

Original Research Article

Knowledge and practice of breast self-examination among female patients attending general outpatients in BPKIHS

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ABSTRACT

Background: Breast cancer is the most common and remains a major health problem all over the world, affecting both developing and developed countries. The strategy to detect early breast cancer is important which includes breast self-examination (BSE), clinical breast examination, and mammography. The studies have found that women who reported that they had been BSE performers had their breast cancer detected at a smaller size and earlier clinicopathological stage. There is a paucity of data on the knowledge and practice of BSE in Nepal among the female population of eastern Nepal. Therefore, this study is conducted to know the knowledge and practice of BSE among the female population attending the general outpatient department.

Methods: A cross-sectional study was conducted over one and half years among 262 females attending general outpatients, using a semi-structured questionnaire.

Results: The majority of the participants (29.4%) were in 3rd decade of life followed by 2nd decade (26%). Forty-one (41%) of the respondents had ever heard of BSE and the main source of information was social media (51%). Only 14.5% had adequate knowledge of BSE. Out of all, only 10.7 % were practicing BSE and the frequency of practice among them was rarely (53.5%). Seventy-two (72%) responded that they don't know how to perform when asked why they did not perform BSE.

Conclusions: This study revealed that most of the participants had low knowledge and practice of BSE. Therefore, developing a health education program to raise awareness about BSE is important.

Keywords: Breast self-examination, Breast cancer, Knowledge and practice

INTRODUCTION

Breast disease in women includes a spectrum of benign and malignant disorders. Benign breast disease is common with an estimate of over one-half of the female population seeking medical advice for breast problems during a lifetime.¹ Breast cancer (BC) remains a major health problem all over the world. It is the commonest cancer and leading cause of death for women accounting for 23% of all female cancer globally.² Not only in developed countries but the breast cancer incidence rate has also increased in developing counter as well. In Nepal, according to the data from seven major cancer service hospitals in 2012, breast cancer was the second

most common cancer among women, after cancer of the cervix.^{3,4}

In Nepal women with cancer present in late-stage due to unawareness of the disease.⁵⁻⁷ Females tend to detect and report breast lumps at a late stage due to ignorance and lack of knowledge of BSE.^{5,7} These were reflected in the study by the average duration of symptoms (11.30 months with SD $\pm$ 26.09) before the first presentation of the patient with a lump or mastalgia to the doctors.⁸

The strategy to detect early breast cancer is important which includes BSE, clinical breast examination, and mammography. BSE is done by women by examining their breasts regularly to detect any abnormal swelling or

lump to seek prompt medical help. BSE serves as an important screening practice and a simple economical and noninvasive method to early detect cancer.⁹ The studies have found that women who reported that they had been BSE performers had their breast cancer detected at a smaller size and earlier clinicopathological stage.¹⁰ Early detection of breast cancer serves a leading role in the reduction of breast cancer mortality.¹¹ Although the American cancer society urges women to perform mammography, it is seldom not available in a large number of hospitals in Nepal including the hospital where the study took place.¹² At present, parallel to India, mammography is not available in a large number of public and private hospitals in towns as a diagnostic service for women.^{11,13}

The studies suggesting the effectiveness of BSE has been published in 1978.¹⁴ A study in Nepal in 2008 demonstrated that BSE could be regarded as a tool to aid primary prevention strategies for breast cancer.¹⁵ Knowledge and practice of BSE play an important role in the early detection of breast cancer. Therefore, in a resource-limited country like ours, BSE plays an impotent role in the early detection of breast cancer. There is a paucity of data on the knowledge and practice of BSE in Nepal among the female population of eastern Nepal. Most of the studies done were on female healthcare workers based in the capital of the country. Therefore, this study is conducted to find out the knowledge and practice of BSE among the female population attending a teaching hospital and its association with demographic variables. This survey will help them to be aware of BSE and be familiar with their breast and seek prompt medical help if they find any abnormalities.

METHODS

This was a hospital-based descriptive prospective study, which was carried out in a general outpatient of BPKIHS Dharan, Nepal from March 2021 to Aug 2022.

