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by Mohammad Nayeem Hasan

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Impact of Family Support on Knowledge and Health-Seeking Behaviour Practices Among Breast Cancer Patients in Bangladesh

Abstract

Background: Breast cancer is the most prevalent cancer among women worldwide, with high mortality rates in developing countries due to late-stage diagnoses. In Bangladesh, lack of awareness and delays in seeking treatment contribute significantly to poor outcomes. This study aims to assess breast cancer patients' knowledge and practices related to screening and examine the influence of family and social support on their health-seeking behaviors.

Methods: We used a convenience sampling method to select women aged 18 and older, diagnosed with breast cancer or suspected of having it, and who met the inclusion criteria. Data were collected through face-to-face interviews using a structured questionnaire. Participants' knowledge and practices regarding breast cancer were assessed, and factors influencing these behaviors, such as socio-economic, medical, and social support variables, were analyzed. Descriptive statistics, chi-square tests, and logistic regression analyses were used to identify associations with knowledge and practice outcomes.

Results: This study involving 355 participants found that 53.52% of patients exhibited good knowledge and practice regarding breast cancer. Factors significantly associated with better knowledge and practice included a higher income (AOR: 0.87, 95% CI: 0.46–0.94, $p < 0.001$), access to portable electronic devices (AOR: 1.11, 95% CI: 1.07–4.97, $p = 0.022$), reporting symptoms (AOR: 5.55, 95% CI: 1.04–5.33, $p = 0.041$), and experiencing discomfort (AOR: 2.33, 95% CI: 1.01–5.57, $p = 0.039$). Conversely, patients using alternative remedies (AOR: 0.52, 95% CI: 0.26–0.94, $p = 0.043$) and those with diagnosis delays (AOR: 0.42, 95% CI: 0.22–0.79, $p < 0.001$) had lower odds of demonstrating good knowledge. Family support, particularly from spouses, positively influenced knowledge and practice, while support from social circles was negatively associated (AOR: 0.54, 95% CI: 0.26–0.89, $p = 0.009$).

Conclusion: This study highlights significant gaps in breast cancer awareness and practices in Bangladesh, emphasizing the importance of early detection, breast self-examination (BSE), and overcoming socio-cultural barriers. Factors like education, income, and access to technology influence knowledge, but many patients still lack confidence in seeking medical care. Family and social support, especially from spouses, positively affect knowledge and practices, though societal norms sometimes limit its impact. With rising breast cancer rates, comprehensive awareness campaigns focusing on education, stigma reduction, and early detection are urgently needed to improve health outcomes.

Introduction:

Breast cancer is the most common cancer affecting women worldwide and one of the leading causes of cancer-related deaths [1]. In 2020, two million new cases of breast cancer were reported, making it the most prevalent malignancy among women, accounting for 11.7% of all cancer cases globally [2]. While breast cancer is more frequently diagnosed in developed countries, the mortality rate is higher in developing nations [3]. In 2012, nearly 62% of breast cancer-related deaths occurred in developing countries, with South Asia alone reporting an

estimated 200,000 new cases and around 97,500 deaths [4]. In Bangladesh, breast cancer has maintained a prevalence rate of 32.8% over the past five years, contributing to 69% of cancer-related deaths among women [5]. A recent study found the incidence rate of breast cancer in Bangladesh to be 22.5 cases per 100,000 women, with 12,764 new cases detected in 2018 [6,7]. Research has shown that 50% of breast cancer patients die due to late-stage diagnosis, highlighting the importance of early detection [8].

Early diagnosis of breast cancer significantly improves outcomes, but delays in detection often result in diagnosis at advanced stages, leading to poorer prognosis and higher mortality rates, even in regions with lower incidence rates [9]. These delays are primarily due to a lack of awareness, poor healthcare-seeking behavior among low-income women, and limited access to effective healthcare services [10]. Good health literacy, which promotes 'breast awareness' by helping women become familiar with their breasts and their changes over time, encourages early medical attention and positively influences screening behavior when women notice early signs and symptoms [11,12]. Research shows that limited knowledge, along with various sociodemographic factors, contributes to delays in seeking medical help, as early signs and symptoms of breast cancer are often overlooked [13].

