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A Cross-sectional Study on the Awareness of Breast Cancer in Bangladesh

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Abstract

Epidemiological knowledge of breast cancer continues to evolve but more needs to be learned. The amount of estrogen and progesterone that the breast epithelium is exposed to over time, primarily during the years of active ovarian activity, appears to be a major determinant of breast cancer risk in women. Possible approaches to primary prevention require a detailed understanding of the factors that influence the onset, regularity and quality of ovarian activity. The present study is a statistical cross-sectional survey. 126 respondents and 49 breast cancer patients were included with the information of knowledge and current life style practices towards cancer prevention. Age ranges, years of education information, gender, marital status and level of awareness related questions were included in the survey questionnaire. Most of the respondents were of age 40+ years, illiterate, female, married and unaware about the knowledge of breast cancer. Survival rate is a part of survival analysis. It is the percentage of people in a study or treatment group still alive for a given period of time after diagnosis. 49 individuals with breast cancer had a survival rate of 63% after 1-3 years, 35% after 1-2 years, and 2% after 4-6 years. Important baseline data on Bangladesh's perception of avoidable cancer risk was supplied by this study. According to the study's findings, lowering Bangladesh's cancer burden will need an extensive cancer awareness campaign.

Key words: Breast cancer, prevalence, knowledge, awareness, survival.

Introduction

Breast cancer comes in a variety of types. The kind of breast cancer is determined by the cells in the breast that grow into malignant tissue. The majority of breast cancers begin in the ducts or lobules and they can travel outside the breast by blood and lymph veins (Girish et al., 2014). Metastasizing refers to the spread of breast cancer to other regions of the body. The aberrant and uncontrollable growth of breast cells characterizes the condition known as breast cancer. One of the main hidden burdens in the world is that breast cancer causes tumors to grow in the mammary gland and interfere with the normal function of breast tissue. It is the most prevalent kind of cancer in women, both developed and developing countries (Jemal *et al.*, 2011). Only 20% to 50% of patients in the majority of low- and middle-income nations receive a diagnosis in stages I and II of the disease, compared to more than 70% of patients in the majority of high-income countries (Ungar-Saldaña, 2014). In developing countries, cancer survival rates are often lower, most likely due to a

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combination of delayed diagnosis and restricted access to quick, standard treatment. With a sharp rise in the incidence of breast cancer, South Asia, home to almost 588 million women over the age of 15, is experiencing an expanding breast cancer crisis (Hussain *et al*., 2014). There are a number of reasons why screening rates are lower in South Asian populations, including lower community awareness, individual knowledge of breast and cervical cancer, poor patient-provider communication, backgrounds in the medical field and limited access to cancer-related services (de Ceuvas *et al*., 2018). In a developing country like Bangladesh, a breast health awareness campaign is ineffectual due to deeply rooted socio-cultural, economic and health system obstacles, including gender inequity and human rights issues (Islam et al., 2016).

Drinking less alcohol, controlling weight, exercising frequently and eating a nutritious diet can all reduce the risk of breast cancer (Coughlin et al., 2019). But previous studies showed that the incidence rate of breast cancer was significantly elevated because community women were not well-informed about the disease's symptoms, indicators and risk factors.

Given all of these circumstances, determining the degree of breast cancer awareness among the risk categories is crucial. The purpose of this study was to determine how women saw and understood various aspects of the breast.

To address and rectify these disparities, it is imperative to look into the specific circumstances surrounding the complex barriers that women face when trying to access information, a timely and accurate diagnosis and the kind of therapy that is crucial for reducing the morbidity and death rate from breast cancer.

Materials and Methods

Given all of these circumstances, determining the degree of breast cancer awareness among the risk categories is crucial. The purpose of this study was to determine how women saw and understood various aspects of the breast.

