

Knowledge, Attitude, and Practice of Breast Self- Examination among Women in Bangladesh

Mosammat Beauty Begum¹; Fahima Khatun²; Dipali Rani Mallick³

¹. Senior Staff Nurse, National Institute of Diseases of the Chest and Hospital(NIDCH) Mohakhali, Dhaka 1212, Bangladesh.

². Faculty of Women's Health Nursing and Midwifery, National Institute of Advanced Nursing Education and Research (NIANER) Mugda, Dhaka, Bangladesh.

³. Faculty of Women's Health Nursing and Midwifery, National Institute of Advanced Nursing Education and Research (NIANER), Mugda, Dhaka, Bangladesh

Corresponding Author- Mosammat Beauty Begum.E mail address- beautymsn2017@gmail.com

Abstract

Introduction: Breast cancer is the 1st leading cause of death among women in Bangladesh. Breast Self-examination (BSE) can contribute in early detection about 60% of breast cancer that every woman should practice for early treatment. **Aims and Objective:** To assess the knowledge, attitude, and practice of BSE among women. **Methods:** A descriptive correlational study was conducted with a sample of 172 those were conveniently selected from Dhaka Medical College Hospital, Dhaka, Bangladesh. Data were collected by the researcher using face-to-face interview with a standard Breast Self-Examination scale of 43 items in 3 dimensions of BSE Knowledge, Attitude, and Practice. Data were analyzed using descriptive statistics (frequencies, percentages, mean, SD) and inferential statistics two sample t-test, ANOVA and Pearson correlation. **Results:** The mean age of the participants was 32.93 years, and about 49.4% of their education was below secondary school. Majority (95.9%) had poor BSE knowledge and 83.7% had negative attitude towards BSE. The BSE was performed by only 6.4% women. Findings showed that BSE Knowledge and practice was significantly ($F = 9.53$; $p = .000$; $F = 5.73$; $p = .004$) related with women's higher education and also BSE knowledge and practice was significantly ($t = 3.48$; $p = .001$; $t = -1.11$, $p = .029$) related to the women's who were known someone with breast cancer. The relationship of BSE knowledge and attitude were revealed positive correlation ($r = .622$; $p = .000$; $r = .290$, $p = .000$) to practice BSE. **Conclusion:** Result suggested that education, BSE knowledge, and attitude influenced to practice BSE. Therefore, nursing educational program on BSE is recommended.

Key words: BSE, Knowledge, Attitude, Practice, Women, Bangladesh.

Date of Submission: 18-09-2019

Date of Acceptance: 05-10-2019

I. Introduction

Breast self-examination (BSE) is an effective and cost free method for early detection of any change in breast⁴¹ that leads to early diagnosis and makes women more aware about breast cancer^{11,12}. Breast cancer is the major public health problem commonly caused of female malignancy refers to higher level of morbidity and mortality²⁰ need huge amount of medical attention and treatment cost.

Worldwide the prevalence of breast cancer was reported as nearly 14.5 million in 2014 which assumes to rise up to 19 million by the year of 2024^{3,4}. It is reported that more than 2.1 million women per year newly diagnosed and half million deaths occur which is as high as all of death⁴⁵ and from all of cancer, 16% of female are diagnosed by breast cancer which is more common in female than male⁴⁴. In developed countries breast cancer is a post-menopausal (50 years) disease but in developing countries 45% of reproductive age group (15-49) are diagnosed and 21% death occurs with breast cancer¹⁴.

In developing countries breast cancer is spreading day by day⁴⁵ as reported in Arab world increasing (28%)^{13,17} compared to western countries, the U.S.A 12%⁴⁶, UK 16.7%⁸ and Australia 28 %⁶. Neighboring country in India, the incidence of breast cancer is twice more in urban woman than rural²⁴ and mostly diagnosed at the last stages associated with poor prognosis¹⁰.

In Bangladesh, breast cancer is the second common type of cancer in women^{25,26,27} and first leading cause of their death⁴⁵. The incidence of breast cancer was reported about 22.5 per 100,000 in females⁴³. Among all cancers, about 12754 (8.5%) new cases were diagnosed with breast cancer and about 6846 (6.3%) were died in 2018 mostly were between the age of 15 to 44 years old⁴⁵. A study mentioned that, the risk factors of breast

cancer are female gender, age ≥ 40 , obesity, menarche < 12 years of age, having a first degree relative with breast cancer⁴².

Most of the breast cancer diagnosed at an advanced stage due to lack of awareness, inadequate health care facilities¹⁸ and inadequate knowledge about breast cancer¹⁵.

Mammography, clinical breast examination (CBE) and breast self-examination can early detect breast abnormalities⁴⁴. Due to cost and access of mammography, many women cannot do this³⁶. WHO (2012) suggested that according to socioeconomic, cultural and religious context, only affordable, easy and powerful mechanism is required⁴⁴. Therefore, promotion of Breast Self-Examination practice might be contributed in early detection of breast cancer and promoting its survival rate^{18,19,29,36}.

Breast self-examination is one of the important screening method for early detection of breast tumors especially in poor resource setting. It is a part of general body awareness in which women are familiar with the appearance of their breasts so that any irregular changes could be recognized and reported early²⁸. A study³⁹ reported about 60% of breast cancer was early detected and one third can be reduced by practicing BSE⁴⁴. Thus BSE practice could protect women from severe morbidity and mortality due to breast cancer^{22,41}.

In the literature^{5,11,12,35,42,49} it is reported that majority of the women either perform BSE incorrectly or not performed it at all. Therefore, health professional for example nurses should encourage women to practice BSE through regularly with proper technique. Existing study^{2,42,49} found that BSE knowledge and attitude is related to perform BSE. Findings of this study would contribute in developing strategy to improve BSE knowledge, to increase social awareness and encouraging women to perform BSE.

