

Assessment of knowledge, attitude and practice regarding breast self-examination among females in Karachi

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Abstract

Objective: To assess the knowledge, attitude and practice regarding breast self-examination among women in an urban setting.

Method: The Knowledge, Attitude and Practice study was conducted from May to July 2018 at the Department of Gynaecology and Obstetrics at Naseer Hussain Shaheed Hospital and the Institute of Infectious Disease, Karachi, and comprised women aged 15 years or above who were attending the outpatient department. Data was collected using a pre-designed questionnaire and was analysed using SPSS 23.

Results: There were 385 women with a mean age of 30.09 ± 7.09 years. Overall, 259 (67.3%) subjects had adequate knowledge about breast self-examination, 123 (31.9%) had appropriate practices and 187 (48.6%) had positive attitude.

Conclusion: Overall knowledge level regarding breast self-examination was found to be inadequate.

Keywords: Breast cancer, knowledge, attitude and practice, breast self-examination (BSE).

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Introduction

¹Breast cancer is one of the most common malignancies, a global major health issue and a leading cause of mortality and morbidity among women. There has been an increased burden of disease irrespective of financial economy of countries, but prognosis and survival rate are far better in developed countries because of diagnosis at an early stage and advances in treatment.¹

Breast cancer typically starts within the mammary glands, or the ducts, which are the passages that drain milk from the lobules to the nipple. Rarely, it can begin in the breast stromal tissues, which include the fatty and fibrous connective tissues of the breast. Genetic abnormality is an important cause of breast cancer. The inherited abnormality from parents is the reason for 5-10% cancers, whereas 85-90% of breast cancers are because of abnormal genetics.²

The incidence of breast cancer is rising in Pakistan rapidly. It has been estimated that every ninth women is diagnosed with breast cancer. In Asian population, the incidence of breast cancer is higher.^{2,3} The required clinical breast screening facilities are not available in Pakistan. Only 2.5% urban and 0.7% rural population have access to the relevant radiological facilities.⁴ About 9.5% of urban population and 4.8% rural women underwent clinical screening of breast cancer. In Karachi, breast cancer

accounts for 34.6% of all cancer cases, and is the most frequent cancer among females in our region.^{3,5} The major cause of death in breast cancer is inadequacy and lack of awareness, low socioeconomic status (SES), poverty and delayed presentation.⁶

Clinical breast examination (CBE), mammography and breast self-examination (BSE) are the most recommended screening techniques for the detection of breast cancer.⁷ CBE is a standard method⁸ in which healthcare professional either looks for women breast abnormalities/strangeness or evaluates patient reports of signs and symptoms to observe and find palpable breast cancers at the beginning stage of the disease.⁹ Screening mammography is the additional method involving X-ray images of the breasts. It is the key to continuous reduction in breast cancer mortality through early detection. Organisations like the National Cancer Institute (NCI), American Cancer Society (ACS) and the American College of Radiology (ACR) recommend mammographic examination every year in women aged >40.¹⁰ CBE and mammography require hospital visit, specialised equipment and expertise, but BSE is an inexpensive non-invasive screening method that can be carried out by women themselves.¹¹ There are two advantages of BSE; firstly, women become familiar with the shape and feel of their breasts, and, secondly, they can easily detect any changes at an early stage.¹² About 90% of the times, individuals are found to have noticed the breast cancer by themselves.¹³ Various studies concluded that problems and obstacles in diagnosing and planning treatment can be reduced by spreading awareness about breast cancer among women.^{14,15}

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The current study was planned to assess the knowledge, attitude and practice (KAP) regarding BSE in an urban setting.

Subjects and Methods

The KPA study was conducted from May to July 2018 at the Department of Gynaecology and Obstetrics (Gyn/Obs) at Naseer Hussain Shaheed Hospital and the Institute of Infectious Disease, Karachi, and comprised women aged 15 years or above. Both facilities are public hospitals administered by the Karachi Metropolitan Corporation (KMC) in district Central of Karachi.

After approval from the ethics review board of "Baqai Medical University" Karachi, the sample size was calculated using WHO calculator.¹⁶ As there was no relevant literature available, frequency of outcome variable was taken as 50% with 95% confidence interval and 5% standard error.

The sample was raised using non-probability consecutive sampling from among the women who were attending the outpatient department (OPD) and volunteered to participate in the study. Those who did not consent were excluded.

Data was collected using a structured questionnaire that had two sections. The first section contained socio-demographic data, while the second part related to specific questions regarding BSE-related KAP. The total KAP score was categorised into adequate/inadequate knowledge, positive/negative attitude and appropriate/inappropriate practice. There were 5 knowledge indicators with a score of 1 for each of them. Score 3-5 was considered substantially adequate knowledge. There were 3 indicators for attitude and score 2-3 was considered as having a

Table-1: Socio-demographic characteristics.