The sample size was calculated from the previous study done by Marahatta, the knowledge and practice of BSE were 31% and 19.2% respectively.¹⁶ So, the sample size was 262 on the following assumption: Population proportion 19.2%, CI 95% and margin of error 5%, 10% non-response rate.

Female patients attending GOPD aged 16-60 were included in the study by using a purposive sampling technique. Consent was taken from all the study subjects. A semi-standardized questionnaire was used to record relevant demographics and information regarding knowledge and practice regarding BSE. The questionnaire had three major domains. Section one included questions on socio-demographic characteristics (age, sex, ethnicity, marital status, education status, occupation, etc.). Section two was about knowledge about BSE and section three was about the practice of

BSE. Respondents aware of BSE or who have ever heard about BSE were considered to be knowledgeable about it. Respondents who have ever performed BSE (Regularly and irregularly) were considered to have practice of BSE.

Knowledge level was assessed with the 6 questions about BSE which included 10 correct options. Each correct option was given 1 mark and zero for incorrect options. Thus, the knowledge ranged from 1-10. Women having a score of < 5 were considered to have inadequate knowledge while women having a score of 0.>5 were considered to have adequate knowledge of BSE. The questions were initially prepared in English and then translated into Nepali language.

The data were entered in Microsoft excel and analyzed using statistical package for social science (SPSS), version 11.5. Descriptive statistics were performed. The Chi-squared test was used to examine the association between variables. The confidence level was set to <0.05 to define statistical significance. Ethical consideration was granted by the ethical review committee.

RESULTS

Socio-demographic status

A total of 262 females were enrolled in the study. The finding revealed that the majority of the respondents (29.4%) were in the 3rd decade of life followed by 2nd decade of life (26%), with a mean age of 36 years. The majority of the female (82.1%) were married and followed the Hindu religion (92.4%). There was a predominantly Janajati ethnicity consisting of 42.7% of the female population followed by Brahmin/ Chhetri (30.2%). The females attending only primary school and attending higher levels of school were equal in (28%) in numbers. A high proportion (54.6%) of the respondents were homemakers. The sociodemographic variables of the respondents are presented in Table 1.

Knowledge and practice of BSE among respondents

Forty-one (41%) of the respondents had ever heard of BSE and the main source of information was mass media (29%). Health professionals also played the role of information source in 12.5% of respondents.

Knowledge level was analyzed using a questionnaire that had ten correct options. Questions such as at what age BSE should be started? Who, how often and the best time to conduct BSE were included. The benefits of BSE were also asked. Only 14.5% had adequate knowledge rest 85.5% had inadequate knowledge of BSE. The 61% of the respondent believed that BSE was a useful tool for detecting breast cancer, others were not sure (17%) or didn't believe (21%) its usefulness.

Out of all, only 10.7% were practicing BSE; among them, more than 50% of the respondents rarely practiced BSE. They did not follow all 5 steps of BSE correctly.

The women who did not practice BSE gave various reasons as summarized in Table 2. Major did not know how to perform (72.1%) and does not have symptoms (45.8%).

Table 2 and 3 represents the knowledge and practice of BSE among respondents.

Knowledge of BSE found to be significantly associated with age, marital status, educational status, ethnicity, and occupation. Whereas the practice of BSE was found to be significantly associated only with their educational status.

Tables 4 and 5 represent association between knowledge of BSE and practice with sociodemographic factors.

Table 1: Sociodemographic characteristics of the female population.

Variables	Category	Frequency	Percentage (%)
Age (years)	15-19	15	5.7
	20-29	68	26
	30-39	77	29.4
	40-49	51	19.5
	50-59	40	15.3
	60	11	4.2
Marital status	Married	215	82.1
	Unmarried	43	16.4
	Widowed	4	1.5
Religion	Hindu	242	92.4
	Christian	1	0.4
	Islam	3	1.1
	Buddhist	16	6.1
Caste/ethnicity	Janajati	112	42.7
	Brahman/Chhetri	79	30.2
	Dalits	34	13
	Newar	19	7.3
	Tarai/Madesi	17	6.5
	No formal education	31	11.8
Educational status	Primary school	74	28.2
	Secondary school	84	32
	Above 12	73	27.9
	Homemaker	143	54.6
Occupations	Farmer	22	8.4
	Students	40	15.3
	Working women	57	21.8

Table 2: Knowledge of BSE among respondents.