II. Objectives

General objective

The aim of this study was to assess the knowledge, attitude and practice of Breast Self-examination among women in Bangladesh.

Specific objectives

1. To describe the socio-demographic characteristics and disease related characteristics among women in Bangladesh.
2. To assess the knowledge, attitude and practice of Breast self-examination among women in Bangladesh.
3. To examine the relationship between socio- demographic characteristics and knowledge, attitude and practice of Breast self-examination among women in Bangladesh.

III. Materials And Methods

This descriptive correlational study was carried out on all Bangladeshi women who were attending at female outpatient department and admitted in female ward at Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh from June 2018 to June 2019. A total 172 adult subjects (female) with the range of 18-60 years of age were for in this study.

Study Design: A descriptive correlational study was conducted.

Study Location: This is a tertiary level hospital in Dhaka city which offers outpatients and inpatients services for all category people come from all over the country. Thus this hospital is a representative setting for getting eligible samples of the target population for this study.

Study Duration: June 2018 to June 2019

Sample Size: 172 women

Sample size calculation: The sample size was determined by using G power analysis. The estimated sample size has calculated for an accepted minimum level of significant alpha (α) of 0.05, an expected power of 0.80 (1- β) and accepted medium effect size of 0.30 (γ) calculated sample size is 143. Due to potential dropout, 20% attrition rate added and the total sample size was 172.

Subject & selection method: Convenient sampling technique was used to recruit the sample, women who were attending at female outpatient department and admitted in female ward at Dhaka Medical College Hospital (DMCH), Dhaka, Bangladesh from December 2018 to January 2019 who met the inclusion criteria.

Inclusion criteria: All women who were eligible and willingly agree to participate in the study were included in this study.

Exclusion criteria:

1. Women who were mentally retarded.
2. Pregnant during study period.
3. Diagnosed breast cancer patient.
4. All male person.

Procedure methodology:

Approval was obtained from both Institution Review Board (IRB NO. Exp.NIA.S-2018-19) of NIANER and BSMMU. Informed consent was obtained prior to the interview from study participants. Privacy and confidentiality of the participants were maintained. The participation of the women was voluntary and participants could refuse and withdraw from the study at any time without any penalty.

Data collection procedure was divided into two parts:

Preparation phase: The researcher informed and collected written permission letter from director of the selected hospital (DMCH) as well as from participants.

Data collection phase: The researcher met with the participants; informed them about the study and human rights and protection, after obtaining consent from, participants who were willingly to participate in the study. The researcher explained about questionnaire and offered to give answer to complete the questionnaire. The researcher collected answer by direct face-to-face interview of the participants to ensure completeness and correctness, it was taken 15-20 minutes.

After completing the questionnaire, the researcher thanked the participants for spending time to participate in this study. This process was continued until desired sample found. Data were collected from December 2018 to January 2019 with following instrument:

Breast self- examination was measured by 4 parts questionnaires. (1) Socio-demographic Characteristics Questionnaire, (2) BSE Knowledge Scale, (3) BSE Attitude Scale and (4) BSE Practice Scale.

(1) The Socio-demographic Questionnaire (SCQ) were developed by researcher based on literature review consisted of 8 items including 2 items of disease related characteristics- age, religion, marital status, level of education, occupation, monthly income, history of breast cancer of the family, and known person of breast cancer.

(2) This study used Breast Self-Examination Scale (BSES developed by Doshi and Colleagues)¹². This scale consists of three domains. The permission is obtained from the original authors. The reliability of the questionnaire (BSEQ) was 0.8.

(a) BSE Knowledge Scale: There are total 15 items of question to assess the knowledge of participants about breast self –examination. For positive Knowledge, items score ‘2’ was used for correct answer (true response), ‘1’ for don’t know and ‘0’ for incorrect that means (false responses) was applied. The negative question was reversed. The item number was one (1). Assessment of level of knowledge was out of 100% and by using blooms classification, a score of less than 60% indicated poor knowledge while as a score of 60-100% indicates positive knowledge which was further classified as follows; 60-86% indicates satisfactory knowledge and score of 86%-100% indicates good knowledge.

(b) BSE Attitude Scale: There are total 13 items of question with 5point rating scale to measure the attitude of participant towards breast self-examination. For attitude items, 5-point ‘Likert scale (strongly agree/agree/neutral/strongly disagree/disagree) will be used. For a positive attitude items, a score of 4, 3, 2, 1 and 0 was used for strongly agree, agree, neutral, disagree, strongly disagree respectively was used. Level of attitude was score out of 52. A score of 27- 52 indicates positive attitude while as a score of 0-26 indicates negative attitudes.

(c) BSE Practice Scale: There are total 7 items of question to explore the practice of participants of breast self-examination. Practice similar ordinals (never/seldom/neutral/frequently/always) was applied. For practice an items score of 0, 1, 2, 3, 4, was given for never, seldom, neutral, frequently, and always respectively. Level of practice was score out of 28. A score of 15-28 indicates good practice while as a score of 0-14 indicates poor practice. These measures have translated in Bengali version based on back translation process.

Statistical analysis:

Data was analyzed using SPSS software (version 23). Both descriptive and inferential statistics were used for the analysis of data. The descriptive statistics was used for the analysis of the participant’s characteristics, distribution of knowledge, attitudes, and practices of BSEQ of the participants in terms of frequency, percentages, mean, and standard deviation and inferential statistics such as two sample t-test, ANOVA, and Pearson correlation were used to examine the relationship between study variables, p value of <0.05 was considered as statistically significant.