Participants: The survey includes a series of standardized questionnaires. Between June 2023 and January 2024, 49 patients with breast cancer who were indoors and had either radiological or clinical evidence of breast cancer from diagnostic examinations were the subjects of the study at Labaid Cancer Hospital and Super Speciality Center, two renowned hospitals in Dhaka. The study was a cross-sectional survey with a statistical foundation. We included 126 respondents with information of knowledge and current life style practices towards cancer prevention. Age ranges and years of education information were also included.

Questionnaire: The questionnaire was made in English. It consisted of both close- and open-ended questions and was structured in a way to find out participants' physiological challenges, sociodemographic factors and related information.

Results and Discussion

The results of this study contain the age groups, gender, marital status, education level, knowledge, awareness and perceptions of women on breast cancer.

Table 1. Prevalence of age groups in study population.

Age group (Study population)	Number of participants
25-30	17
30-40	50
40+	59
Age group (Study patients)	
30-40	5
40+	44
Gender	
Female	117
Male	9

In this study, people of different age groups have participated (Figure 1). Among 126 respondents, majority of them belong to age group of 40+ years, 47%. The second major group (40%) includes the population of age 30 - 40 years. Rest age group 25 - 30 years consist 13% of total study population respectively.

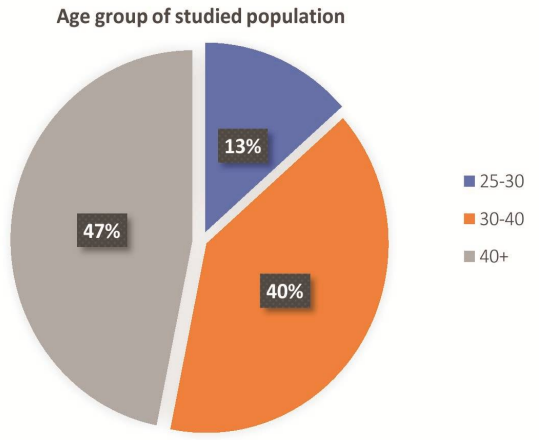

Figure 1. Prevalence of age groups in study population.

Among 49 Patients, majority of them (90%) belong to age group of 40+ years and rest age group 30 - 40 years consist 10% of total study patients respectively which is shown in figure 2.

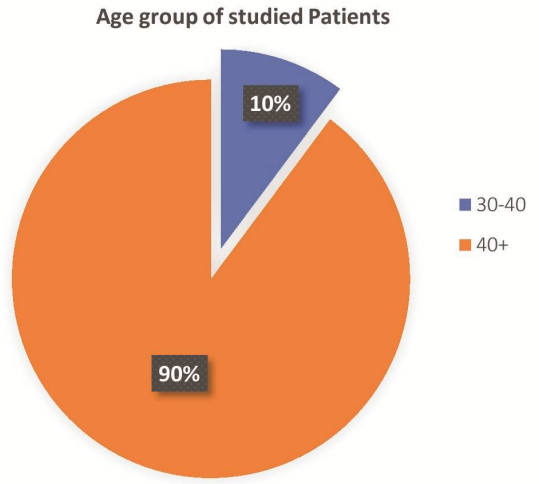

Figure 2. Prevalence of age groups in study patients.

Prevalence of gender in study population:

Both male and female participated in this study. Among 126 respondents, 117 of them were female (93%) and 9 were male (7%) in this study (Figure 3).

Prevalence of educational level in study population:

People of different education level had responded in this study which is shown in figure 4. Among 126 respondents, 31% of them are illiterate and 11, 8, 5 and 7% of total study population has education level below primary, primary, secondary and higher secondary (HSC), respectively. The remaining 25 and 13% of study population were graduate and post graduate respectively.