Information on the epidemiology, biology, and environmental factors of breast cancer is limited in South Asia [14]. In Bangladesh, high breast cancer mortality rates are largely due to a lack of knowledge, limited access to treatment, and community negligence. Raising awareness about the signs, symptoms, and early detection methods such as Clinical Breast Examination (CBE), Breast Self-Examination (BSE), and mammograms is essential to reducing morbidity and mortality. However, breast cancer remains a largely under-discussed issue, resulting in widespread misinformation about its causes and risk factors [15]. In Bangladesh, there is a lack of awareness regarding self-diagnosis and available treatments, which contributes to delays in seeking care. Additionally, societal stigma makes it challenging for women to openly discuss symptoms, often leading to delays in seeking medical attention until the disease has reached advanced stages [5].

Breast cancer has a significant psychological impact, with fears of death and mastectomy often leading to anxiety. Patients experience emotional stages as they cope with their diagnosis, feeling overwhelmed as their lives change. During these times, they need support, but their emotions can be difficult for others to fully understand [16]. In a qualitative study, Hamilton et al. explored the attitudes of men as husbands, fathers, and caregivers toward their partners' breast cancer and chemotherapy using grounded theory. Through semi-structured interviews, they identified two key themes: the focus on the partner's illness and caregiving, while also striving to maintain balance within the family [17].

To provide effective support for breast cancer patients and their families, it is essential to understand their experiences, as successful management depends on a comprehensive understanding of their needs [18]. The dual role of spouses and friends as both supporters and individuals in distress underscores the critical support requirements of patients. Spousal support plays a key role in reducing depression and anxiety, benefiting both patients and their partners. For patients, family support is vital in preventing psychological distress, while for male partners, support from friends is most valuable [19]. Therefore, assessing patients' knowledge and practices regarding breast cancer and screening is crucial for developing effective health promotion strategies that aim to reduce mortality caused by inadequate healthcare-seeking behavior and insufficient screening services. This study aims to evaluate breast cancer

patients' knowledge and practices concerning screening and explore the role of family and social support.

Methods:

We adhered to the STROBE guideline to ensure improved reporting of our observational cross-sectional study in epidemiology.

Study sites and study design:

A multi-center retrospective cross-sectional study was conducted at two primary cancer care facilities in Dhaka, the capital of Bangladesh.

Data collection:

Due to the absence of patient registries, a convenience sampling method was employed. Patients visiting these facilities were considered potential participants. Those who met the study's inclusion and exclusion criteria were invited to participate. Verbal informed consent was obtained prior to data collection, in accordance with the study protocol.

Eligibility criteria

In this study, we surveyed women aged 18 years and older who either had suspected breast cancer or had been diagnosed with breast cancer and referred to our participating centers. Only patients whose initial stage was documented in the medical records, or who had an initial diagnosis made within the past 6 months prior to staging at our facilities, were included. Face-to-face interviews were conducted using a structured questionnaire by trained interviewers who were not involved in the clinical management of the patients.

Outcome variables:

The study evaluated participants' knowledge and practices regarding the risk factors and health-seeking behaviors associated with breast cancer. Participants' knowledge and practices were assessed based on their responses to a set of knowledge-specific and practice-specific questions. Each correct answer received one point, while incorrect answers received zero. Respondents who scored at or above the mean were classified as having 'good knowledge,' while those who scored below the mean were considered to have 'low knowledge' [20]. There were 7 questions assessing knowledge and practice, each demonstrating a reliability coefficient above 70%, calculated using Cronbach's alpha [21].