IV. Results

1. Socio-Demographic Characteristics and Disease Related Characteristics of Participants

Socio-demographic Characteristics

Total 172 participants were recruited for this study. The mean age of the participants was 32.93 years (SD= 9.86) with the range of 18-60 years of age. Most of them were Muslim (94.8%) by their religion. Only 13.4% participants had above secondary school education and 23.8% of them had no formal education. Majority (86.6%) of the participants were married who were live with their husband. Most of participants (79.1%) were homemaker and their mean monthly family income was 17680.23 with the range of 3000-60000 BDT (Table 1).

Diseases related characteristics

Among all participants only 2.9% had history of breast cancer in their family but 41.9% were known someone who were suffering from breast cancer (Table 1).

Table 1. The Distribution of Socio-Demographic Characteristics and Disease Related Characteristics of the Participants

(N = 172)			
Variables	Categories	n	%
Religion	Muslim	163	94.8
	Hindu	9	5.2
Marital Status	Married	149	86.6
	Unmarried	14	8.1
	Widowed	7	4.1
	Separated	2	1.2
Educational Level	No formal education	41	23.8
	Primary	38	22.1
	< SSC	47	27.3
	SSC	23	13.4
	More	23	13.4
Occupation	Homemaker	136	79.1
	Private job	14	8.1
	Government job	2	1.2
	Daily laborer	16	9.3
	Student	4	2.3
Family History of BC	Yes	5	2.9
	No	167	97.1
Known someone with BC	Yes	72	41.9
	No	100	58.1

2. Breast Self-Examination Knowledge, Attitude, and Practice of Participants

Breast Self-Examination Knowledge of Participants

Table 2.a. showed the findings that among all participants most of them (92%) did not know about the duration of BSE and only 4.1% had aware about the exact time of BSE procedure. More than 90% women did not know about the position, techniques and methods of BSE (item no. 3 to 11). On the other hand, only 29.1% participants reported that during BSE need to press on the nipple to check any unusual discharge from the breast. Majority of the women (91.3%) reported that they ‘need to observe any unusual change in the shape and size of the breast’. Although most of the participants (85.5%) were aware about ‘the retraction of the nipple is a warning sign that should be observed’ but only 46.5% of the women knew about the statement of “lump is the early sign for cancer”. The mean score of BSE knowledge \pm SD was= .22 \pm .14.

Table 2. a. Breast Self-Examination Knowledge of Participants

Items	(N=172)	
	n	%
BSE should be done every 2 months	14	8
BSE must be done between days 7 until 10 after menses	7	4.1
BSE should be done in front of the mirror	8	4.7
Undress until the waist when doing the BSE	6	3.5
Hands should be raised up alternately above the head when doing the BSE in front of the mirror	2	1.2
BSE should be done from the front view only	16	9.3
BSE can be done in a supine position	16	9.3
Palpate in the right breast while left-sided lying when doing the BSE	4	2.3
Use finger pulps to examination any lumps of the skin	6	3.5
BSE can be done using the vertical strip and circular technique	7	4.1
Need to press on the nipple to check any unusual discharge	50	29.1
BSE includes arm- pit examination to check for any lump	59	34.3
Need to observe any unusual change in the shape and size of the breast	157	91.3
Retraction of the nipple is a warning sign that should be observed	147	85.5
Lump is the early sign for cancer	80	46.5

Attitude Towards Breast Self-Examination Among Participants

Among all participants 25.6% were “agree” and “strongly agree” that they felt so funny during BSE. 23.3% of them were “agree” and “strongly agree” with the statements of “BSE will be embarrassing to me”. About 56.4% participants accepted (“agree” and “strongly agree”) that “BSE feel uncomfortable, that’s why they cannot do BSE once in a month”. Although majority of the participants (88.4%) were agree “and “strongly agree” to get treatment from a traditional healer if there is a lump in the breast but only 6.4% were accepted (agree “and “strongly agree”) to discuss with their friends about BSE due to their shyness. About 71% women were denied (disagree and strongly disagree) about the statements of “I am not afraid to think about the breast cancer” and 95.9% were felt that (agree and strongly agree) “all women should do BSE” which had the highest mean score =3.42, SD=.592. Very few (9.3%) women were “agree “and “strongly agree” to the statement of “avoid BSE because they worry about having breast cancer” which had the lowest mean score =.45. Though majority (86.6%) of the participants were “agree” and “strongly agree” in the statement of “Interested in doing BSE but only 5.3% of them were search for information regarding BSE from the internet, magazine, and newspaper. The mean score of BSE attitude ±SD was = 1.71± .31 (Table 2.b).