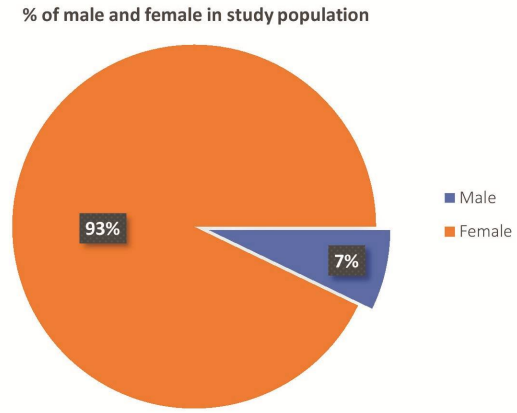

Figure 3. Prevalence of gender in study population

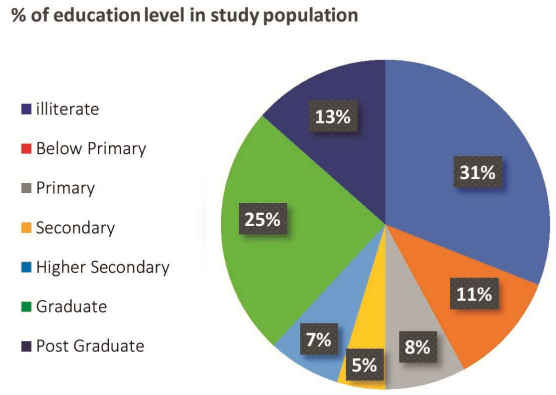

Figure 4. Prevalence of education level in study population.

Table 4. Prevalence of education level in study population.

Education level	No of participants
Illiterate	39
Below primary	14
Primary	10
Secondary	6
Higher secondary	9
Graduate	31
Post graduate	17

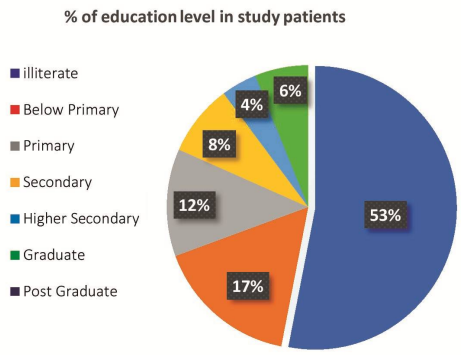

Figure 5. Prevalence of education level in study patients.

Table 5. Prevalence of education level in study patients.

Education level	No of participants
illiterate	26
Below Primary	8
Primary	6
Secondary	4
Higher Secondary	2
Graduate	3
Post Graduate	0

Prevalence of education level in study patients has been shown in Figure 5. Among the 49 patients, most of them were illiterate (53%) and 17%, 12%, 8% and 4% of total study patients had education level below primary, primary, secondary and higher secondary (HSC) respectively. The remaining 6% of study patients were graduate and there were no post graduate patients.

Prevalence of marital status in study population:

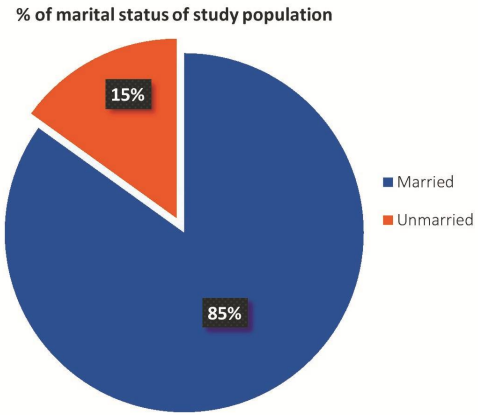

Figure 6. Prevalence of marital status in study population.

Table 6. Prevalence of marital status in study population.

Status	No. of person
Married	107
Unmarried	19

Prevalence of ever heard about breast cancer in study population:

This study targeted both married and unmarried people to evaluate their knowledge and awareness about breast cancer. In this study, majority of the respondents were married which is 85% of total study population and the remaining 15% were unmarried (Figure 6).

Figure 7 represents if the 126 respondents ever heard about breast cancer. It was found that 45 % of them heard but 55 % did not heard about breast cancer.