Possible factors

To identify potential risk factors associated with knowledge and practice, we examined a variety of socioeconomic, medical, and social support factors as independent variables. These included the patient's age, geographic location (division), residency (urban or rural), marital status, educational attainment (illiterate, primary, or secondary) of both the patient and their spouse, household monthly income, exposure to mass media (social media, television, and newspapers), access to mass media and portable electronic devices, and the patient's medical

history, including symptoms (such as a lump, breast pain, nipple discharge, skin changes, bone pain, or other symptoms). Additional factors considered included cancer stage, first health facility visits after symptoms, use of alternative remedies, diagnosis delays, and discomfort experienced (such as arm pain, breast pain, itching, lump, nipple discharge, shape changes, skin changes, or ulcerated skin). We also assessed family support, including who the patient first spoke to about their health problem, who recommended they consult a doctor, fear or discomfort in discussing the issue with their spouse, and whether the patient received support from their spouse or social circle after diagnosis. Diagnosis delay was defined as the period from the first recognition of symptoms to the initiation of definitive treatment, incorporating both patient and provider delays [22]. In this study, a diagnostic delay was considered to be any period exceeding sixteen (16) weeks.

Statistical analysis

We performed descriptive statistics using crosstabs to present counts and percentages for categorical variables. Chi-square tests and Fisher's exact test were used to explore factors associated with knowledge and practices. Binary and multivariable logistic regression analyses were conducted to identify risk factors. Initially, bivariable analysis was carried out to assess the relationship between knowledge and practices and various factors. Univariable (unadjusted) and multivariable (adjusted) logistic regression models were then used to examine the associations with risk factors. In the univariable analysis, variables were added to the logistic regression model individually, while in the multivariable analysis, all relevant variables were included simultaneously. The results are presented as unadjusted/crude odds ratios (COR) and adjusted odds ratios (AOR) with 95% confidence intervals and a significance level of 5%. All analyses were performed using R software.

Variable selection

Variables were selected through a two-stage process. In the first stage, bivariable analysis (chi-square test) was conducted for each independent variable, and a significance threshold of p-value ≤ 0.20 was used to determine which covariates would be included in the multivariable models [23,24]. In the second stage, a comprehensive multivariable model was developed using the selected predictor variables. To assess multicollinearity in the final model, we used a variance inflation factor (VIF) cut-off value of 4.00 [25]. Since the VIF values for all variables were below this threshold, all selected variables were included in the final model.

Model performance

We assessed the accuracy of the best model using the Area under the Receiver Operating Characteristic (AUROC) curve, sensitivity, specificity, and the Hosmer–Lemeshow goodness-of-fit test. Higher AUROC values indicated better model performance. In the ROC curve, a lower p-value suggests that the model effectively distinguishes between the two categories, with an area under the curve greater than 0.50 [26]. The Hosmer–Lemeshow goodness-of-fit test evaluates how closely the model's estimated probabilities align with observed outcomes. A p-value greater than 0.05 in the Hosmer–Lemeshow test suggests that the model accurately classifies observations into outcome categories [27].

Results

41 This study involving 355 participants, it was found that patients had a slightly higher level of knowledge and practices regarding breast cancer. The results revealed that a majority of respondents (64.67%) were unaware of the symptoms of breast cancer. Additionally, only a small proportion of respondents (11.11%) regularly performed breast self-examinations, and just 11.21% sought medical help immediately after noticing symptoms. Furthermore, the vast majority (95.21%) had never had a breast exam conducted by a healthcare professional before experiencing any breast issues. Awareness of mammography was also low, with only 6.01% of participants being familiar with the procedure. Regarding personal or family history, 27.92% knew someone close to them who had cancer, but only 9.52% were aware of a family history of breast cancer. In terms of overall knowledge and practice, 53.52% of participants were classified as having "Good" knowledge and practice (mean ≥ 1), while 46.48% were categorized as having "Low" knowledge and practice (mean < 1) on breast cancer (Table 1).