Table 2.b. Attitude TowardsBreast Self-ExaminationAmong Participants

Items	Strongly agree n (%)	Agree n (%)	Neutral n (%)	Disagree n (%)	Strongly Disagree n (%)	(N=172)
						M ± SD
Doing BSE makes me feel so funny	28 (16.3)	16 (9.3)	2 (1.2)	120 (59.8)	6 (3.5)	1.65±1.21
BSE will be embarrassing to me	12 (7.0)	28 (16.3)	2 (1.2)	126 (73.3)	4 (2.3)	1.52 ±1.02
Doing BSE is wasting time	2 (1.2)	11 (6.4)	6 (3.5)	149 (86.6)	4 (2.3)	1.17 ± .62
Doing BSE makes me feel unpleasant	4 (2.3)	15 (8.7)	4 (2.3)	144 (83.7)	5 (2.9)	1.24 ± .74
If there is a lump, I prefer to get treatment from a traditional healer	59 (34.3)	93 (54.1)	9 (5.2)	9 (5.2)	2 (1.2)	3.15 ± .83
Feel uncomfortable, cannot do BSE once in a month	10 (5.8)	87 (50.6)	18 (10.5)	55 (32.0)	2 (1.2)	2.28 ± 1.01
All women should do BSE	80 (46.5)	85 (49.4)	6 (3.5)	1 (.6)	.00	3.42 ± .59
I really care about my breasts	10 (5.8)	84 (48.8)	13 (7.6)	59 (34.3)	6 (3.5)	2.19 ± .08
I am not afraid to think about the breast cancer	19(11.0)	30 (17.4)	1 (.6)	28 (16.3)	94 (54.7)	1.14 ± 1.49
Avoid BSE because I worry about having breast cancer	6 (3.5)	10 (5.8)	.00	23 (13.4)	133(77.3)	.45 ± 1.01
Feel uncomfortable, cannot do BSE once in a month	10 (5.8)	87 (50.6)	18 (10.5)	55 (32.0)	2 (1.2)	2.28 ± 1.01
All women should do BSE	80 (46.5)	85 (49.4)	6 (3.5)	1 (.6)	.00	3.42 ± .59
I really care about my breasts	10 (5.8)	84 (48.8)	13 (7.6)	59 (34.3)	6 (3.5)	2.19 ± .08
I am not afraid to think about the breast cancer	19(11.0)	30 (17.4)	1 (.6)	28 (16.3)	94 (54.7)	1.14 ± 1.49
Avoid BSE because I worry about having breast cancer	6 (3.5)	10 (5.8)	.00	23 (13.4)	133(77.3)	.45 ± 1.01
Interested in doing BSE	21(12.2)	128(74.4)	7 (4.1)	14 (8.1)	2 (1.2)	2.88 ± .76
Always search for information regarding BSE from the internet, magazine, and newspaper	1 (.6)	8 (4.7)	1 (.6)	68 (39.5)	94 (54.7)	.57 ± .78
Discuss with my friends about BSE	3 (1.7)	8 (4.7)	.00	71 (41.3)	90 (52.3)	.62 ± .85
Mean score ±SD= 1.71 ± .31						

Breast Self-ExaminationPractice of Participants

Table 2.c showed the findings that among all of the participants only 6.4% were practiced BSE once in a month, among them only 1.7% were practiced always BSE in a month. Majority 95.9% of the participants never learnt the correct method of BSE and 91.9% never discussed the importance of BSE with friends. Most (95.9%) of the women never got advice from parents, partner or friends to do BSE. But among them only 1.7% participants were indicated that they had been taught on BSE by health staff. About 58.2% of the women never went to public health care directly, if notice any breast abnormality. The mean score of BSE practice ± SD was=.39±.45.

Table 2.c. Breast Self-Examination Practice of Participants

Items	Never n (%)	Seldom n (%)	Neutral n (%)	Frequently n (%)	Always n (%)	(N=172)
						M ± SD
Do BSE once a month	135 (78.5)	26(15.1)	.00	8 (4.7)	3 (1.7)	.36 ± .85
Avoid learning the correct method of BSE	165 (95.9)	3 (1.7)	.00	1 (.6)	3 (1.7)	.10 ± .58
Parents or partner always advise to do BSE	170 (98.8)	2 (1.2)	.00	.00	.00	.01 ± .10
Advise friends to do BSE	165 (95.9)	.00	.00	4 (2.3)	3 (1.7)	.14 ± .68
Discuss the importance of BSE with friends	158 (91.9)	3 (1.7)	.00	8 (4.7)	3 (1.7)	.23 ± .81
Have been taught on BSE by health staff	167 (97.1)	2 (1.2)	.00	3 (1.7)	.00	.06 ± .40
If notice any breast abnormality, directly go to public health care	24 (14.0)	76(44.2)	1 (.6)	39 (22.7)	32(18.6)	1.88 ±1.40
Mean score ±SD= .39 ± .45						

3. Level of Breast Self-Examination Knowledge and Attitude and Practice of Participants

The result showed that among all participant’s majority of the participants had poor level of knowledge (95.9%) and 83.7% had negative attitude towards BSE practice, only 2.3% participants had good level of BSE practice (Table 3).

Table 3. Level of Breast Self-Examination Knowledge and Attitude and Practice of Participants (N=172)

Variables	Level	Score	n	%	M ± SD
Knowledge					.22 ±.14
	Poor knowledge	<60%	165	95.9	
	Satisfactory knowledge	60-85%	7	4.1	
	Good knowledge	86-100%	.00	.00	
Attitude					1.71± .31
	Negative attitude	0-26	144	83.7	
	Positive attitude	27-52	28	16.3	
Practice					.39±.45
	Poor practice	<14	168	97.7	
	Good practice	14-28	4	2.3	

4. The Significant Relationship Between Socio-Demographic and Disease Related Characteristics and Total BSE Knowledge, BSE Attitude and BSE Practice of Participants

The result showed the socio-demographic characteristic ‘education’ and disease related characteristic ‘known someone with BC’ are related with BSE. In education, the participants who had higher educational level (> SSC), had statistically significant higher BSE knowledge (F=9.53, p=<.001) and practice (F=5.73, p= .004) compared to those who had below SSC education. The women those were known someone with Breast Cancer were significantly higher BSE knowledge(t=-3.48, p=.001)and practice (t=-1.11, p=.029) compared to those were not known someone with Breast cancer (Table 4).