Variables	Category	Frequency	Percentage (%)
Ever heard of BSE	Yes	108	41.2
	No	154	58.8
Have you been taught how to do BSE?	Yes	18	6.9
	No	224	93.1
Source of information for BSE if heard: (may include multiple responses)	Media	55	51
	Health professional	33	30
	Friends	17	15
	Schools	9	8.3
	Family	7	6.4
Knowledge level	Adequate	38	14.5
	Inadequate	224	85.5

Table 3: Practice of BSE among respondents.

Variables	Category	Frequency	Percentage (%)
BSE useful tool for the detection of breast cancer	Yes	161	61.5
	No	56	21.4
	May be	36	13.7
	Don't know	9	3.4

Continued.

Variables	Category	Frequency	Percentage (%)
Current practice	Yes	28	10.7
	No	234	89.3
Frequency of practice	Monthly	3	10.7
	Occasionally	10	35
	Rarely	15	53.5
Follow all the steps correct	Step one	12	4.5
	Step two	6	2.3
	Step three	3	1.1
	Step four	3	1.1
	Step five	17	4.2
Reason for not practicing: (may have multiple responses)	I don't have symptoms	120	45.8
	Don't know how to perform	189	72.1
	Feel shy	12	4.5
	Afraid of detecting a lump	3	1.1
	Didn't know about BSE	7	2.7

Table 4: Association between knowledge of BSE and demographic variables.

Variables	Category	BSE knowledge, n (%)		P value
		Inadequate	Adequate	
Age (years)	15-19	14 (93.3)	1 (6.7)	<0.001*
	20-29	44 (64.7)	24 (35.3)	
	30-39	66 (85.7)	111 (4.3)	
	40-49	49 (96.1)	2 (3.9)	
	50-59	40 (100)	0 (0)	
	60	11 (100)	0 (0)	
Marital status	Married	192 (89.3)	23 (10.7)	<0.001*
	Unmarried	28 (65.1)	15 (34.9)	
Religion	Hindu	205 (84.7)	37 (15.3)	0.642
	Christian	1 (100)	0 (0)	
	Islam	3 (100)	0 (0)	
	Buddhist	15 (93.8)	1 (6.2)	
Caste/ ethnicity	Janajati	96 (85.7)	16 (14.3)	<0.002*
	Brahmin/Chhetri	58 (73.4)	21 (26.6)	
	Dalits	33 (97.1)	1 (2.9)	
	Newar	19 (100)	0 (0)	
	Tarai /Madesi	17 (100)	0 (0)	
Educational status	No formal education	31 (100)	0 (0)	<0.001*
	Primary school	71 (95.9)	3 (4.1)	
	Secondary school	71 (84.5)	13 (15.5)	
	Above 12	51 (69.9)	22 (30.1)	
Occupations	Homemaker	129 (90.2)	14 (9.8)	<0.004*
	Farmer	21 (95.5)	1 (4.5)	
	Students	28 (70)	12 (30)	
	Working women	46 (80.7)	11 (19.3)	

Note *Statically significant at 95% level of confidence.

Table 5: Association between practice and demographic variables.

Variables	Category	BSE practice, n (%)		P value
		Inadequate	Adequate	
Age (years)	15-19	14 (93.3)	1 (6.7)	0.221
	20-29	57 (83.8)	16 (10)	
	30-39	67 (87)	10 (13)	
	40-49	46 (90.2)	5 (9.8)	
	50-59	39 (97.5)	1 (2.5)	
	60	11 (100)	0 (0)	

Continued.

