



## Care seeking behavior of premenopausal women with breast carcinoma

Most. Baby Naznin<sup>1\*</sup>, Fahmida Akter<sup>2</sup>, Md. Pilot Hossen<sup>3</sup>

<sup>1</sup>Department of Reproductive and Child Health, National Institute of Preventive and Social Medicine (NIPSOM), Mohakhali, Dhaka

<sup>2</sup>Department of Epidemiology, National Institute of Preventive and Social Medicine (NIPSOM), Mohakhali, Dhaka

<sup>3</sup>Department of Public Health and Hospital Administration, National Institute of Preventive and Social Medicine (NIPSOM) Mohakhali, Dhaka-1212

### ARTICLE INFO

#### Article history

Received: 30 September 2023

Accepted: 29 October 2023

#### Keywords

Care Seeking Behavior,  
Premenopausal Women,  
Breast cancer

#### Corresponding Author

Most. Baby Naznin  
✉babynipsom@gmail.com

### ABSTRACT

Breast cancer is a rising challenge as women cancers differ markedly from all cancers in their nature, distribution and prognosis and mortality. This cross-sectional study was conducted among two hundred breast cancer patients attending specialized hospitals to determine the care seeking behavior of premenopausal women with breast cancer and factors associated with it. Study subjects were selected purposively and data were collected by face-to-face interview and medical records review. Among the respondents, majority (50 %) was within 40 to 44 years age group and mostly married (94%). More than half lived in rural area and majority of the patients (35.5%) were completed primary education. Maximum (42.5%) were housewives and had monthly family income within 10000-20000 taka (20.5%). Maximum age at menarche was 12 years and married  $\leq 20$  years and use contraceptives (97%). Majority (99.9%) mentioned that, the knowledge on sign/symptom of breast cancer were lump or thickening in the breast. Majority (81.5%) of the respondents did not perform self-examination of breast and went to the village doctor (53.5%) and received allopathic advice (66.5%). Most (73%) mentioned that, they started treatment for breast cancer just after appearance of symptoms occurred. The proportion of the respondents who went to the MBBS doctor was significantly higher with monthly family income more than 20000 taka ( $p < 0.001$ ) and the proportion of the respondents went to the village doctor was significantly higher who were residing nuclear family ( $p < 0.001$ ). The proportion of the primary educated respondents who went to the village doctor was significantly higher ( $p < 0.001$ ). Further indepth research is required for better understanding of association between the care seeking behavior and associated others factors.

### INTRODUCTION

According to a recent report of the World Health Organization (WHO), breast cancer has been identified as the second deadly disease across the world. The number of women afflicted by breast cancer is on gradual rise in the country as they are more prone cancer type among the global female population with 1.35 million new cases every year. South Asian countries are facing a hidden breast cancer epidemic. A significant proportion of the breast cancer cases occur in premenopausal women. Knowledge of the various aspects of breast cancer in different geographical regions is limited in south Asia. South Asia, the home of approximately 588 million women over 15 years of age, faces a growing breast cancer epidemic, as the incidence of breast cancer is increasing

dramatically. It is estimated that 69% of breast cancer deaths occurred in developing countries. In Bangladesh, the rate of breast cancer occurrence is estimated to be 22.5 per 100,000 females of all ages, compared to 124.8 per 100,000 females worldwide. For Bangladeshi women aged between 15-44 years, breast cancer has the highest rate of occurrence – 19.3 per 100,000.

Breast cancer is the most common cancer in women worldwide. Even though the incidence of breast cancer in developing countries is lower than in their Western counterparts, it is rising rapidly. According to GLOBOCAN estimates, more than half (52.9%) of 1.67 million new breast cancer cases were diagnosed in developing countries in 2012, while the corresponding figure for 1980 was only 35%. Although in developed countries breast

cancer is mainly a disease of postmenopausal women (50 years), almost half of all breast cancer cases (45%) in developing countries in 2010 were diagnosed in women of reproductive age (15–49 years). In Asia, the incidence of breast cancer peaks among premenopausal women in their forties, whereas among postmenopausal women in Western countries it peaks in their sixties. The mortality of breast cancer is significantly higher in developing countries than in high-income countries. In 2012 nearly 62% of deaths associated with breast cancer occurred in developing countries.