Variables	n (%)
Mean Age (years)	30.09±7.09
Marital Status	
Married	265 (68.8)
Unmarried	88 (22.9)
Divorced/widowed/separated	32 (8.3)
Religion	
Muslim	370 (96.1)
Non-Muslim	15 (3.9)
Monthly Income(In rupees)	
<25000	243 (63.1)
25000-75000	68 (17.7)
>75000	74 (19.2)
Family history of breast cancer	
Yes	67 (17.4)
No	318 (82.6)
Educational status	
Illiterate	15 (3.9)
Able to read and write	11 (2.9)
Islamic/Informal education	12 (3.1)
Primary	29 (7.5)
Secondary	46 (11.9)
Intermediate	107 (27.8)
Graduate	135 (35.1)
Post Graduate	30 (7.8)

positive attitude. There were 8 indicators for practice and score 5-8 was considered as indicating substantially appropriate practice of BSE. Each criterion was based on a cut-off of approximately 60% score.

Data was analysed using SPSS 23. Frequencies and percentages were calculated for qualitative variables. Mean and standard deviation (SD) were calculated for quantitative variables. Pearson chi-square test was applied to check the relationship between socio-demographic variables and KAP. P<0.05 was considered significant.

Results

There were 385 women with a mean age of 30.09±7.09

Table-2: Knowledge attitude and practice (KAP) related characteristics.

Knowledge attitude and practice profile		n (%)
Knowledge		
1. Have you heard of BSE?	Yes	280 (72.7)
	No	105 (27.3)
How did you hear about it?	Relatives	227 (59)
	friends	119 (30.9)
	TV	79 (20.5)
	Internet	157 (40.8)
	other	4 (1)
2. Can early detection of breast cancer improve the chances of Survival?	Yes	278 (72.2)
	No	15 (3.9)
	Don't know	92 (23.9)
3. Do you think screening of abnormality of breast is important and useful?	Yes	301 (78.2)
	No	84 (21.8)
4. Do you know what to look for while performing BSE?	Yes	200 (51.9)
	No	185 (48.1)
5. Should BSE be performed monthly?	Yes	164 (42.6)
	No	221 (57.4)
Attitude		
1. Do you feel embarrassed while doing BSE?	Yes	172 (44.7)
	No	213 (55.3)
2. Do you avoid BSE because of the fear that you could detect breast cancer?	Yes	130 (33.8)
	No	255 (66.2)
3. If you notice any breast abnormality will you consult a doctor?	Yes	336 (87.3)
	No	49 (12.7)
Practice		
1. Do you perform BSE?	Yes	268 (69.6)
	No	117 (30.4)
2. Do you know Three positions to perform BSE?	Yes	142 (36.9)
	No	243 (63.1)
3. Do you avoid BSE because of the fear that you could detect breast cancer?	Yes	130 (33.8)
	No	255 (66.2)
4. Do you perform BSE in front of mirror?	Yes	200 (51.9)
	No	185 (48.1)
5. Do you use pads of your fingers when you perform BSE?	Yes	202 (52.5)
	No	183 (47.5)
6. Do you feel the armpit while doing BSE?	Yes	149 (38.7)
	No	236 (61.3)
7. Do you raise one hand above head when performing BSE?	Yes	150 (39)
	No	235 (61)
8. Do you press entire breast area firmly while doing BSE?	Yes	292 (75.8)
	No	93 (24.2)

Table-3: Association of Knowledge, attitude and practice (KAP) with various other factors.

