J MEDICINE 2023; 24: 23-27

Impact of Low-Level Knowledge on Breast Cancer in Bangladeshi Patients during Medical Help Seeking

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Abstract

Overall, knowledge on breast cancer acts as a decision maker for medical help seeking during disease diagnosis and treatment. With this study we determined the impact of knowledge on breast cancer and related causes. A cross sectional study was conducted among newly diagnosed breast cancer patients National Institute of Cancer Research and Hospital, Dhaka from July 2017-June 2018. Face to face interview was taken by pretested semi structured questionnaire asking every breast cancer woman regarding knowledge and practice on sign-symptom, Breast-Self-Examination and mammography. After symptom identification first consultation to health care provider was a critical point and homeopathy was the major mean of first consultation. Breast cancer patients did not know the symptoms might cause cancer and as well negligence also play a role in help seeking. Improved knowledge can increase awareness as well influence practice on Breast-Self-Examination. To overcome this problem massive program is needed for early diagnosis and treatment.

Key words: *Low level of knowledge, medical help seeking, Breast Cancer, Impacts*

DOI: *https://doi.org/10.3329/jom.v24i1.64900*

Received: *08-08-2022;* ***Accepted:*** *14.12.2022*

Introduction:

According to the state of World Health Organization, among the non-communicable diseases cancer holds 2nd position [1]. Globally incidence of breast cancer increases steadily due to increased life expectancies, globalization, and life style changes[2]. Each year, approximately 1.38 million new breast cancer cases were diagnosed with 4.5 lakh death annually.

Knowledge acts as a predisposing factor to change behavior which can improve the health seeking behavior of patients. For that to reduce the breast cancer death, breast self-examination is transformed as breast awareness after 1991[3]. Increase awareness, knowledge results early detection of breast cancer. By early detection survival rate will be increased. There is an inverse association between delay and survival times. Through early diagnosis and treatment 1/3 of the mortalities can be avoided [4]. Beside this, several studies also show that those who were knowledgeable were more likely to practice breast cancer screening[3]. Previously, to evaluate knowledge and awareness different national international strata from rural women, medical /university students were studied [5]. Its symptom did not arrest their daily activities and severity set to low due to lack of breast cancer knowledge [6]. Maximum breast cancer is present as lump, which can be easily detected by breast self- examination, mammography or clinical breast examination. Via step by step approach, every woman can do the self-breast examination properly [7]. The main purpose of this study was to determine the impact of knowledge on breast cancer, their perception on help seeking, relation between help seeking time and its impact. Impacts of knowledge help us to identify the magnitude of the problem. By solving problem, we can prevent 90% of breast cancer death as well metastasis and its complications. Delay in help seeking is likely to affect prognosis and survival of patients.

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Methodology:

A cross sectional study was conducted among newly diagnosed primary carcinoma (breast cancer) patients. Samples were selected following the convenient method of sampling from National Institute of Cancer Research and Hospital, Dhaka from July 2017-June 2018.Patients of breast cancer fulfilling the selection criteria were enrolled as well some were excluded by exclusion. Patients with mental disability, recurrence of breast cancer, treatment failure, incomplete treatment, history of metastasis, hearing impairment and who did not comply with the informed written consent were excluded from the study. Face to face interview was taken from diagnosed breast cancer patients admitted in selected hospital by pretested semi structured questionnaire. Interview was taken to 40 - 45 minutes in length. In total 200 patients completed the interview. The reason for non-completion included being too tired, having poor physical health, lack of interest. Before assessing the impact of knowledge on breast cancer of every woman, base line information regarding knowledge and practice about the sign-symptom, Breast Self-Examination and mammography were asked. Questionnaires were prepared according to Breast module of the Cancer Awareness Measure (Breast-CAM) [8].

The questionnaire included socio demographic questions of patients, as well, questions about help seeking time, cancer stage, first contact with health care service provider, number of consultation(s) for diagnosis of disease, number of consultations for start treatment, perception on help seeking were asked. Clinical information such as stage of disease, type of surgical management was obtained from review of medical records. Questionnaire was prepared by reviewing literatures of qualitative study which was done in South East Asian Region[9-12] and from various models[13, 14]. Written permission was taken from hospital authority before taking interviews. Perspectives of the study were explained to the respondents and informed consent was taken from each respondent. Seeking help for medical treatment to a health care provider and delay means more help seeking time. The ethical clearance was obtained from the Institutional Review Board of NIPSOM and before data collection from National Institute of Cancer Research and Hospital, Mohakhali, Dhaka. Statistical analyses of data were performed by using Statistical Package for Social Sciences (SPSS) for Windows, version 23.0(SPSS Inc.; Chicago, IL, USA). Descriptive statistics were expressed as frequency and percentage with mean and standard deviation where required. Association was seen between help seeking time and other variables of impact of knowledge was done by Pearson's Chi-square (χ^2) 2x2 table and at $p<0.05$ level of significance.