South Asia, the home of approximately 588 million women over 15 years of age, faces a growing breast cancer epidemic, as the incidence of breast cancer is increasing dramatically. Information concerning the epidemiology, biology, and different environmental backgrounds of breast cancer are scarce in South Asia. None of the South Asian countries have central cancer registries which could provide comprehensive nationwide data. All population based epidemiological data in this region have been obtained from 25 Indian population-based cancer registries (that cover only 7.5% of the total Indian population) and a single Pakistani cancer registry (coverage 1%). An estimate of over 200,000 new breast cancer cases occurred in South Asia in 2012, and approximately 97,500 breast cancer patients died. Currently breast cancer has overtaken cervical cancer as the most common cancer in South Asian women. Recent studies have indicated that exposure to light pollution is a risk factor for the development of breast cancer (Haim et al., 2013). The most widely used system in the U.S. is the American Joint Committee on Cancer Staging system is TNM system. There are five major staging groups, stage 0 to stage IV (NCI, 2005). The earliest breast cancers are detected by a mammogram (American Cancer Society, 2007). Breast cancer is diagnosed with physician and self-examination of the breasts, mammography, ultrasound testing, and biopsy (Jerry et al., 2013).

Treatment of breast cancer depends on the type of cancer and its stage (the extent of spread in the body). Most women with breast cancer will require surgery. Broadly, the surgical therapies for breast cancer can be divided into breast conserving

surgery and mastectomy. Radiation therapy destroys cancer cells with high energy rays. There are external beam radiations, brachytherapy, chemotherapy, hormone therapy, targeted therapy. Occasionally, breast cancer presents as metastatic disease. Common sites of metastasis include bone, liver, lung and brain (Lacroix, 2006). To determine if the cancer has spread, several different imaging techniques can be used: chest x-ray, mammograms, computerized tomography (CT scan), bone scan, positron emission tomography (PET scan) (Jerry et al., 2013).

According to the International Association of Research on Cancer (IARC, 2002) of the World Health Organization. Recent global cancer statistics indicate a rising global incidence of breast cancer and the increase is occurring at a faster rate in populations of the developing countries that previously enjoyed a low incidence of the disease (Adebamowo and Ajayi, 2000; Parkin et al., 2004; IARC, 2004).

Patients with family history or specific risk factors might have a different screening schedule including starting screening mammograms at an earlier age (Jerry et al., 2013). The majority of women report knowing they have a breast problem, often for a long period of time, but that they consciously choose not to seek care. Many reasons cited for this included mistrust of the doctor (having experienced or seen examples of bad treatment in the past), wanting to see a female doctor (women are embarrassed to show their bodies to a male doctor, yet female doctors are the exception), preferring to use alternative medicine first (homeopathic, spiritual healers, and ayurveda), feeling too much responsibility to the family (child and elder care, cooking, and cleaning) to leave for her own care, and fears that if she is diagnosed with cancer that it will ruin her family financially or that her husband will leave her as a result. It's true, men are not always supportive. Cancer is costly, so they won't take us to the hospital for treatment (Story et al., 2012).

The majority of breast cancer death occurs in developing countries (Porter, 2008). Mortality reduction achieved in the last decades in developed countries has not been achieved in developing countries mainly because of a lack of

access to early medical attention (McCoy et al., 2004). Most cancer in low- and middle-income countries (LMC) is detected at later stages than in high-income countries (Sloan and Gelband, 2007). It is commonly assumed that this late diagnosis is due to the population's lack of information and to deficient coverage of screening programs. However, there are very few research studies on the reasons behind delayed medical attention for breast cancer in women in underdeveloped countries (Karla, Claudia 2009).