In Table 2, the percentage of patients age with good knowledge and practice on breast cancer was 55.26% for those under 40 years, 56.78% for those between 40 and 59 years, and 43.33% for those aged 60 and above. Regarding geographic location, the percentage of patients with good knowledge and practice on breast cancer ranged from 51.92% in Chittagong to 78.57% in Rangpur. For area of residence, 54.18% of rural residents exhibited good knowledge and practice on breast cancer, while 56.38% of urban residents did. A significant difference emerged in the spouse education level category ($p = 0.029$), patients whose spouses had a secondary or higher education had 59.46% good knowledge and practice, 44.07% in those with spouses with primary education and 59.55% in those with illiterate spouses. In terms of household monthly income, a strong association was found ($p = 0.005$), patients earning more than 20,000 BDT monthly (71.64%) exhibited highest good knowledge and practice on breast cancer, lowest (44.25%) in those with incomes below 5,000 BDT. Patients with portable electronic devices and mass media access showed better knowledge and practice on breast cancer, with 55.49% ($p = 0.027$) of those with devices and 59.03% ($p = 0.086$) of those with mass media access demonstrating good outcomes.

33 In medical history, 56.88% of individuals with symptoms had good knowledge and practice on breast cancer and only 14.29% of individuals without symptoms had the same outcome ($p < 0.001$). First health facility visit showed that 61.05% of patients who first visited a private clinic had good knowledge and practice and lowest 46.67% of those who not visited government or private hospitals. Patients who consumed alternative remedies were less likely to have good knowledge and practice on breast cancer, as only 47.71% of those who used alternative remedies exhibited, where 60.45% of those who did not, with a significant p-value of 0.028. Patients who experienced delays in diagnosis showed a trend toward poorer knowledge and practice (57.73% good knowledge in delayed diagnosis and 42.86% in no delay, $p = 0.017$). Among all patients, 24.58% had good knowledge and practice on breast cancer, while 22.62% did not who feel any discomfort experience ($p = 0.043$) (Table 2).

In the category of family and social support, for those who were recommended to consult with a doctor, 70% of individuals who made the recommendation themselves and had good knowledge and practice on breast cancer followed by, 54.68% from husband, 53.57% from neighbor, 58.57% from sons or daughters, and 53.49% from others, respectively. Regarding the fear or discomfort in talking to a spouse about the issue, 59.26% of individuals who felt uncomfortable had good knowledge and practice on breast cancer and 54.98% had same outcomes who are not in fear to share and comfortable ($p = 0.046$). When considering spousal support after diagnosis, 57.02% of individuals who received support from their spouse had good knowledge and practice on breast cancer, while, a lowest amount (47.83%) of those who

did not receive support ($p = 0.025$). Among all patients, a large amount (62.50%) did not receive support from their social circle and had lower knowledge and practice (Table 2).

The highest proportion of patients expressing no fear or discomfort in discussing their breast cancer problems with their spouse was observed in Rangpur (100%), while the lowest was in Barisal (68.18%). Regarding support from spouses after diagnosis, the highest was in Mymensingh (96.55%), and the lowest was in Barisal (77.27%). For support from their social circle, the highest was in Sylhet (100%), while the lowest was in Barisal (56.00%) (Figure 1).

In the adjusted model (Table 3), several socioeconomic factors were found to influence the odds of demonstrating good knowledge and practice regarding breast cancer. Individuals aged 40–59 and those under 40 had 1.25 times and 1.35 times higher odds, respectively, of exhibiting good knowledge and practice compared to those aged 60 or older. Patients from Rangpur had more than four times higher odds of demonstrating good knowledge and practice compared to those from Barisal (AOR: 4.05, 95% CI: 0.64–8.25). Regarding education, illiterate patients had 66% lower odds of exhibiting good knowledge and practice compared to those with secondary or higher education (AOR: 0.34, 95% CI: 0.12–0.97, $p = 0.046$). Additionally, patients with a monthly income of less than 5000 BDT had 13% lower odds of demonstrating good knowledge and practice compared to those earning over 20,000 BDT (AOR: 0.87, 95% CI: 0.46–0.94, $p < 0.001$). Furthermore, patients with access to portable electronic devices had 1.11 times higher odds of exhibiting good knowledge and practice (AOR: 1.11, 95% CI: 1.07–4.97, $p = 0.022$), and those with access to mass media had significantly higher odds as well (AOR: 1.90).