Study variables		Knowledge		Attitude		Practice	
		Inadequate n (%)	Adequate n (%)	Negative n (%)	Positive n (%)	Inappropriate n (%)	Appropriate n (%)
Age	< 30 years	75(36.8)	129(63.2)	112(54.9)	92(45.1)	142(69.6)	62(30.4)
	≥ 30 years	50(27.8)	130(72.2)	86(47.5)	95(52.5)	120(66.3)	61(33.7)
<i>p</i> -values		0.06		0.14		0.48	
Marital status	Married	77(29.2)	187(70.8)	133(50.2)	132(49.8)	171(64.5)	94(35.5)
	Unmarried	35(39.8)	53(60.2)	48(54.5)	40(45.5)	65(73.9)	23(26.1)
	Divorced/widowed/ separated	13(40.6)	19(59.4)	17(53.1)	15(46.9)	26(81.2)	6(18.8)
<i>p</i> -values		0.11		0.76		0.06	
Religion	Muslim	121(32.8)	248(67.2)	191(51.6)	179(48.4)	251(67.8)	119(32.2)
	Non-Muslim	4(26.7)	11(73.3)	7(46.7)	8(53.3)	11(73.3)	4(26.7)
<i>p</i> -values		0.62		0.7		0.62	
Educational status	Illiterate	9(60)	6(40)	10(66.7)	5(33.3)	14(93.3)	1(6.7)
	Primary	15(51.7)	14(48.3)	15(51.7)	14(48.3)	27(93.1)	2(6.9)
	Secondary	15(32.6)	31(67.4)	31(67.4)	15(32.6)	37(80.4)	9(19.6)
	Intermediate	39(36.8)	67(63.2)	49(45.8)	58(54.2)	69(64.5)	38(35.5)
	Graduate	29(21.5)	106(78.5)	59(43.7)	76(56.3)	83(64.5)	52(38.5)
	Post Graduate	3(10)	27(90)	21(70)	9(30)	10(33.3)	20(200)
	Able to Read and Write	8(72.7)	3(27.3)	7(63.6)	4(36.4%)	10(90.9)	20(66.7)
	Islamic / Informal Education	7(58.3%)	5(41.7)	6(50)	6(50)	12(100)	0(0)
<i>p</i> -values		0.001		0.03		0.001	
Monthly income (in Pak Rupees)	<25000	98(40.5)	144(59.5)	124(51)	119(49)	186(76.5%)	57(23.5)
	25000-75000	14(20.6)	54(79.4)	34(50)	34(50)	38(55.9)	30(44.1)
	>75000	13(17.6)	61(82.4)	40(54.1)	34(45.9)	38(51.4)	36(48.6)
<i>p</i> -values		0.001		0.87		0.001	
Family history of breast cancer	17(25.4%)	50(74.6)	32(47.8)	35(52.2)	33(49.3)	34(50.7)	
		0.16		0.51		0.001	

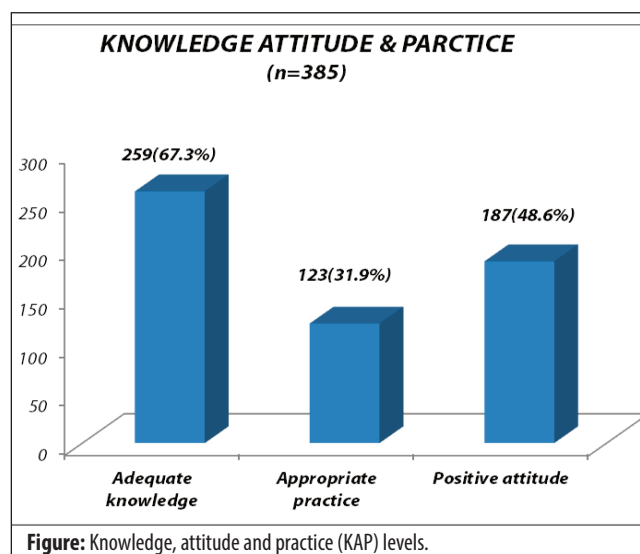
years. Of the total, 265(68.8%) subjects were married, 88(22.9%) were unmarried and 32(8.3%) were divorced/widowed/separated. Also, 370(96.1%) subjects were Muslims; 15(3.9%) were non-Muslims; 15(3.9%) were illiterate; 29(7.5%) had primary education; 46(11.9%) had passed secondary level; 107(27.8%) had done intermediate; 135(35.1%) were graduates; 30(7.8%) were post-graduates; and the rest were only able to read and write or had only Islamic education. In terms of income, 243(63.1%) participants were earning <Rs25,000, 68(17.7%) Rs 25-75,000 and 74(19.2%) had >Rs75,000 monthly earning. Family history of breast cancer was reported by 67(14.3%) subjects (Table 1).

Overall, 280(72.7%) participants had heard about BSE before; 278(72.7%) considered that early detection of breast cancer improved the chances of survival; 301(78.2%) thought screening of breast abnormality was important; 142(36.9%) knew the appropriate way to perform BSE; 200(51.9%) knew what to look for while performing BSE; 164(42.6%) believed BSE should be performed on a monthly basis; 172(44.7%) considered BSE a quite embarrassing procedure; 71(18.4%) had a history of breast lump; 51(13.2%) had detected it by themselves; 130(33.8%)

avoided BSE because of the fear that they might get detected with breast cancer; 268(69.6%) had performed BSE; 200(51.9%) performed the examination in front of a mirror; 202(52.5%) used pads of their fingers while performing BSE; 149(38.7%) felt the armpit while doing BSE; 150(39%) raised one arm above the head during BSE; 292(75.8%) pressed the entire breast area firmly during BSE; and 336(87.3%) said that in case if they ever noticed any breast abnormality they will consult a doctor (Table 2).