If untreated, a malignant breast tumor could advance in stage, diminishing a Woman's chances of survival. Therefore, identifying factors which contribute to delays in accessing medical intervention has been a continued focus of cancer researchers throughout the world (Noreen, 1993). In high income countries, mortality rates have steadily declined over time as a result of early detection resulting in more favorable breast cancer stage distribution and improved treatment. Conversely the situation in low income countries characterized by medically underserved communities is still bleak. The reasons adduced for the differences in mortality rates include advanced stages at presentation, worse biologic behavior, poor treatment facilities and poor patient acceptance of recommended treatment which have been linked ignorance, superstition, self-denial, and fear of mastectomy and unavailability of treatment facilities (Stanley, 2011). Despite improvements in cancer screening, early detection, and treatment, breast carcinoma remains the most frequently diagnosed cancer in women and the second most common cause of cancer deaths in women in the United States (Oluwole et al., 2003).

## MATERIALS AND METHODS

### Study place and participant

A cross sectional study was conducted to assess the care seeking behavior of premenopausal women with breast carcinoma patients. This study was conducted one year from January to December 2015. Initially protocol was developed and approved by the protocol approval committee of NIPSOM followed by data collection, data processing, analysis, report writing. The study was conducted in the following hospital: National

Institute of Cancer Research & Hospital (NICRH), Dhaka Medical College & Hospital (DMCH) and Ahsania Mission Cancer Hospital.

### Sample size and sampling technique

The sample size was determined with the following formula:

$$n = \frac{z^2 pq}{d^2}$$

Where, n = the desired sample size

z = at 95% confidence level usual value is 1.96

p = the proportion of target population

Prevalence of first contact of physician, p=50% (0.50)

$$q = 1 - p \\ = 0.50$$

d = Standard error, 5 % ( 0.05)

$$\text{So, } n = \frac{(1.96)^2 \times 0.50 \times 0.50}{(0.05)^2} \\ = 384$$

Purposive sampling was adopted to conduct this study in the OPD and indoor wards of the selected hospitals.

### Data collection instrument and technique

Semi- structured questionnaire was used to collect data. Face to face interview technique and medical record review were applied to collect data.

### Data processing and analysis

The data were checked and cleaned; followed by editing, coding and categorizing to detect errors or omissions and to maintain consistency and validity. All data were analyzed by using the "Statistical Package for Social Sciences (SPSS)" software: 20-version. For descriptive statistics means, medians, standard deviations & frequency of the variables and inferential statistics Chi square test were done to determine the association.

### Ethical issues

Ethical clearance was taken from ethical committee of NIPSOM prior to initiation of study. Informed written consent was taken from the respondents before interview. Privacy of the

respondent was maintained and interview was not disclosed to any unauthorized person.

## RESULTS

A cross sectional study was conducted among 200 participants. The study revealed following finding in respect of socio-demographic characteristics, information regarding care seeking behavior of the respondents and factors associated with it.

Among respondents, majority [71(35.5%)] were completed primary education. 67(33.5%) respondents were completed secondary and higher secondary education, 40(20 %) were completed

Illiterate and can sign only, 22 (11%) were found to have graduation and higher graduation. majority [165(82.5%)] were housewives. This study reveals that were doing farmer, 4 (2%) were day laborer, and the rest [7(3.5%)] were unemployed. Majority [110(55%)] lived in rural area and the rest [90(45%)] lived in urban area. It was found that, majority [82(41%)] respondent's monthly family income < 10000 takas. Maximum [114 (57%)] belonged to nuclear family and the rest [75(62.5%)] were within 1-5-member group (Mean-5.01, Std. Deviation- $\pm$ 1.32, minimum-1, maximum-8) (Table 1).