In terms of medical history, patients who reported symptoms had more than five times higher odds (AOR: 5.55, 95% CI: 1.04–5.33, $p = 0.041$) of demonstrating good knowledge and practice compared to those without symptoms. In contrast, patients who used alternative remedies had 48% lower odds of demonstrating good knowledge and practice (AOR: 0.52, 95% CI: 0.26–0.94, $p = 0.043$). Furthermore, patients who experienced a delay in diagnosis had 58% lower odds of exhibiting good knowledge and practice (AOR: 0.42, 95% CI: 0.22–0.79, $p < 0.001$). On the other hand, those who experienced discomfort had over twice the odds (AOR: 2.33, 95% CI: 1.01–5.57, $p = 0.039$) of demonstrating good knowledge and practice on breast cancer compared to those who did not experience discomfort (Table 3).

Regarding family support, patients who felt uncomfortable discussing their health issues with their spouse had 2.39 times higher odds of demonstrating good knowledge and practice on breast cancer (AOR: 2.39, 95% CI: 1.03–4.79, $p = 0.046$). Additionally, those who received support from their spouse after diagnosis had 21% higher odds (AOR: 1.21, 95% CI: 1.11–2.91, $p = 0.036$) of exhibiting good knowledge and practice. However, patients who received support from their social circle were 46% less likely to demonstrate good knowledge and practice (AOR: 0.54, 95% CI: 0.26–0.89, $p = 0.009$) compared to those who did not receive such support (Table 3).

The adjusted model utilized in this study demonstrated a good fit as it successfully passed the Hosmer and Lemeshow goodness-of-fit test. Furthermore, the classification accuracy was also acceptable, with AUROC values of 74.46%, as shown in Tables 4 and Figure 2.

Discussion

In this study, a significant portion of patients lacked awareness of breast cancer symptoms and did not regularly perform breast checks or seek immediate medical attention upon noticing symptoms. These findings align closely with a previous study, which reported that only half of the respondents recognized a breast mass as a key symptom of breast cancer [28]. A general lack of confidence in the healthcare system, fueled by personal experiences or negative portrayals in the media, led many patients to avoid seeing a healthcare professional [29]. Awareness of mammography and its importance was also limited, with many patients unfamiliar with the procedure. Similar to our findings, Osime et al. reported only 35% mammography awareness among civil servants, while Akinola et al. found a 40.5% awareness level in a hospital sample [30,31].

In terms of personal connections, only a small number of patients knew someone close to them who had been affected by cancer, and even fewer were aware of breast cancer or had a family history of it. A study among urban women in Ahmedabad also found that only a few participants knew that a family history increases the risk of breast cancer [32]. Another study among university female students in Bangladesh found that those with a family history of breast cancer in close relatives had significantly better knowledge of the Breast Self-Examination (BSE) procedure [33]. Regarding overall knowledge and practice, just over half of the patients in our study demonstrated good knowledge and practice about breast cancer. This aligns with findings from a survey in Saudi Arabia, where about 50% of participants exhibited appropriate knowledge [34]. However, some studies have reported poorer knowledge levels [35,36]. For instance, a previous study in Bangladesh found that more than half of participants were unaware of breast cancer risk factors and had limited knowledge on the subject [15,37].