KAP scores indicated that 259(67.3%) subjects had adequate knowledge about BSE, 123(31.9%) had appropriate practices and 187(48.6%) had positive attitude (Figure).

Association of age, marital status, religion with KAP, association of attitudes and monthly income, and knowledge and attitude with family history of breast cancer was non-significant ($p>0.05$), while the association of educational status with KAP, association of monthly income with knowledge and practice, and association of family history of breast cancer with practice were significant ($p<0.05$) (Table 3).



Discussion

In view of the rising incidence of breast cancer, there is a dire need to assess BSE-related KAP among females of various demographic characteristics so that the prerequisite of devising better screening methods to detect breast cancer in early stages can be initiated. The overall BSE knowledge in our population was poor at 67%. An earlier study among dental female doctors reported that 28% women examined their breasts rarely or never.¹⁷ Attitude reflects the importance of self-examination and showed that majority of the women felt "all women should do BSE". The current study highlights knowledge and interest in doing BSE, in contrast with the findings of previous study where discomfort and fear were possible hurdles in the way of practising BSE.¹⁸

In Europe, young girls (3.4%) and those aged 17-30 years (14.8%) showed an accurate method and currently doing appropriate BSE practice compare to the current study (31.9%).¹⁹ There is paucity of data in under-developed countries like Pakistan regarding breast cancer awareness, and in countries where data is available, the results seem to be poor as there is now enough awareness regarding BSE. About 30% Pakistani females practise BSE.²⁰

Regular visits to specialists for screening of breast cancer is an early possible way to diagnose the disease. However, with the increased prevalence of this disease, BSE plays an important role in early diagnosis. BSE is an easy and quick method that involves no cost. Even then its practice is not very common. In a study, 60% females had knowledge about BSE and >80% females had positive attitude.²¹ Most of the respondents were aware of BSE in our study. It is documented that one's belief and knowledge plays an important role in the management of any disease. Similarly, female's belief and knowledge are important factors in seeking medical help.²² Literature showed that with high prevalence of breast cancer, overall mortality rate of females is rising. However, if it is detected at an early stage, there will be significantly low mortality. World health Organisation (WHO) reported that older women are more prone to having this disease.²³ It is important to detect breast cancer in early stages as progressive spread of cancer is often incurable. The regular practice of BSE has positive effect on treatment, prognosis and survival.²⁴

Another study showed that three-quarter of the females had knowledge about BSE, but only 9% adopted it as a practice. Only 13% females had sufficient knowledge on how to examine their breast. Their main source of information was television and others had information from friends or acquaintances. However, majority females had gathered information regarding BSE from surfing the

internet. There were more than 85% females who thought that it is an important issue to monitor regularly, but less than 5% females practised BSE regularly. There were 60% females who had reasonable attitude towards BSE and only 10% had awareness regarding BSE. Absence of knowledge on BSE was cited as the main cause for not practising BSE.²⁵

A study showed that the development of level of knowledge and society's attitude about BSE can play a positive and vital role on screening performances. Inadequate knowledge of women about breast cancer was the leading risk factor. Among the predictors of a better knowledge, higher SES was a significant factor. Cancer risk revealed poor knowledge among the poorest and the least educated women.²⁶

A study conducted in Karachi showed that despite having more than 70% BSE knowledge, only 33% females had taken it up as a practice. Even though most females knew that BSE is vital for diagnosing early stage of breast cancer.²⁷

There were various factors leading to better knowledge. Among them was older age. As age progressed, knowledge was found to be sufficient in females regarding breast cancer. On the contrary, younger females had inadequate knowledge about breast cancer and therefore had negative association with knowledge level of breast cancer. The most significant factor that influenced BSE practice was family history of breast cancer. Such an experience makes women more anxious about their health, breast diseases and specifically BSE.²⁸

The results of the current study showed that BSE practice was significantly associated with knowledge. Literature has also showed this relationship.²⁹

The current study has its limitations. The data was entirely self-reported and may have carried various biases. Also, the sample size was relatively small and may not be truly representative of the community.

Despite the limitations, the study highlighted the need for creating awareness regarding regular BSE. Community awareness activities, preventive and educational programmes are needed to improve the knowledge level among women regarding breast cancer and regular BSE. Relevant authorities need to devise cost-effective screening tools, like BSE, and to implement it in preventive care.

Conclusion

The overall BSE knowledge was found to be inadequate, whereas most of the respondents were aware of BSE and half of the subjects had a positive attitude towards it.

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