**Table 1:** Distribution of Socio-demographic characteristics of the respondents

Variables	Categories	Frequency(f)	Percent (%)
Age	30-34	27	13.5
	35-39	72	36
	40-44	101	50.5
Marital Status	Married	188	94
	Divorced	8	4
	Unmarried	3	1.5
	Separation	1	0.5
Religion	Muslim	159	79.5
	Hindu	33	16.5
	Christian	7	3.5
	Buddist	1	0.5
Educational qualification	Illiterate and can sign only	40	20
	Primary	71	35.5
	Secondary and higher secondary	67	33.5
	Graduation and higher	22	11
Occupation	Housewife	165	82.5
	Maid servant	2	1
	Service	25	12.5
	Business	8	4
Residence	Urban	90	45
	Rural	110	55
Monthly family income	<10000	82	41
	10000-20000	41	20.5
	>20000	77	38.5
Type of family	Nuclear	114	57
	Joint	86	43

### Breast cancer related information

In this study, out of 200 respondents, majority [163(81.5%)] did not performed breast

examination by themselves and the rest [37(18.5%)] performed breast self-examination (Table 2).

**Table 2:** Distribution of the respondents by their Breast cancer related information

Variables	Categories	Frequency (n)	Percentage(%)
Breast self-examination	Yes	37	18.5
	No	16	81.5
Sign/symptoms of breast cancer	Lump/thickening in the breast	199	99.5
	Change in size or shape of the breast	144	57
	Change in skin color and puckering of skin	43	21
	Discharge from the nipple	80	40
	Inverted nipple	78	39.5
Breast cancer curable	Curable if detected early	150	75
	Can be controlled	49	24.5
	Don't Know	1	0.5
Diagnostic of breast cancer	Mammography	128	64
	FNAC	46	23
	Biopsy	2	1
	Don't know	24	12

**Reproductive related information:**

In this study mean age at menarche was 12.31±1.11, minimum age was 9 and maximum was 15 years.

**Table 3:** Distribution of the respondents by their reproductive related information

Variables	Categories	n	%
Age at menarche	9-11 years	37	18.5
	12-14	157	78.5
	≥15	6	3
Age at marriage	≤20	185	92.5
	>20	12	6
No of Children	<3	145	73.5
	≥3	52	26
Breast feed	Yes	194	97
	No	6	3
Family planning	Yes	194	97
	No	6	3

**Care seeking behavior related information**

This study revealed that out of 200 respondents, 130 (65%) respondents stay within (3-5) kilometers distance from the hospital, 41(20.5%) within (6-8) kilometers and the rest 29(14.5%) respondents stay in within (0-2) kilometers from the hospital (Table 4).

**Table 4:** Distribution of the respondents by their Care seeking behavior related information

Variables	Categories	n	%
Distance	0-2 km	29	14.5
	3-5 km	130	65
	6-8km	41	20.5
Heard	Yes	132	66
	No	68	34
Probable causes	Heridity	56	28
	Age	6	3
	Parity	7	3.5
	Contraceptive	2	1
	No breast feed	5	2.5
Family history	Don't know	124	62
	Yes	184	92
	No	16	8
Care seeking	Pharmacy	6	3
	Khabiraj	26	13
	MBBS doctor	61	30.5
Received Care	Village doctor	107	53.5
	Allopathic	133	66.5
	Homeopathy	67	33.5
Specialized treatment	Yes	119	59.5
	No	81	40.5
Way to reach the physician	by herself	171	85.5
	by the help of others	29	14.5
	Immediately	54	27
Initiation treatment	Appear of symptoms	146	73

**Table 5:** Association between level of education and first visit for treatment of breast cancer of the respondents

Level of Education	First contact for treatment of breast cancer				Total number	p-value
	Pharmacy	Khabiraj	MBBS doctor	Village doctor		
Illiterate and can sign	1(3.8%)	5(19.2%)	4(11.1%)	30(83.3%)	40	*p>0.001
Primary	2(3.7%)	13(24.1%)	14(25.9%)	42 (50%)	71	
Secondary and higher secondary	3(3.6%)	6(7.1%)	33(39.3%)	25(46.3%)	67	
Graduation and above	0(0.0%)	2(5.6%)	10(38.5%)	10(38.5%)	22	
Total	6	26	61	107	200	

\* Fisher's exact test.