Table 4. The Significant Relationship Between Socio-Demographic and Disease Related Characteristics and Total BSE Knowledge, BSE Attitude and BSE Practice of Participants (N=172)

Variables	Knowledge		Attitude		Practice	
	M±SD	r/t/F (p)	M±SD	r/t/F (p)	M±SD	r/t/ F(p)
Educational level		9.53(.000)		.71(.49)		5.73 (.004)
No formal education ^a	2.54±1.51	(c >a, b)	22.02±3.67		1.93±1.79	(c >a, b)
< SSC ^b	3.11±1.78		22.66±4.35		2.51±2.83	
> SSC ^c	4.39±2.85		21.85±3.75		4.07±4.34	
Known someone with BC		-3.48(.001)		-23(.81)		-1.11(.029)
Yes	3.97±2.42		22.38±3.94		3.13±3.91	
No	2.84±1.84		22.23±4.12		2.54±2.58	

Table 5 showed the findings that BSE knowledge was significant positive correlation with participants BSE practice ($r = .622$; $p = .000$). Furthermore, Attitude of BSE also was significant positive correlation with women's BSE practice ($r = .290$, $p = .000$).

Table 5. Correlation Between BSE Knowledge, BSE Attitude and BSE Practice
(N=172)

Variables	Knowledge of BSE r (p)	Attitude of BSE r (p)
Attitude of BSE	.123 (.109)	
Practice of BSE	.622 (.000)	.290 (.000)

V. Discussion

1. Socio-Demographic Characteristics and Disease Related Characteristics of Participants

Socio-Demographic Characteristics

The present study involved women with the mean age was 32.93 years as it was reproductive age group, thus can motivate them for practicing BSE regularly to identify any abnormality in their breast as early as possible. Similar observation was revealed in studies conducted in India and Pakistan^{22,39}. Current study showed most of the participants were Muslims, married and more than four quarters of participants were at least secondary school education which was close to a study reported by Rosmawati, (2010) in Malaysia³⁵.

Disease related characteristics

In the present study very few participants only had history of breast cancer in their family which is consistent to another study of Bangladeshi⁴². In current study near about half of the participants were known someone who were suffering from breast cancer, a study in India found 59% of study participants were known about Breast cancer⁹ which is little bit higher than this study. The facts that, this study was conducted in a tertiary hospital setting where usually poor and low socio economic people come more because of low cost services and for this reason may be those people were not aware about breast cancer.

2. Breast Self-Examination Knowledge, Attitude, and Practice of Participants

Breast Self-Examination Knowledge of participants

In the current study, the mean score of BSE knowledge \pm SD was very low compare to another studies of the mean score of knowledge \pm SD in India and Malaysia (14.22 \pm 8.02 and 16.91 \pm 8.01) respectively^{12,35}. The reason of lower mean score of knowledge in present study because of educational background of the participants, who had no any medical science background and very few participants had tertiary level of education. In this study most of the population had poor knowledge about BSE which is similar to Pakistani, Indian and Malaysian women 80.7%, 61.6% and 69.11% respectively^{5,35,47}. Researcher assumed that this poor learning indicate that sufficient training and adequate public education is essential to encourage and facilitate early detection of any abnormalities in the breast which is also supported by some studies^{5,12}.

Poor knowledge was also found to be related with the methods, position, techniques of BSE and the exact time to perform it in current study. Similar observations were also found in Malaysian women, and also had poor knowledge on a breast lump is the early sign for breast cancer and method of early detection³⁵. In fact, recently a study was conducted in Bangladesh revealed that the knowledge regarding early detection methods were poor (26.93%) which is also consistent to present study⁴².

In contrary to the current study's result, in the investigation of Reizi, Javadjade, and Sharifrad (2013) conducted on female health workers in Iran with the subject of BSE, most of them (79.8%) had good and acceptable knowledge in this field due to their participants were health professional and they had more knowledgeable about BSE which was totally absent in this present study³².

Attitude towards Breast Self-Examination among Participants

In the present study the mean score of attitude \pm SD was low compare to another studies (13.57 \pm 3.66 and 37.10 \pm 6.76)^{30,35} respectively. The current study showed majority of the participants had negative attitude towards BSE. Recently a study conducted in India showed that near about two third (68%) participants had negative attitude toward BSE²¹. This negative attitude shows that a close relation between knowledge and practice that can be developed by sensitization program with a promise of a good outcomes. In contrast to the findings of this study, different studies showed the higher level of positive attitude 74.4%, 86.6%, 38% and 72.45% 73.3% towards BSE among their participants in different countries^{30,32,34,35,37} respectively.

In current study, near about half of the participants did not practicing BSE due to afraid to think breast cancer which is consistent to a study in Kufa city, Iraq¹⁶. Researcher supposed that the reason of afraid for practicing BSE is lack of information and knowledge which also going to negative attitude. According to this

study few participants were searched for information regarding BSE due to their negative attitude and embarrassment to BSE. Researcher assumed that in this study most of the participants were homemaker and they were busy with their family. Time consuming is another reason which is related to negative attitude. But another study in Sydney found that a quartet of the participants relied on friends or their relatives as a source of information about screening program like BSE⁵⁰. According to present study, majority of the participants were felt that “all women should do BSE” and were accepted “to get treatment from a traditional healer if there is a lump in the breast”. These statements are also consistent (73.3%) to the studies^{12,35} in Indian students and Malaysian women.

Practice of BreastSelf-Examination Among Participants

The practice of BSE reflects the practical application of the knowledge of BSE and positive attitude towards BSE. In present study the mean score of BSE practice is very low than other studies in neighboring countries in India, and Malaysia respectively^{21,35}. According to the current study among all of the participants very few participants were practiced BSE. Poor practice of participants may be due to some reasons. Firstly, participants never learnt the correct method and importance of BSE. Secondly, parents, partner or friends did not give any advice to do BSE. Finally, never taught on BSE by health staff which are also supported by different studies in different countries^{5,12,35}. This finding indicated that awareness and health education programs can improve the poor practice to regular practice towards BSE.