Results:

Among 200 respondents, maximum 91 (45.5%) patients were illiterate and house wife 168(84%), and mean age was 42, 134 (67.0%) patients was present with locally advance stage (stage III). Maximum respondents 93 (46.5%) 1st sought help from the homeopathy, 66 (33%) respondents sought help to post graduate doctor, only 41 (20.5%) respondents consulted to M.B.B.S physician for breast cancer diagnosis. In total, 65 (32.5%) patients were diagnosed as breast cancer in 1stvisit. Maximum 92(46.0%) patients were diagnosed in 2nd visit. Out of 200 patients, no one started treatment in 1st visit. 48 (24%) patients were started treatment in 2nd visit.

Table 1. *Influencing factors impacting on knowledge about among breast cancer patients (n=200)*

Variables	n (%)
Help seeking time (in months)	
1-6	74(37.0)
7-12	60(30.0)
More than 12 months	66(33.0)
Mean± SD	11 ±8.6
First contact with health care service provider	
Homeopathy	93(46.5)
Post graduate physician	66(33.0)
MBBS physician	41(20.5)
Stage of breast cancer	
Stage I	0(0.0)
Stage II	30(15.0)
Stage III	134(67.0)
Stage VI	36(18.0)
Number of consultation(s) for diagnosis of disease	
1st visit	65(32.5)
2nd visit	92(46.0)
3rd visit	30(15.0)
4th visit &5th visit	13 (6.5)
Number of consultation(s) to start treatment	
2nd visit	48(24.0)
3rd visit	88(44.0)
4th visit	40(20.0)
5th visit and 6th visit	24(12.0)
Perception on help seeking	
Did not know it may cause cancer	80(40)
Negligence	62(31)
What would be done after detection of breast cancer	58(29)
Total	200(100)

Influencing factors for delay in help seeking among breast cancer patients were summarized in Figure 1. As a result of low level of knowledge 192 (96 %) patients had wrong perception, 124 (62%) respondents were delayed to seek medical help due to mentally upset, 150 (75%) patients had

poor health care service delivery and utilization and 120 (60 %) patients delayed due to received alternative treatment.

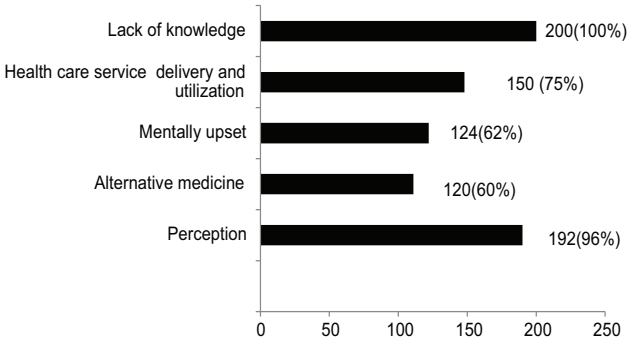

Figure-1. *Impacts on knowledge among breast cancer patients (n= 200)*

Between group comparison:

Association between knowledge with help seeking time of breast cancer patients was summarized in Table 2. Results showed that knowledge was found significantly associated with help seeking time to start treatment (provider delay) and lack of knowledge on first consultation ($p<0.0001$). Help seeking time (total delay) and lack of knowledge on first consultation ($p<0.0001$) had significant association. Lack of knowledge on first consultation had association with occupation ($p=0.045$), and division ($p=0.005$). Family income ($p= 0.021$) and education ($p=0.001$) was also significantly associated with the statement "what would be done for earlier detection of breast cancer". Help seeking time was associated with negligence ($p<0.0001$) and education ($p=0.037$), and also with the statement "did not know it may cause cancer", ($p=0.025$).