**Table 6:** Association between type of family and first visit for treatment of breast cancer of the respondents

Type of family	First contact for treatment of breast cancer				Total	p-value
	Pharmacy	Khabiraj	MBBSdoc	Village doctor		
Nuclear family	4(3.5 %)	12(10.5%)	35(30.7%)	63(55.3%)	114	*
Joint family	2(2.6% %)	14(16.3%)	26(30.2%)	44(51.2%)	86	p<0.001
Total	6	26	61	107	200	

\*Chi-square test

**Table 7:** Association between monthly family income and first visit for treatment of breast cancer of the respondents

Monthly family income	First visit for treatment of breast cancer				Total	p-Value
	Pharmacy	Khabiraj	MBBS doctor	Village doctor		
<10000	2(2.2 %)	17(18.5%)	14(20.9 %)	49(73.1%)	82	*p<0.001
10000-20000	3(7.3%)	6(14.6%)	8(19.5%)	24 (58.5%)	41	
> 20000	1(1.5%)	3(4.5%)	39(42.4%)	34(37%)	77	
Total	6	26	61	107	200	

\*Chi-square test.

**Table 8:** Association between level of education and perform self-examination of breast

Level of education	Perform self-examination of breast		Total number	P-value
	Yes	No		
Illiterate and can sign only	7(17.5%)	33(82.5%)	40	*P<0.001
Primary	11(15.5%)	60(84.5%)	71	
Secondary and higher secondary	10(14.9%)	57(85.1%)	67	
Graduation and higher graduation	9(40.9 %)	13(59.1%)	22	
Total	37	163	200	

\*Chi-square test.

It was seen that there was association was conducted in between different variable. The association between education and first visit for treatment of breast cancer was invalid. Fisher's

Exact test was done (p<0.001) (Table 5). The association between type of family and first visit for treatment of breast cancer was not significant ( $\chi^2=1.634$ , df =3, p<0.001) (Table 6). The

association between type of family and first visit for treatment of breast cancer was not significant ( $\chi^2=1.634$ ,  $df=3$ ,  $p<0.001$ ) (Table 7). In the association between level of education and perform breast self-examination of woman of the respondents (Table 8), it is seen that among 40 illiterate and can sign only respondents performed self-examination of breast 7(17.5%) and no performed 33(82.5%). Association between level of education and perform self-examination of breast was found to be statistically significant ( $\chi^2=9.945$ ,  $df=3$ ,  $p<0.001$ ).

## DISCUSSION

This cross-sectional study entitled “Care Seeking Behavior of Premenopausal Women with Breast Carcinoma” was carried out among 200 participants in three hospital of Dhaka city. Among the participants, mean age was 38.22( $\pm 4.37$ SD) years, minimum age was 30 years and maximum age was 44.00 years. Majority of the respondents [101(50.5%)] were within 40 to 44 years age group. Another study showed that mean age of patients was 41 years, SD 12 years, and largest proportion of patients in 35 to 54 years age group (Talukder et al., 2009).

Maximum respondents 188(94.0%) were married, 8(4.0 %) were divorced, 3(1.5%) were unmarried and the rest 1(0.5 %) were separated and most of the respondents 165(82.5%) were housewives, 25 (12.5%) were service holders, 8 (4%) was doing business and the rest 2(1%) were servant in the house. Dowla (2011) found that most of the breast cancer patients are married and it were 87%. Maximum [184(92%)] have no family history of breast cancer and the rest [16(8%)] have history of breast cancer. The study of Samuel Y.O et al showed that 5% breast cancer patients have family history positive (Samuel et al., 2012)

Majority [113 (56.5%)] respondents mentioned that, they did not know the probable causes of breast cancer. 61(30.5%) thought the probable causes of breast cancer for heredity, 8(4%) parity, 6(3%) mention age and no breast fed, 4(2%) mentioned others and the rest [2(1%)] respondents mentioned that, the probable causes of breast cancer were contraceptives. The study of Samuel Y.O et al found that only 8.2% mentioned the

probable causes of breast cancer were increasing age, smoking 6.3%, obesity 1%, late menarche 5% and benign breast disease 4.2 % (Samuel Y.O et al, 2012).