The finding of the current study is consistent with the Kashmiri women’s BSE practice (5.6%)⁴⁰. Other studies also revealed poor practice of BSE (9.6%; 13%;13.13%)^{5,23,42} in, Pakistan, Malaysia and Bangladesh respectively. A recent study conducted in India in which only 18% participants had checked their breast and 5% practiced it regularly²². Though the result of some previous studies^{1,30} showed higher practiced than present study but researchers also indicted (17.8%, 28.2%;) that was not satisfactory practice of BSE in Saudi Arabia and Zambia respectively which was related to lack of BSE knowledge and negative attitude towards BSE.

3. The Relationship Between Socio-Demographic and Disease Related Characteristics and Total BSE Knowledge, BSE Attitude and BSE Practice of Participants

The present study showed that BSE knowledge and practice were significantly associated to the higher educational level. Similarly, to this study, other investigators in Bangladesh reported that participants educational level was a significant determinant of BSE practice^{31,42}. Other studies in different countries had consistency to this finding^{28,32,47}. But another study showed that majority of the participants were considerably higher level of education but the practice of BSE was low among Malaysian women²⁴. Findings of this study indicate that participants did not have much information regarding BSE. So awareness program should be developed and breast cancer preventive information should be disseminated to keep in mind.

In current study there was a statistically association between the familiarity of people who live with breast cancer and knowledge of breast self-examination and also breast self-examination practice compared to who did not know anyone with breast cancer. This finding is similar with a study which is conducted in Ethiopia⁴⁸. Investigator assumed that familiarity of people with breast cancer represented as source of awareness on Breast cancer and curious to knowing information about screening method that leading to BSE knowledge and practice more than compared to others. Researcher expected that improving knowledge regarding the importance and procedure of BSE at all level of women through health education campaign on BSE would help sustaining the practice of BSE. Current study showed that age, religion, marital status, occupation, family income and family history did not significantly affect the practice of breast self-examination. But contrary to this study, a previous study observed that increasing age, being married and family history of breast cancer was significantly associated with higher practice of BSE in Bangladesh⁴².

4. Correlation Between BSE Knowledge, Attitude and Practice of Participants

In present study, there was positive correlation between knowledge, attitude and practice which is similar to another previous studies in India, Malaysia^{12,35}. In Bangladesh recently a study revealed that there was a positive correlation between knowledge and practice⁴². Current study also showed a fair positive correlation between knowledge and attitude of the participants though it was not statistically significant but previous studies conducted in India and Malaysia, they also found a significant correlation between knowledge and attitude in their participants^{12,35}. These findings mentioned that higher level of BSE knowledge and positive attitude towards BSE reflects a positively significant higher practice of BSE among participants. In contrast a study conducted by Kalliguddi et al., (2019) observed that attitude and practice of BSE were not correlated in Indian women²¹. Educational program to create awareness regarding BSE procedure and importance of need which will help to develop knowledge, positive attitude and sustaining practice of BSE.

Limitation of the study

The current study has several limitations. Convenient sampling technique was used. This sample cannot assume to be broadly representative that limiting generalization of the findings. This research is also restricted by the use of face-to-face interviews, to collect easily data respondent's bias may be occurred. Furthermore, Researcher used the back-translation method to translate scales that were developed in English into Bangla. Although researcher made every effort to develop reliable scales in the Bangla language, there might be inaccuracy in the process of translation and accommodating the cultural nuance.

VI. Conclusion And Recommendations

Conclusion

This study finding showed BSE knowledge, attitude and practice was not satisfactory. Majority of the women did not know about the BSE procedure, importance and exact time to do BSE. Though most of the women were agreed that 'all women should do BSE' but near about two third of women were felt uncomfortable to do BSE once in a month. Very few women practiced BSE regularly due to lack of BSE knowledge and negative attitudes towards BSE. The result of this study indicated that women who had higher education were likely to have more BSE knowledge and practice. Those women also known someone with breast cancer were more BSE knowledge and practice compared to others. Women's education, BSE knowledge, and attitude significantly association to perform BSE.

Recommendations

The findings of the current study revealed that women's education, BSE knowledge, and attitude significantly influenced to perform BSE. To increase BSE knowledge awareness program should be developed. Nurses should provide education and information to women about procedure, exact time and importance of BSE. Women's awareness will help to reduce negative attitude towards BSE. Establishing rapport building and trust between nurses and women may help to develop positive attitude. Women should be encouraged to do BSE correctly, timely and also regularly to take responsibility for their own health. Nurses can arrange education and awareness campaigns or use mass media to disseminate BSE procedure and importance and also to popularize this cost free screening method (BSE). Therefore, nursing educational program on BSE may contribute in increasing BSE knowledge which would impact to perform BSE.

Health professionals must consider these findings in developing strategy to improve BSE. Strategy should be taken to increase social awareness. This study was a quantitative study conducted with women in one study setting. Further, interventional study is recommended with involving rural women in various setting to find out the real situation and also for generalization of the study.

Acknowledgements

First of all, researcher would like to give thanks to the Almighty Allah who has blessed her for strengthening to start of this works until its completion. Researcher would like to express her hearty gratefulness to her mother, Dr. Fahima Khatun and also Dipali Rani Mallick for their constructive guidance, mental support, and inspiration. The author wishes to thank all participants of this study. The study has no conflict of interest.

