

Original Research Article

Incidence of breast cancer among women in Al-Madinah Al-Munawwara

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ABSTRACT

Background: Breast cancer (BC) is the second most common cancer in the world, and most frequent cancer among women. BC is a public health issue because of the highest rate of morbidity and mortality, so our study about the incidence of breast cancer among women in Al-Madinah Al-Munawwara to answer many questions such as lifestyle, risk factor age, and the roles of the patients in awareness of the community.

Methods: It was a retrospective study that analyzed questionnaires collected from King Fahad Hospital and early diagnostic Taiba Cancer Screening centers from women patients with breast cancer after ethical consent in a specific time interval from January 2022 to March 2023 in Al-Madinah, Kingdom of Saudi Arabia.

Results: Among 111 women with breast cancer, 51.4% were diagnosed at the age 19 to 30 years, 16.2% were diagnosed at the age 31 to 40 years, 6.3% were diagnosed at the age 41 to 50 years, 20.7% were diagnosed at the age 51 to 60 years old, and 5.4% were diagnosed at an age over 60 years. 39.6% of women diagnosed with breast cancer have (1-3) children, 22.5% have (4-7) children, and 3.6% have more than (7) children. 56.2% of patients breastfeed their children, while 43.8% do not.

Conclusions: The incidence of breast cancer according to our study shows a high-risk factor in younger women, we suggest starting breast cancer screening from earlier age 19 years old and above. An increase in childbirth and lactation reduces the progress of breast cancer and prevents the disease, encouraging women with or without breast cancer for breastfeeding and childbirth. The experience and knowledge of patients with breast cancer about the disease make them active members in community awareness and urged other women to early screening, also the success story of recovering patients can be inspired for newly diagnose or relapse cases to complete their treatment by conducting educational meetings.

Keywords: Breast cancer, Young women, Screening, Diagnosis, Awareness, Breastfeeding, Childbirth

INTRODUCTION

Breast cancer is the second most common cancer worldwide, and commonly occur on women rather than men. Breast cancer mostly appears in middle-aged or in older women, which is the average age of breast diagnosis.¹

Breast cancer come from lining epithelial cell of the duct almost of the cases. In the beginning the cancerous growth is limited to the duct or lobule it is called in situ where it generally causes no symptoms and has minimal potential for metastasis. Over time, these in situ which is called (stage 0) may progress and invade the surrounding breast tissue then metastasize to the regional lymph node or it could go much further to other organs in the body (distant

metastasis). Mainly the mortality increases due to widespread metastasis.²

Risk factors of breast cancer increases with age from 40 to 59 and decreases in early 70 years old women, there is also a risk increase with race like in Caucasian women they are more susceptible to breast cancer than other race.³ There is a factor that can lead to increase the risk for breast cancer include, dietary habit like preserve foods consuming products that are rich and full of fat and flavor enhancer, also high endogenous estrogen and higher human epidermal growth factor receptor 2 expressions are defined as risk factor contributing to a higher incidence of breast cancer.^{4,5}

According to the 2020 Global Burden of Cancer Report published by the World Health Organization (WHO)'s International Agency for Research on Cancer (IARC), there are approximately 2.3 million new cases and 685,000 deaths from cancer worldwide. Cancer is the leading cause of death for women with the disease.⁶ The global growth rate of new instances of breast cancer stayed above 30% from 2008 to 2018. The most frequent cancer among women in industrialized countries is breast cancer, which is also becoming more prevalent in many areas with rapid economic growth.⁷ As a result of the high incidence and ongoing increase in mortality from breast cancer, which has resulted in a major burden from the disease.^{8,9}

The incidence of breast cancer is lower in KSA compared to the worldwide average, but it's not a matter of avoidance since it's a major cancer mortality in women.¹⁰

BC in women is a public health issue because of the highest rate of morbidity and mortality in addition to the burden of disparities existing in the care of these patients.¹¹ Patients with cancer in general often face many challenges such as interruption of work at any time, like treatment-related infertility, and responsibilities for children.¹²

Objectives

This study aims to describe the incidence of breast cancer among women in Al-Madinah, by determining the average age at risk of developing breast cancer in women and focusing on the target age for awareness about breast cancer disease to change their lifestyle that decrease the incidence of the disease.

METHODS

Study design

It was a retrospective study that analyzed questionnaires collected from King Fahad Hospital and early diagnostic Taiba Cancer Screening centers from women patients with breast cancer after ethical consent in a specific time interval from January 2022 to March 2023 in Al-Madinah, Kingdom of Saudi Arabia. Include all diagnostic women

patients with breast cancer that filled out the questionnaire, also exclude incomplete questionnaires.

Sample size

All diagnostic breast cancer women in the period from January 2022 to March 2023 came for follow-up or new diagnosis and completed filling out the questionnaires became a part of the sample size.