In this study, several factors were significantly associated with patients' knowledge and practice regarding breast cancer, including the educational status of the spouse, household monthly income, use of portable electronic devices, symptoms experienced by patients, use of alternative remedies, diagnosis delay, discomfort, fear of sharing the problem with a spouse, and support received from both spouses and social circles. Patients under the age of 40 and those aged 40-59 had higher odds of demonstrating good knowledge and practice compared to those aged 60 or older. Although not statistically significant, patients from Rangpur showed higher odds of good knowledge and practice compared to those from Barisal. We also observed a slight difference based on area of residence, with urban residents exhibiting a slightly higher percentage of good knowledge and practice than their rural counterparts. Similar to our findings, a study in India found no significant association between demographic variables and breast cancer knowledge levels [38]. However, a notable regional variation in BSE awareness was reported in a large study across 24 low- and middle-income countries by Pengpid and Peltzer [39].

In this study, education level was a significant factor, with illiterate patients having lower odds of demonstrating good knowledge and practice regarding breast cancer compared to those with secondary or higher education. Women with postgraduate degrees had a significantly higher mean knowledge score, which is consistent with findings from other studies [35,36]. A study conducted in Bangladesh found that the number of years spent studying was significantly associated with knowledge about breast cancer symptoms, risk factors, and treatment options, indicating that higher education levels are linked to better breast cancer awareness [33]. Regarding income, patients with household incomes below 5,000 BDT were less likely to exhibit good knowledge and practice compared to those with incomes above 20,000 BDT. This aligns with previous studies showing that women from higher income backgrounds are more aware of screening and exhibit better knowledge and practices [40].

Furthermore, access to technology played a crucial role, as patients with portable electronic devices or mass media access demonstrated significantly better knowledge and practice. This finding echoes the results of Mansour et al., whose study on the role of social media in raising breast cancer awareness in the Gulf Cooperation Council (GCC) area highlighted how social media campaigns can enhance breast cancer awareness and promote screening programs [41].

Patients who reported symptoms had significantly higher odds of demonstrating good knowledge and practice regarding breast cancer. The type of first healthcare facility visited also played a crucial role; those who initially visited a general government hospital or a private clinic/hospital were more likely to demonstrate good knowledge and practice. Diagnosis delays were linked to poorer knowledge and practice, as patients experiencing delays had more than half the odds of achieving good outcomes. This finding aligns with previous studies showing that increased awareness and knowledge about breast cancer and breast self-examination can trigger the recognition of early symptoms and encourage timely healthcare seeking [22,42]. Patients who used alternative remedies were less likely to exhibit good knowledge and practice, with their odds being nearly 50% lower. The use of traditional medicine may negatively impact survival, particularly when it leads to the disease progressing to advanced stages or is used as a substitute for standard cancer treatment. Cooperation with traditional healers and educating them about breast cancer symptoms could help improve early diagnoses [43]. Furthermore, patients who experienced discomfort had more than twice the odds of demonstrating good knowledge and practice on breast cancer.

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Family and social support played a significant role in shaping patients' knowledge and practices. Those who were encouraged to consult a doctor by themselves, their spouses, or close family members had better knowledge and practice outcomes. Research indicates that breast cancer patients value emotional and informational support from both family and healthcare providers. However, further research is needed to better understand the specific types and amounts of social support provided by both family members and healthcare professionals in these settings [44,45]. Interestingly, patients who felt uncomfortable discussing their health with their spouse had higher odds of demonstrating good knowledge and practice, suggesting that discomfort in sharing health issues may motivate greater awareness or action. Companion involvement in decision-making during medical visits is generally seen as beneficial, and while informational support from companions is helpful, emotional support is even more highly valued by cancer patients [44–46].