References

- [1]. Almanie RA, Alshabanah RF, Almanie NI, Almohayya TS, Alahmari EM, Almaher EM. Assessment of Knowledge and Attitude and Practice towards Breast Cancer Screening among Female in Abha City, 2017. *Egyptian Journal of Hospital Medicine*. 2018 Jan 22;70(3).
- [2]. Alwan NA, Al Attar WM, Eliessa RA, Madfaic ZA, Tawfeeq FN. Knowledge, attitude and practice regarding breast cancer and breast self-examination among a sample of the educated population in Iraq.
- [3]. American Cancer Society, Breast Cancer Facts and Figures 2013 – 2014. Atlanta, GA: American Cancer Society Inc. 2013.
- [4]. American Cancer Society cancer facts and Figures, American journal 2005, 2006, 2015. Published online January 5, 2015. <http://www.dnaindia.com/health/report-breast-cancercases-in-india-to-double-by-2015-experts-1600847>.
- [5]. Batool T, Sarwar H, Afzal M, Gilani SA. Knowledge, Attitude and Practices of Women towards Breast Self-Examination in Rural Area of Lahore, Pakistan. *Annals of Punjab Medical College*. 2018 Jun 12;12(2):158-61.
- [6]. Breast Cancer Care WA. <https://www.breastcancer.org.au/about-breast-cancer/statistics.aspx>. 2017
- [7]. Cancer Incidence and Mortality Worldwide: IARC Cancer-Base NO.11. Lyon, France: International Agency for Research on Cancer, <http://globocan.iarcfr>. 2014.
- [8]. Cancer Statistics for UK. <https://ww.cancerresearchuk.org> > ... > Cancer Statistics > 2019.
- [9]. Dahiya N, Basu S, Singh MC, Garg S, Kumar R, Kohli C. Knowledge and practices related to screening for breast cancer among women in Delhi, India. *Asian Pacific journal of cancer prevention: APJCP*. 2018;19(1):155.
- [10]. Dikshit R, Gupta PC, Ramasundarahettige C, Gajalakshmi V, Aleksandrowicz L, Badwe R, Kumar R, Roy S, Suraweera W, Bray F, Mallath M. Cancer mortality in India: a nationally representative survey. *The Lancet*. 2012 May 12;379(9828):1807-16.
- [11]. Doshi D, Reddy B, Kulkarni S, Karunakar P. Breast self-examination: knowledge, Attitude and Practice among Students in India. *Indian Journal of Palliative Care*. 2010; 1:66-7.