It was found that most of respondents were lump or thickening in the breast, 114(57.0%) were Change in size or shape of the breast, 80(40%) discharge from the nipple, 78(39.0%) Inverted nipple and the rest 43(21.5 %) were change in skin color and puckering of skin. Another study showed changes in breast size and shape (15.6%), breast lump (46.6%) nipple discharge (13.1%) nipple retraction (5.5%), palpable axillary lymph nodes (0.4%) (Samuel et al., 2012). Association between level of education and perform self-examination of breast was found to be statistically significant ( $\chi^2=9.945$ ,  $df=3$ ,  $p<0.001$ ).

The association between education and first visit for treatment of breast cancer was found statistically significant ( $p>0.001$ ). The levels of education and the self-reported knowledge about the disease with higher levels education being associated with higher levels of appreciation about the disease  $p<0.001$  (Samuel et al., 2012).

## CONCLUSION

Breast cancer is one of the non-communicable diseases in Bangladesh. It is a common cancer in female. In this study, maximum breast cancer occurs in (40-44) age group and most of the participants came from urban areas and middle-income class. Majority was housewives and not highly educated. Maximum had knowledge about lump or thickening in the breast. Most of the participants went to the village doctor and received allopathic treatment by the help of others. This study reveals that highly educated respondents were aware of breast cancer and performed self-examination of breast.

## RECOMMENDATIONS

Government should take integrated approach with different ministries-and with NGOs to facilitate the District Hospital for early diagnosis of breast cancer. Specific measure like subsidized or free of cost clinical services should be made available for early detection and prompt treatment for

economically vulnerable of those patients. Necessary action should be taken for the women of rural and urban awareness about breast cancer by using mass media. Specific policy and strategies like cancer surveillance, cancer registration should be ensured throughout the country for detection, prompt treatment of breast cancer to reduce morbidity and mortality of breast cancer patients.