Variables	Category	BSE practice, n (%)		P value
		Inadequate	Adequate	
Marital status	Married	193 (89.8)	22 (10.2)	0.605
	Unmarried	37 (86)	6 (14.0)	
	Widowed	4 (100)	0 (0.)	
Religion	Hindu	218 (90.1)	24 (9.9)	0.255
	Christian	1 (100)	0 (0)	
	Islam	3 (100)	0 (0)	
	Buddhist	12 (75)	4 (25)	
Caste/ ethnicity	Janajati	98 (87.5)	14 (12.5)	0.613
	Brahmin/Chettri	69 (87.3)	10 (12.7)	
	Dalits	31 (91.2)	3 (8.8)	
	Newar	18 (94.7)	1 (5.3)	
	Tarai / Madesi	17 (100)	0 (0)	
Educational status	No formal education	29 (93.5)	2 (6.5)	<0.001*
	Primary school	72 (97.3)	2 (2.7)	
	Secondary school	77 (91.7)	7 (8.3)	
	Above 12	56 (76)	17 (23.3)	
Occupations	Homemaker	128 (89.5)	15 (10.5)	312
	Farmer	22 (100)	0 (0)	
	Students	34 (85)	6 (15)	
	Working women	50 (87.7)	7 (12.3)	

DISCUSSIONS

BSE is an important tool for women in a country where screening tool like mammography is seldom available. Women should be encouraged and informed about the benefits and its limitation. The importance of promptly reporting to a health professional if any changes to their breast should be emphasized.

The results of this study demonstrate that only 41.2% of the respondents had ever heard about BSE. This finding is consistent with the findings of a similar study done in other parts of Nepal where 31.1% had heard about BSE.¹⁶

Social media played an important role in delivering the information about BSE as shown by this study where the majority of the respondents heard about it from the media (51%) followed by a health professional (30%). Media as a major source of information (52%) was also observed in other studies.¹⁷ This information is important to use social media as a useful tool not only to spread awareness but also about how to perform BSE. In some studies, in Nepal, health professionals (60%) were the major source of information on BSE followed by media (36%).¹⁸

The significant female had an inadequate level of knowledge of BSE (85%) irrespective of whether they have ever heard of BSE or not. Even though the knowledge was inadequate sixty-one (61.5%) of them believed that BSE was a useful tool for the detection of breast cancer, others were not sure (17%) or didn't believe (21%) its usefulness. Studies have shown that respondents believed that BSE helps in the early detection of breast abnormalities (99.4%) and can improve survival.¹⁷ Similarly, studies done in Lahore on

nursing students also responded that BSE is a necessary (56.4%) tool.¹⁹

In our study, the rate of the practice of BSE was found to be very low 10.7% in contrast to the other studies where 90.63% of the respondents performed BSE.²⁰ Among those who practiced, fifty-three (53.5%) rarely practiced BSE. This big difference gap in practice may be as the later study was conducted in either nursing or medical students. Studies conducted on students of Nepal also had low practice (27.1%) levels despite good BSE knowledge (34%).²¹ In studies conducted in Turkey, it was found that even among health workers (HW), despite knowledge and practice (92.6%), the percentage of those who performed regular BSE was rather low (31.1%, n=101).²² These rates were even lower in women who are not health workers.²²

The women who did not practice gave various reasons. Seventy-two (72%) of them responded that they do not know how to perform and 45.8% said that they didn't have symptoms, and therefore didn't perform BSE. This study was consistent with the other study where 65% didn't perform BSE and the reason behind this was, they don't know how to perform (33%).¹⁹

Knowledge of BSE was found to be significantly associated with age, marital status, educational status, ethnicity, and occupation. A study done on the Kashmiri female population also found a significant relationship between knowledge of BSE with educational status and occupation.²² Therefore, educational intervention for increasing awareness of BSE has a major role. Whereas the practice of BSE was found to be significantly associated only with their educational status which was consistent with the studies done in Turkey where

variables including age, level of education, and family history of BC were not significant with BSE practice.²³

This study was carried out in only one hospital, therefore, might not be representative of other populations in general.

CONCLUSIONS

This study revealed that most of the participants had low knowledge and practice of BSE. Education was found to be associated with both the knowledge and practice of BSE. Therefore, it is important to develop a health education program to raise awareness about BSE among females of this population. Social media played a major role in getting information about BSE therefore more awareness should be emphasized via media. In a setting like ours where mammography is seldom available, women should be encouraged to perform BSE regularly and emphasized to report any new symptoms immediately to their health care professional.

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