- [12]. Doshi D, Reddy BS, Kulkarni S, Karunakar P. Breast self-examination: Knowledge, attitude, and practice among female dental students in Hyderabad city, India. *Indian journal of palliative care*. 2012 Jan;18(1):68.
- [13]. Elobaid YE, Aw TC, Grivna M, Nagelkerke N. Breast cancer screening awareness, knowledge, and practice among Arab women in the United Arab Emirates: a cross-sectional survey. *PloS one*. 2014 Sep 29;9(9):e105783.
- [14]. Forouzanfar MH, Foreman KJ, Delossantos AM, Lozano R, Lopez AD, Murray CJ, Naghavi M. Breast and cervical cancer in 187 countries between 1980 and 2010: a systematic analysis. *The lancet*. 2011 Oct 22;378(9801):1461-84.
- [15]. Godfrey K, Agatha T, Nankumbi J. Breast cancer knowledge and breast self-examination practices among female university students in Kampala, Uganda: a descriptive study. *Oman Medical Journal*. 2016 Mar;31(2):129.
- [16]. Hamid HG. The impact of educational level on Knowledge, Attitude and Practices toward breast cancer among women attending primary health center in Kufa city. *AL-QADISIYAH MEDICAL JOURNAL*. 2015;11(19):78-88.
- [17]. Hashim MJ, Al-Shamsi FA, Al-Marzooqi NA, Al-Qasemi SS, Mokdad AH, Khan G. Burden of Breast Cancer in the Arab World: Findings from Global Burden of Disease, 2016. *Journal of epidemiology and global health*. 2018 Dec 31;8(1):54-8.
- [18]. Hossain MS, Ferdous S, Karim-Kos HE. Breast cancer in South Asia: a Bangladeshi perspective. *Cancer Epidemiology*. 2014 Oct 1;38(5):465-70.
- [19]. Hussain SA, Sullivan R. Cancer control in Bangladesh. *Japanese journal of clinical oncology*. 2013 Oct 25;43(12):1159-69.
- [20]. Isara AR, Ojedokun CI. Knowledge of breast cancer and practice of breast self- examination among female senior secondary school students in Abuja, Nigeria. *Journal of preventive medicine and hygiene*. 2011 Dec 4;52(4).
- [21]. Kalliguddi S, Sharma S, Gore CA. Knowledge, attitude, and practice of breast self-examination amongst female IT professionals in Silicon Valley of India. *Journal of family medicine and primary care*. 2019 Feb;8(2):568.
- [22]. Kumarasamy H, Veerakumar AM, Subhathra S, Suga Y, Murugaraj R. Determinants of awareness and practice of breast self-examination among rural women in Trichy, Tamil Nadu. *Journal of mid-life health*. 2017 Apr;8(2):84.
- [23]. Makanjuola OJ, Amoo PO, Ajibade BL, Makinde OY. Breast cancer: knowledge and practice of breast self-examination among women in rural community of Ondo State, Nigeria. *IOSR J Pharm Biol Sci*. 2013;8(1):32-7.
- [24]. Minhat HS, Mustafa J, Zain NM. THE PRACTICE OF BREAST SELF-EXAMINATION (BSE) AMONG WOMEN LIVING IN AN URBAN SETTING IN MALAYSIA. *International Journal of Public Health and Clinical Sciences*. 2014 Nov 15;1(2):91-9.
- [25]. National Cancer Registry Programme (2013). National Centre for disease informatics and research. and Indian council of medical research, three-year report of population based cancer registries 2009–2011 national cancer registry programme. National cancer registry, 2013.
- [26]. NIPORT, Bangladesh Maternal Mortality and Health Care Survey 2010;2011.
- [27]. NIRCH, Cancer Registry Report National Institute of Cancer Research and Hospital 2008-2010; 2013.
- [28]. Olaogun JG, Emmanuel EE, Dada SA, Odesanmi OM, Adesua OA. The prevalence of practicing breast self-examination and knowledge of breast cancer disease among women attending secondary health facility. *International Surgery Journal*. 2017 Sep 27;4(10):3211-7.
- [29]. Omotara B, Yahya S, Amodu M, Bimba J. Awareness, attitude and practice of rural women regarding breast cancer in Northeast Nigeria. *J Community Med Health Educ*. 2012;2(5):1-4.
- [30]. Ramson LM. Knowledge, attitude and practice of breast self-examination for early detection of breast cancer among women in Roan constituency in Iuanshya, Copperbelt province, Zambia. *Asian Pacific Journal of Health Science*. 2017;4(3), 74-82.
- [31]. Rasu RS, Rianon NJ, Shahidullah SM, Faisal AJ, Selwyn BJ. Effect of educational level on knowledge and use of breast cancer screening practices in Bangladeshi women. *Health care for women international*. 2011 Feb 18;32(3):177-89.
- [32]. Reisi M, Javadzade SH, Sharifirad G. Knowledge, attitudes, and practice of breast self-examination among female health workers in Isfahan, Iran. *Journal of education and health promotion*. 2013;2.
- [33]. Albeshan SM, Hossain SZ, Mackey MG, Osmani SS, Brennan PC. UNDERSTANDING BETTER THE KNOWLEDGE, BELIEFS, AND ATTITUDES TOWARD BREAST CANCER AND BREAST SCREENING PRACTICES AMONG WOMEN LIVING IN RAS AL KHAIMAH, UNITED ARAB EMIRATES (UAE). In *Proceedings of the International Conference on Public Health 2017 Dec 16 (Vol. 3, No. 2, pp. 208-222)*.
- [34]. Romli HA, Pardi KW. Knowledge, attitude and practice of breast self-examination among undergraduate health science female students. *Int J Public Health Clin Sci*. 2017 Sep; 4:87-99.
- [35]. Rosmawati NH. Knowledge, attitudes and practice of breast self-examination among women in a suburban area in Terengganu, Malaysia. *Asian Pac J Cancer Prev*. 2010 Jan 1;11(6):1503-8.
- [36]. Sama CB, Dzekem B, Kehbila J, Ekabe CJ, Vofu B, Abua NL, Dingana TN, Angwafo III F. Awareness of breast cancer and breast self-examination among female undergraduate students in a higher teachers training college in Cameroon. *Pan African Medical Journal*. 2017;28(1):164.
- [37]. Samhitha J, Ramyasree CH. Knowledge and attitude on breast self- examination. *International Journal of Current Research*. 2016;8(06), 32675-32677.
- [38]. Sambo MN, Idris SH, Dahiru IL, Gobir AA. Knowledge and practice of self-breast examination among female undergraduate students in a northern Nigeria university. *Journal of Medicine and Biomedical Research*. 2013;12(2):62-8.
- [39]. Sarwar MZ, Shah SF, Yousaf MR, Ahmad QA, Khan SA. Knowledge, attitude and practices amongst the Pakistani females towards breast cancer screening programme. *screening*. 2015 Oct 1; 8:17-9.
- [40]. Sideeq K, Ayoub T, Khan SS. Breast self-examination: assessing its knowledge attitude and practice among ethnic Kashmiri females. *International Journal Of Community Medicine And Public Health*. 2017 Aug 23;4(9):3288-92.
- [41]. Swati. Sheoran P, Dr. Sarin J. Awareness and Ability Regarding Breast Self- Examination (BSE): A Interventional Study in Rural Area Haryana. *International Journal of Science and Research*, 2017;6(8), 2319-7064.
- [42]. Tithi NS, Asaduzzaman M, Nasrin N, Monjur M. A Cross-sectional Survey on Knowledge regarding Breast Cancer and Breast Self-examination among Bangladeshi Women. *Breast cancer*.;236(26.17):22-45.
- [43]. Uddin AK, Khan ZJ, Johirul Islam AM. Cancer care scenario in Bangladesh. *South Asian journal of cancer*. 2013 Apr;2(2):102.
- [44]. World Health Organization. Breast cancer: prevention and control. <http://www.who.int/cancer/detection/breast-cancer/en/print.html>. 2012.
- [45]. World Health Organization. Breast cancer: prevention and control. <http://www.who.int/cancer/detection/breast-cancer/en/print.html>. 2018.
- [46]. Worldwide Cancer Data World Cancer Research Fund International. <https://www.wcrf.org/int/cancerfacts/figures/data...cancers/breast-cancer-statistics>.
- [47]. Yerpude PN, Jogdand KS. Knowledge and practice of breast self-examination (BSE) among females in a rural area of South India. *Natl J Community Med*. 2013 Jun;4(2):329-.

- [48]. Zeru Y, Sena L, Shaweno T. Knowledge, Attitude, Practice, and Associated Factors of Breast Cancer Self-Examination among Urban Health Extension Workers in Addis Ababa, Central Ethiopia. *Journal of Midwifery and Reproductive Health*. 2019;7(2):1662-72.
- [49]. Sarfo L., Awuah-Peasah D., Acheampong E., Asamoah F. Knowledge, attitude and practice of self-breast examination among female university students at Presbyterian University College, Ghana. *American Journal of Research Communication*.2013;1, 395-404.
- [50]. Robinson L., Hossain SZ., Clarke J. Breast cancer knowledge and participation in breast screening practices among Southeast Asian women living in Sydney. *GSTF Journal of Nursing and Health Care*.2017;3(2).

Mosammat Beauty Begum. "Knowledge, Attitude, and Practice of Breast Self- Examination Among Women in Bangladesh". *IOSR Journal of Nursing and Health Science (IOSR-JNHS)*, vol. 8, no.05, 2019, pp. 69-79.