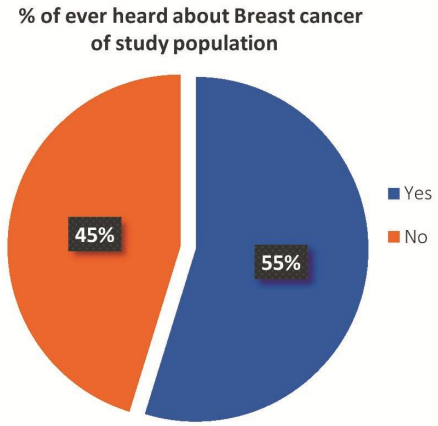

Figure 7. Prevalence of ever heard about breast cancer in study population.

Table 7. Prevalence of ever heard about breast cancer in study population.

Status	No. of participants
Yes	69
No	57

Among 49 patients, most of them didn't hear about breast cancer 51.02% and heard about breast cancer 48.98% (Figure 8). As most of them are illiterate, they have no proper knowledge about breast cancer.

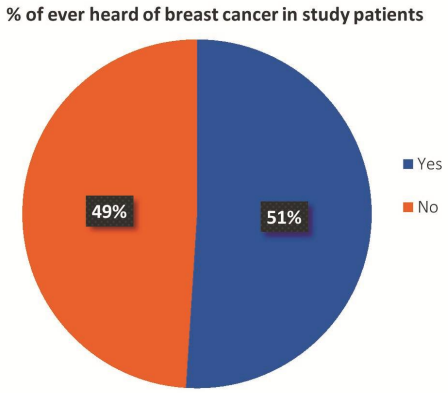

Figure 8. Prevalence of ever heard about breast cancer in study patients.

Table 8. Prevalence of ever heard about breast cancer in study patients.

Status	No. of participants
Yes	24
No	25

But in general people most of them heard about breast cancer 58% and heard about breast cancer 42% (Figure 9).

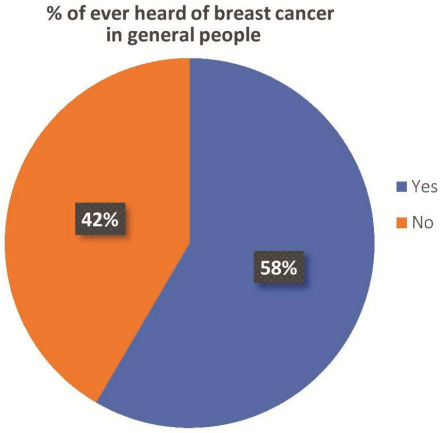

Figure 9. Prevalence of ever heard about breast cancer in general people.

Table 9. Prevalence of ever heard about breast cancer in general people.

Status	No. of participants
Yes	45
No	32

Prevalence of level of awareness about the cause and outcome of breast cancer in study population

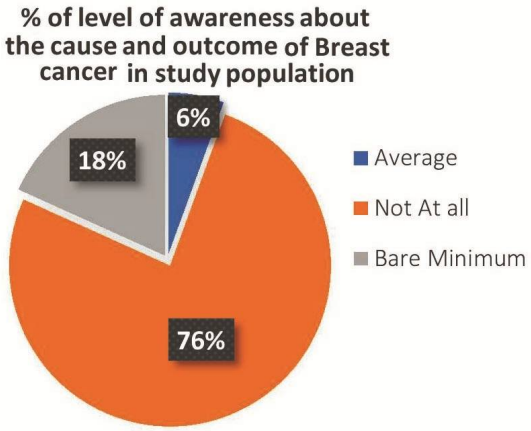

Figure 10. Prevalence of awareness about the cause and outcome of breast cancer in study population.

Table 10. Prevalence of awareness about the cause and outcome of breast cancer in study population.

Status	No. of Person
Average	7
Not at all	96
Bare minimum	23

We asked 126 people about the causes and outcome of breast cancer awareness (Figure 11). 16% patients reported that they had not at all any awareness regarding the causes and outcome of breast cancer and 84% of them reported to know bare minimum about the causes and outcome of breast cancer.

