
40-49	11 (33.3%)
50-59	8 (24.2%)
60-69	7 (21.2%)
70+	2 (6%)
Total	33

through studying the clinical characteristics of the patients under this study, it was found that 14(42%) of them (those in their fifth, sixth, and seventh decades) developed the disease after menopause, while 19(57%) before it, but they were confirmed that menopause after treatment, especially those in their forties ,18 (54.5%)of the women under study had this disease in their family history,22(66%) not having children or having them after turning thirty and only 11(33%) have not children after this age , Out of 30 married and have children women 18(60%) of them were breastfeeding and 12(40%) of them were not, as shown in Table 2.

Table 2. Clinical characteristics of the patients assessed

Clinical Characteristic	Number) Percentage (
Menopausal	pre	14 (42%)
	post	19 (57%)
Breast feeding	Yes	18 (60%)
	No	12 (40%)
Family history of breast cancer	Yes	18 (54.5%)
	No	15(45.4%)
Having children later in life (beyond the age of thirty) or not at all	Yes	22(66%)
	No	11(33%)

With respect to Lifestyle habits the findings indicated that the vast majority of patients women in the this study 30(90.9%) were non-smokers. Furthermore, 28(84.8%) of them did not engage in any physical activity, compared to 5(15%) only who engaged in various sports activities, but not on a regular basis as shown in Table 3.

Table 3. Lifestyle habits: Smoking and Physical activity (sports)

Lifestyle habits	Number) Percentage (
Smoking	Yes	30 (90.9%)
	No	3 (9%)
Physical activity (sports)	Yes	5(15%)
	No	28(84.8%)

As for the educational level, most of the patients women are illiterate or have completed primary school only with percentages of (60%) and only (24%) have completed secondary school and (15%) have obtained higher education, 90% were married , 6% were Widow and 3% were Single as shown in Table 4.

Table 4. Sociodemographic characteristics of patients

Sociodemographic characteristics		Number)Percentage (
Schooling	Illiterate	10 (30%)
	Complete elementary school	10 (30%)
	Complete secondary school	8 (24%)
	Bachelor's or Institute	5 (15%)

Marital status	Married	30(90%)
	Widow	2(6%)
	Single	1(3%)

DISCUSSION

Breast cancer risk increases as a woman gets older, because growing older is strongly linked to a heightened risk of breast cancer. The results of the current study agree with Siegel et al.(12) that the age group most affected is over the age of 40, as they account for approximately 99.3% of all breast cancer-related deaths in America. Therefore, it is necessary to undergo a mammogram beforehand for women aged forty or older. This study concluded that breast cancer is more common in the fourth and fifth decades of life, which is consistent with previous research(13-16).

Although cancer is not brought on by menopause, a woman's risk of getting it rises with age. Women who go through menopause after the age of 55 are more likely to develop uterine, breast, and ovarian malignancies. If a woman also started menstruating before the age of twelve, her risk increases[17]. Breast cancer is thought to be prevented by lactation[26], where according to certain research, breastfeeding may marginally reduce the incidence of breast cancer[18], and This is what the results of the current study agreed with. Women have an increased likelihood of developing breast cancer if a mother or sibling has been diagnosed with the condition. More than 25% of all instances of breast cancer have a family history where a UK cohort study including more than 113,000 women found that people who have one first-degree cousin with breast cancer are 1.75 times more likely to have the disease than those who had no affected relatives [19]. A woman's risk is slightly increased if she is not have children or if she has children after the age of thirty [18], this is what the recent study's findings demonstrated also.

Although the vast majority of patients women in this study were non-smokers, but there is mounting evidence that smoking, particularly when one is young, increases the risk of developing breast cancer[20-23]. Studies have shown a correlation between a lower risk of breast cancer and regular participation in four to seven hours of moderate-to-intense physical activity each week where the exercise can affect the growth and behavior of breast cells by lowering blood levels of the hormone insulin growth factor, which also absorbs and controls blood sugar [18], and this is what the results of the current study confirmed that being more active lowers the chance of developing breast cancer. According to our research majority of the patients in the research did not complete their secondary education, they are either illiterate or have only an elementary education, this is consistent with a study conducted by Rocha *et al.* [24] with 114 patients 51%did not finish high school .Also more than 50% of the patients under of Batiston *et al.* [25] the study did not complete high school or elementary school. This information is important because the more educated a patient is, the more knowledgeable they are about the condition, its diagnosis, and prevention.

CONCLUSION

In conclusion, the prevention of breast cancer is feasible. One of the main strategies to avoid breast cancer is to lower risk factors. Still, much work needs to be done to raise public awareness of breast cancer. Several risk factors for breast cancer were found in this investigation have been comprehensively described. Health promotion programs are necessary to raise awareness and improve comprehension of the risk factors so that women may make informed decisions about their health and healthcare options that have been scientifically proven. We anticipate that this study will add significantly, if only somewhat, to the body of knowledge regarding breast cancer in women.

RECOMMENDATIONS

Early cancer detection measures, such as clinical breast exams, easy access to mammograms, and advice on maintaining a healthy lifestyle and controlling weight, must be a fundamental component of medical care. Despite the advancements in our day and age, we find the delays in diagnosis and treatment concerning.

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