The statistical package for the social sciences (SPSS v.26) was employed to analyze the data using frequencies, percentages, and graphs. These techniques were utilized to describe the participants' demographic information and to illustrate their responses to all questionnaire items.

Ethical considerations

Permission to carry out the study was sought from Al-Rayan colleges. The data was collected from questionnaires filled out by the patients after taking permission from hospitals or early diagnosis centers. Informed consent was obtained before collecting data.

RESULTS

Among 111 women with breast cancer; 36.9% are between the ages of 19-30 years, 36% are between the ages of 41-50 years, 16.2% are between the ages of 51-60, 6.3% are between the ages of 31-40, and 4.5% are over 60 years old. 60.4% of breast cancer patients are married, compared to 20.7% who are single, and others (divorced, widow) 18.9%. In education levels, 54.1% have an undergraduate or higher, 22.5% secondary, 12.6% primary, and 10.8% preparatory. As for the age of breast cancer diagnosis, 51.4% were diagnosed at the age 19 to 30 years, 16.2% were diagnosed at the age 31 to 40 years, 6.3% were diagnosed at the age 41 to 50 years, 20.7% were diagnosed at the age 51 to 60 years old, and 5.4% were diagnosed at an age over 60 years. 39.6% of women diagnosed with breast cancer have (1-3) children, 22.5% have (4-7) children, and 3.6% have more than (7) children. 56.2% of patients breastfeed their children, while 43.8% do not (Table 1).

90.1% of women with breast cancer felt stressed because of breast cancer, 64.9% had a negative effect your social relationships, 76.6% had a negative effect on their work and productivity, whether inside or outside the home, 64.0% sought to spread awareness of this disease among their acquaintances, 72.1% of them they advised their peers to have regular breast cancer screenings (Table 2). 71.2% of the participants were diagnosed with breast cancer in the hospital, 4.5% through previous information they obtained from their studies or work, 7.2% by comparing their symptoms with those of their friends or relatives with breast cancer, 1.8% through reading about breast cancer, 6.3% through social media, and 9% through their suspicion of breast cancer through information they heard in a workshop or read in a brochure (Table 5).

Table 1: Demographic characteristics.

Characteristics	N (%)
Age (years)	
19 to 30	41 (36.9)
31 to 40	7 (6.3)
41 to 50	40 (36.0)
51 to 60	18 (16.2)
Over 60	5 (4.5)
Marital status	
Single	23 (20.7)
Married	67 (60.4)
Divorced	9 (8.1)
Widow	12 (10.8)
Education level status	
Primary	14 (12.6)
Preparatory	12 (10.8)
Secondary	25 (22.5)
Undergraduate or higher	60 (54.1)
In which age the cancer diagnosed (years)	
19 to 30	57 (51.4)
31 to 40	18 (16.2)
41 to 50	7 (6.3)
51 to 60	23 (20.7)
Over 60	6 (5.4)
Number of children	
0	38 (34.2)
1 to 3	44 (39.6)
4 to 7	25 (22.5)
More than 7	4 (3.6)
If there are children, do you breastfeed your children?	
Yes	41 (56.2)
No	32 (43.8)

Table 2: Breast cancer and personal life.

Breast cancer and personal life	Yes (%)	No (%)
Have you felt any stress because of breast cancer?	100 (90.1)	11 (9.9)
Has cancer negatively affected your social relationships?	72 (64.9)	39 (35.1)
Has cancer negatively affected your work and productivity, both inside and outside the home?	85 (76.6)	26 (23.4)
Have you sought to spread awareness of this disease among your acquaintances?	71 (64.0)	40 (36.0)
Do you advise your peers to have regular breast cancer screenings?	80 (72.1)	31 (27.9)

Table 3: Lifestyle before breast cancer disease.

Lifestyle before breast cancer disease	Yes (%)	No (%)
Have you been eating fast food?	47 (42.3)	64 (57.7)
Have you been exercising regularly?	30 (27.0)	73 (65.8)
Have you been drinking a lot of caffeinated drink?	76 (68.5)	35 (31.5)
Are you a smoker?	36 (32.4)	75 (67.6)

Table 4: Lifestyle after breast cancer disease.

Lifestyle after breast cancer disease	Yes (%)	No (%)
Do you eat fast food?	33 (29.7)	78 (70.3)
Do you exercise regularly?	38 (34.2)	73 (65.8)
Do you drink a lot of caffeinated drinks?	64 (57.7)	47 (42.3)
Do you smoke?	23 (20.7)	88 (79.3)

Table 5: Patients suspicious of the disease for the first time.