Table 2. *Association between knowledge and help seeking time (n=200)*

Different variables on knowledge	Help seeking time; n (%)		Comments
	<6 months	>6 months	(χ^2, df=1)
Help seeking time to start treatment	44(45.8%)	52(54.2%)	20.480,
(provider delay) and lack of knowledge on	80(76.9%)	24(23.1%)	p<0.0001
first consultation			
Help seeking time (total delay) on first	19(19.8%)	77(80.2%)	17.674,
consultation	50(48.1%)	54(51.9%)	p<0.0001
Lack of knowledge on first consultation	11 (32.4%)	23(67.6%)	4.018,
association with occupation	85(51.2%)	81(48.8%)	p= 0.045
Lack of knowledge on first consultation	39(38.2%)	63(61.8%)	7.952,
association with division	57(58.2%)	41(41.8%)	p= 0.005
What would be done after detection of breast	41(70.7%)	122(85.9%)	5.362,
cancer was associated with family income	17(29.3%)	20(14.1%)	p=0.021
What would be done after detection of breast	16(27.6%)	75(52.8%)	10.572,
cancer was associated with education	42(72.4%)	67(47.2%)	p= 0.001
Negligence was associated with education	35(56.5%)	56(40.6%)	4.346,
	27(43.5%)	82(59.4%)	p= 0.037
Negligence was associated with help seeking	10(16.1%)	52(83.9%)	13.420,
time	59(42.8%)	79(57.2%)	p<0.0001
Help seeking time was associated with the	34(28.3%)	86(71.7%)	5.048,
statement "did not know it may cause cancer"	35(43.8%)	45(56.3%)	p=0 .025

Discussion

The study was done at National institute of Cancer Research and Hospital (NICRH), Dhaka. Generalization was assured as because patients from whole country came to this only public cancer hospital for treatment and diagnosis and for that their socio-demographic characteristics were almost same. To avoid recall bias newly diagnosed primary carcinoma (breast cancer) patients were selected. Women were asked about practice of Breast Self-Examination and mammography but it was shocking that before diagnosis of breast cancer, no one practiced Breast Self-Examination and as well, no one had ever done mammography. In a study it was found that in Bangladesh, there is no population-based mammography screening program and it seems that it is not feasible and realistic approach for a limited resource country. However, there should be some sort of awareness program to educate mass people regarding breast cancer sign symptoms and BSE, so that women health seeking behavior can be improved and early diagnosis become possible[3]. Breast cancer patients did not know to whom they go first after identifying breast lump. As because of low level of knowledge most of the patients 1st sought help from the homeopathy. In total, 46 % patients were diagnosed at 2nd visit and 24% patients were started treatment in 2ndvisit which was similar with a study[15]. As a result of low level of knowledge 96 %patients had wrong perception, 62%respondents were delayed to seek medical help due to mentally upset, 75% patients had poor health care service delivery and utilization and 60 % patients delayed due to received alternative treatment. In a study it was found that about one third women could not interpret breast lump properly. They expressed that it did not need to seek any medical attention. They discerned that the lump to be due to normal hormonal changes (affecting women at menopausal age) or to breastfeeding. The proper interpretation of a breast lump was positively associated with general knowledge p = <0.001 (OR 1.26 CI 95% 1.12–1.41)[16]. In another study it was found that due to lack of knowledge maximum breast cancer patients had following perception which made them delay to medical help seeking. Such as 90.5% women were agreed with the statement, 'I was healthy'. 81.0% agreed with the statement, 'wait and see what would be happen'. Perception on breast cancer treatment outcome was summarized as, 79.5% patients perceived that cancer would be cure by treatment, 14.5% respondents perceived to partially cure and 6 % perceived never cure[15]. As a consequence of lack of knowledge maximum patients use alternative medicine which made them delay in medical help seeking. In a study, as first contact with health care service provider 46.5% respondents use alternative medicine. Among them, 86.02% respondents use homeopathy, 58% patients use alternative medicine at any pathway of their diagnosis and treatment. Low level of knowledge caused to delay in consult with cancer specialist, 49.740, p<0.0001[17]. Due to low level of knowledge, patients' were mentally upset and period of time between the initial medical consultation and definitive treatment of the cancer were delayed (Provider Delay) 5.207, p=0 .022[4]. Because this was a cross-sectional study, inference could not be done clearly. There was a chance of recall bias. A large sample size and in-depth interview could provide more reliable information. Despite of hospital-based study due to one specialized cancer hospital in Bangladesh whole cancer patients ultimately came to this hospital. That's why the study represents the whole country.

Conclusion:

Improved knowledge can increase awareness as well influence practice on Breast-Self-Examination. To overcome this problem, policy should be prioritized on top for early diagnosis and treatment of breast cancer.

Ethical Issue:

The ethical clearance was obtained from the Institutional Review Board of NIPSOM and before data collection from National Institute of Cancer Research and Hospital, Mohakhali, Dhaka

Conflict of Interest:

The authors have no conflicts of interest to declare**.**

Acknowledgement:

I deeply acknowledge and express my gratitude to Prof. Dr. Mizanur Rahman, Oncology Surgeon, Department of National Institute of Cancer Research and Hospital, Mohakhali, Dhaka, for his valuable suggestion and cooperation to carry out my study. I am also grateful Prof Dr. Ziaul Islam, Department of Community Medicine, NIPSOM, Dhaka for helping about analyzing the data and expressing statistical part.

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