## REFERENCES

- Adams E, Boulton M and Watson E (2009). The information needs of partners and family members of cancer patients: a systematic literature review. *Patient Education and Counseling*, 77: 179-86.
- Adebamowo CA and Ajayi OO (2000). Breast Cancer in Nigeria. *West African Journal of Medicine*, 19 (3):179-91.
- Ahmed M, Hossain M. A, and Chowdhury MR (2009), Informal sector providers in Bangladesh: how equipped are they to provide national health care? *Health policy and Planning*, 24(6): 467478.
- Akter T and Islam S (2006). Dhaka medical college hospital: a diagnostic study," 2006.
- American cancer Society (2007). "Cancer Facts & Figures 2007". Archived from the original on 10 April 2007. Retrieved 2007:04-26.
- American Cancer Society (2005) 'Breast Cancer Facts & Figures 2005-2006', Atlanta.
- Breast Cancer in Bangladesh, DNAanonymous, January 20, 2013. Breast Cancer in Young women, WebMD, Retrieved September 2009.
- Breast cancer: statistics on Incidence, Survival, and Screening". Imaginis corporation' 2006. Retrieved 2006- 10-09.
- Haim, Abraham, Portnov, Biris P, Light Pollution as new risk factor for human Breast and Prostate Cancers 201 3, ISBN 978- 94-007-6220-6. IARC. 7th Ed. Lyon Press; 2002.
- International Association for Research on Cancer Handbook of Cancer: pp. 7-12. IARC. Lyon: IARC Press; 2004, GLOBOCAN: Cancer incidence Mortality and Prevalence Worldwide Cancer Base. No 5.
- Jerry R and Balentine, Do, FACEP (2013). Melissa Conrad stoppler, Breast Cancer 2013 Medicine net on health.com.
- Lacroix M (2006). Significance detection and markers of disseminated breast cancer cells". *Endocrine-related Cancer* 13 (4): 103347. doi: 10.1677/ERC-06-00011.
- Lambert S, Loisel C and McDonald M (2009). An in-depth exploration of information seeking behavior among individuals with cancer: part 2: understanding patterns of information disinterest and avoidance. *Cancer Nursing*, 32(1):26-36.
- Lacroix M (2011). *A Concise History of Breast Cancer USA*: Nova Science Publishers. pp. 59-68, ISBN 978-1-61122-305-7.
- Mabud M.A. Demographic implications for health human resources for Bangladesh" Center for Health; Population and Development, independent University, Bangladesh, 2005.
- Mac Arthur C and Smith A (1981). Delay in breast cancer and the nature of presenting symptoms *Lancet*, 317, 8220, P601-603.
- McCoy CB, Pereyra M, Metsch LR, Collado-Mesa Messiah SF and Sears SA (2004). Community-based breast cancer screening program for medically underserved women: its effect on disease stage at diagnosis and on hazard of death. *Revista Panamericana de Salud Pública*, 2004; 15(3):160-7.
- Merck Manual of Diagnosis and Therapy (2003). Breast Disorders, Breast Cancer. Retrieved 2008-02-05
- Noreen CF (1993). Delay versus help seeking for breast cancer symptoms: A critical review of the literature patient and provider delay. *Social Science Medicine*, 36(12):1521-1534.
- Olson JS (2002). *Bathsheba's breast: women, cancer & history*. Baltimore: The Johns Hopkins University Press. Pp.1. ISBN 0-8018-6936-6.
- Oluwole SF, Ali AO, Adu A, Blane BP, Barlow B, Oropeza R and Freeman HP (2003). Impact of a Cancer Screening Program on Breast Cancer Stage at Diagnosis in a Medically underserved urban community. *Journal of the American College of Surgeons*, 196: 180-188.
- Samuel YO, Martin B and Joel Y (2012). Knowledge, attitudes, beliefs, behavior and breast cancer screening practices in Ghana west Africa, v.11; 2012, Ghana. *The Pan African Medical Journal*, 11:28.
- Sankaranarayanan R, Roger JB, Parkin DM (1998). Edition, Illustrated; Publisher, International Agency for Research on Cancer, 1998.
- Screening for Breast Cancer. 2002; U.S. Preventative Services Task Force, Retrieved February 28, 2007 from <http://www.ahrq.gov/clinic/uspstf/uspstfbrca.htm>.
- Stanley NCA, Ochonma AE, Eric CI (2011). Acceptance and adherence to treatment among breast cancer patients in Eastern Nigeria 2011; s5 1-s53.
- The History of Cancer. American Cancer Society. 25 March 2002. Retrieved 2006- 10 09.
- The World Bank. Country health system profile-Bangladesh-health resources," [http://www.searo.who.int/en/Section313/Section1515\\_6125.htm/](http://www.searo.who.int/en/Section313/Section1515_6125.htm/)



Unger-Saidana K and Infante-Castaneda C (2009). Delay of medical care for symptomatic Breast cancer: A literature review. *Salud Pública de México*, 2009; 51 suppl 2:S270-S285.

Watson M (2008). Assessment of suspected cancer. *InnovAiT*, 1(2), 94-107.doi: 10 .1093/innovait/inn001.

Wilson CM, Tobin S and Young RC (2004). The exploding worldwide cancer burden: the impact of

cancer on women." *International Journal of Gynecological Cancer*, 14(1):1-11. World Cancer Report.

International Agency for Research on Cancer (2008). Retrieved 2011-02-26. (Cancer statistics often exclude non-melanoma skin cancers such as basal-cell carcinoma, which are common but rarely fatal).