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As breast cancer can be diagnosed early through screening programs, understanding the barriers to screening is crucial. The results from this study highlight that embarrassment was a primary barrier to participating in breast screening programs. Many participants expressed worry, a lack of knowledge, and a lack of confidence in discussing their health with healthcare providers or others, consistent with previous research [47,48]. Receiving spousal support after diagnosis was linked to better knowledge and practice, with those who received this support showing a 21% increase in the odds of positive outcomes. Emotional and informational support, particularly from providers, family, and friends, has been associated with better mental health, self-efficacy, and improved health-related quality of life for breast cancer patients [49,50]. However, support from the social circle was less likely to lead to good knowledge and practice, suggesting a disconnect between social support and actual health behaviors. This may be because many patients were less inclined to share personal experiences with other women, as discussing such topics is not widely accepted in Bangladeshi society [51].

Our findings highlight a significant gap in awareness and understanding of breast cancer among affected women in society. With proper counseling, educational programs, and increased awareness, the issue of late diagnosis could be addressed, ultimately improving the management of breast cancer patients. The study reveals that inadequate knowledge of breast cancer, combined with social and family-related barriers, contributes to the low level of awareness and poor practices in Bangladesh. Expanding awareness programs and improving the delivery of accurate information could help shift this situation, despite the rising prevalence of breast cancer. Both healthcare professionals and the government must collaborate to create effective policies that promote early diagnosis and raise awareness, not only among women but within society as a whole.

Study strengths and limitation

This study contributes valuable insights into the knowledge and practices related to breast cancer health-seeking behaviors and the perceived social support from family and friends among breast cancer patients in Bangladesh. It fills an important gap in understanding these aspects within the Bangladeshi context.

However, there are several limitations to consider. First, as a cross-sectional study, it is unable to establish cause-and-effect relationships. Second, relying on self-reported data for measurements of self-care practices poses a limitation, as these may not accurately reflect actual behaviors. Additionally, the use of a convenience sample from a breast cancer clinic introduces selection bias, as the study did not include individuals who did not seek medical care. This may result in higher knowledge levels compared to other studies that include women from the general population.

Furthermore, the study is not fully representative of the entire Bangladeshi population. The participants were drawn from a single region, specifically a cancer hospital in the capital, Dhaka, which may not reflect the experiences or knowledge levels of individuals from other areas of the country. Due to socio-cultural constraints, it was difficult to access a broad demographic range, and the research was conducted without external funding, limiting the ability to gather data from other regions of Bangladesh.

Additionally, while the study focused on the role of family and social support, the absence of open-ended questions in the survey means that the qualitative aspects of social support were not fully explored. Including questions about who patients first spoke to about their health issues, or how they felt receiving support from their spouse or social circle, could have provided deeper insights into the role of family and friends in the management process. Future research could benefit from a more diverse sample across different regions and demographic groups to provide a broader understanding of the factors influencing breast cancer awareness and management in Bangladesh.

Conclusions

This study highlights several key factors affecting breast cancer awareness, knowledge, and practices in Bangladesh. The findings point to a significant gap in awareness of breast cancer symptoms, the importance of early detection, and the role of breast self-examination (BSE) in early diagnosis. Despite factors like education level, household income, and access to technology being recognized as influential, many patients still lack the confidence to seek medical attention or engage in preventive practices such as BSE. Additionally, regional differences and socio-cultural barriers, such as discomfort in discussing health issues with spouses and the stigma surrounding breast cancer, contribute to delayed diagnoses and poorer health outcomes.

The study also emphasizes the critical role of family and social support in shaping patients' health-seeking behaviors and knowledge. Patients who received emotional and informational support, particularly from their spouses, demonstrated better knowledge and practices regarding breast cancer. However, the findings suggest that social support does not always lead to improved health behaviors, possibly due to societal norms and misconceptions surrounding breast cancer.

With breast cancer rates on the rise in Bangladesh, there is an urgent need for comprehensive awareness campaigns targeting at-risk populations. These programs should focus on educating women and society about breast cancer, addressing common misconceptions, and promoting early detection through regular screenings and BSE. Healthcare professionals and policymakers must work together to design accessible, culturally sensitive interventions that bridge the knowledge gap, reduce stigma, and ultimately improve early detection and patient outcomes.

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