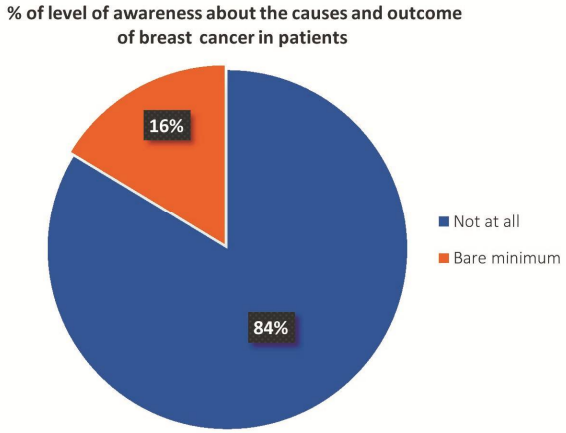

Figure 11. % of level of awareness about the cause and outcome of breast cancer in patients.

Table 11. % of level of awareness about the cause and outcome of breast cancer in patients.

Status	No. of participants
Not at all	41
Bare minimum	8

The prevalence of awareness about the causes and outcome of breast cancer in general people is shown in figure 12. About 71% had no awareness, 20% had bare minimum awareness and 9% had an average awareness regarding the causes and outcome of breast cancer. As most of the general people did not receive proper education and knowledge, they don't have proper awareness about the causes and outcome of breast cancer.

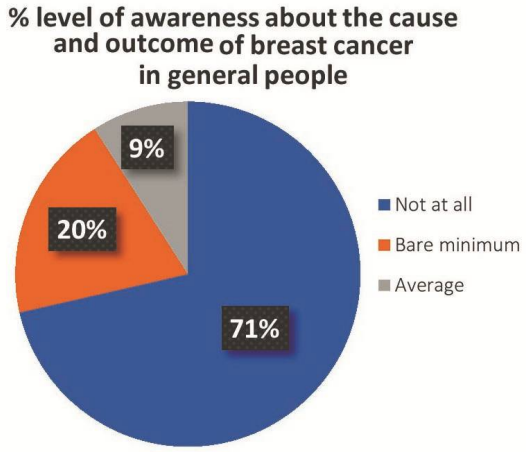

Figure 12. % of level of awareness about the cause and outcome of breast cancer in general people.

Table 12. % of level of awareness about the cause and outcome of breast cancer in general people.

Status	No. of participants
Average	7
Not at all	55
Bare minimum	15

Prevalence of survival rate in study population:

Survival rate is a part of survival analysis. It is the percentage of people in a study or treatment group who are still alive for a given period of time after diagnosis. Among 49 patients, 63% of them survived for 1-3 years; 35% of them for 1-2 years and 2% of the patients survived for 4-6 years.

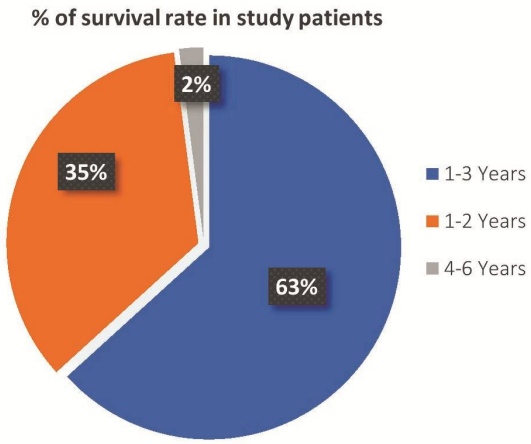

Figure 13. Prevalence of survival rate in study patients

Table 13. Prevalence of survival rate in study patients.

Status	No. of participants
1-3 Years	7
1-2 Years	55
4-6 Years	15

Conclusion

This present survey was carried out with a well-structured and validated questionnaire. The data was collected from both general people and breast cancer patients. The current study found that most of the respondents were female, uneducated and unaware about the causes, risk factors and outcome of breast cancer. From the results of this study it can be anticipated that enhancing knowledge and behavior, raising awareness of breast cancer risk factors and implementing early detection and intervention strategies are critical to disease prevention and aid in early diagnosis.

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