How did you know that you had breast cancer?	N (%)
I was diagnosed in the hospital	79 (71.2)
Through previous information that I obtained from my studies or work	5 (4.5)
My symptoms were similar to those of a friend or relative who had breast cancer	8 (7.2)
I read about breast cancer in a book and found that my symptoms are similar to those of breast cancer	2 (1.8)
I got information about breast cancer through social media and found out that my symptoms are similar to those of breast cancer	7 (6.3)
I suspected I had breast cancer from information I heard at a previous workshop, or read in a brochure	10 (9.0)

47.7% of the participants were diagnosed with breast cancer in a government hospital, 8.1% in a private hospital, 0.9% in a private clinic, 40.5% were diagnosed with breast cancer in the early detection of the breast cancer center, and 2.7% were diagnosed with breast cancer in the car early detection of breast cancer (Table 6).

Table 6: Diagnostic breast cancer clinic.

Where you diagnosed with breast cancer?	N (%)
In a government hospital	53 (47.7)
In a private hospital	9 (8.1)
In a private clinic	1 (0.9)
In early detection of breast cancer center	45 (40.5)
In the car early detection of breast cancer	3 (2.7)

It is noted that 32.4% of the participants had previously undergone a periodic examination for breast cancer before being diagnosed with it, while 67.6% had not previously undergone a periodic examination for breast cancer before being diagnosed with it (Table 7).

Table 7: Periodic screening of breast cancer.

Did you undergo regular breast cancer screening before being diagnosed?	N (%)
Yes	36 (32.4)
No	75 (67.6)

DISCUSSION

In our study, the most frequent age affected with breast cancer was 19-30 years old (51.4%), that different from other researches suggests most affected age group 30-44 years old in KSA.¹³ The peak age incidence for malignant breast disease was 31-40 years in the study from Lagos, Nigeria, 9%. All these findings are endorsed by an epidemiological study by Alghamdi et al, 24% who concluded that in KSA, BC is diagnosed in a significantly younger age group (38.6% in age group of 30-44, and 31.2% in 45-59 years). The number of childbirth and lactation decrease the development of breast cancer or

prevent the disease (protective factor), in this study high percentage of breast cancer in women who had more than 7 children (3.6%) compared with 1 to 3 children (39.6%). The result of a case-control study showed that the combination of two protective factors (two or more childbirth and lactation for more than 13 months) could reduce the risk of developing breast cancer by up to 50%.

This study presented low scale in the quality of life with women breast cancer patients affected in their social and emotional scale feel stressed (90.1%), negatively affected your social relationships (64.9%), negatively affected in productivity (76.6%), Other studies have reported similar findings regarding increase psychological distress among breast cancer patients.¹⁵

Higher education level presented (54.1%) of all breast cancer patient, similar to suggest of Dong and Qin about higher education level may be associated with an increased risk of developing breast cancer.¹² In versus Geng et al research show high percentage in low level education and their findings indicate an association between a lower awareness rate and correct rate and lower educational attainment or poor health literacy.¹⁶

In this study, the patients with breast cancer become more regularly active exercise than before breast cancer was diagnosed that shows 27% were exercising before the diagnosis to 34% after breast cancer diagnosis. There is evidence that physical exercise may improve body composition and enhance muscular endurance, flexibility, and quality of life (QOL) in women with breast cancer.¹⁷

The study shows a high degree of awareness that transcript in the consumption of coffee, fast food, and smoking after a breast cancer diagnosis.

Most breast cancer patients are ready to share their stories and spread awareness in society.

Our study shows that (47.7%) of breast cancer disease was first discovered in hospital after a suspected mass or abnormality in the breast, and early detection of breast cancer centers was secondary diagnostic area after hospitals (40.5%).

CONCLUSION

Breast cancer is the secondary most common cancer in the world. The incidence of breast cancer according to our study show a high-risk factor in younger women, we suggest starting breast cancer screening from an earlier age of 19 years old and above. The majority of breast cancer patients show a high education level, but we suggest education has no role in breast cancer disease as much as awareness of this disease. An increase in childbirth and lactation reduces the progress of breast cancer and prevents the disease, encouraging women with or without breast cancer for breastfeeding and childbirth. Stress, negative relations, depression, social phobia, and general appearance are negative socio-emotional factors that negatively affect the improvement of the patient, supporting program is needed from family, friends, and co-workers. In addition to changing the quality of lifestyle by involving in physical activity programs, low smoking, caffeine, and fast food. The experience and knowledge of patients with breast cancer about the disease make them active members in community awareness and urged other women to early screening, also the success story of recovering patients can be inspired for newly diagnose or relapse cases to complete their treatment by conducting educational meetings. The study shows that most of the diagnostic screening is in government hospitals and at a low rate in the private sector that causes pressure in hospitals and delays in diagnosis, so more early detection of the breast cancer center and private clinical for breast cancer are required to relieve pressure from a government hospital, also encourage women to go for diagnosis screening centers.

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