



General Surgery

A STUDY OF KNOWLEDGE, ATTITUDE AND PRACTICE OF SELF BREAST EXAMINATION (SBE) AMONG FEMALE PATIENTS ATTENDING A TERTIARY CENTER IN MAHARASHTRA: A CROSS SECTIONAL STUDY

Dr. Hemant Patil*	Junior resident in Department of Surgery, Dr. Panjabrao Deshmukh Memorial Medical College, Amravati. *Corresponding Author
Dr. Varsha Bijwe	Professor in Department of Surgery, Dr. Panjabrao Deshmukh Memorial Medical College, Amravati.
Dr. Rushikesh Shinde	Junior resident in Department of Surgery, Dr. Panjabrao Deshmukh Memorial Medical College, Amravati.

ABSTRACT **Background:** Self breast examination is proposed to be intuitive, inexpensive, non invasive and universally accessible means of identifying early stage neoplasms. With this basic idea in the background, we conducted this study with a goal of assessing the knowledge, attitude and practice of SBE among the women attending our tertiary care hospital. **Methods:** A cross sectional study was conducted among the women who attended the department of surgery of our institute. We did a purposive sampling of 600 women attended Dr Panjabrao Deshmukh Memorial Medical College in duration of 4 months [Sept 2020 to December 2020]. Those women who were already diagnosed to have breast cancer, those who underwent surgery of breast and having debilitating illness were excluded from the study. A self administrated questionnaire was used to collect the data. Study participants were given a printed copy of this questionnaire and allowed time to fill their response at their will. Strict anonymity and confidentiality was maintained throughout the study. **Results:** Of the 600 women we interviewed, 35% had poor KAP score, 11.83% had moderate KAP score and 53.17% had good KAP scores. Overall total score was significantly higher among the age less than 39 years, more annual income, with higher educational status, more among married women and higher among women who have breast fed. ($p < 0.05$) **Conclusions:** Among the knowledge section majority of the women gave correct answers related to the main purpose of self breast examination and ideal day of performing breast examination. About 1/3 rd of the women practiced SBE regularly in the present sample. More than 2/3rd of the women had moderate to poor KAP score in the present study.

KEYWORDS : Self breast examination; Breast Cancer; Prevention; Cancer control

INTRODUCTION:

Nearly a quarter (25%) of all estimated cancers across the world is attributed to the breast cancer burden.¹ Women in less developed countries have higher number of breast cancer cases when compared to developed countries.² The age adjusted incidence rate of breast cancer in India is around 25.8 per lakh population.³ The cancer associated morbidity and mortality in Indian subcontinent is huge as per the literature.³ There is a dire need of early detection of breast cancer in Indian women. Early detection of breast cancer is essential to ensure effective management plans with successful outcomes.^{4,5} Clinical breast examination, self breast examination (SBE) and various imaging techniques like mammography, ultrasonography, magnetic resonance imaging (MRI) and digital breast tomosynthesis (DBT) are some major methods of screening in breast cancer. SBE is proposed to be intuitive, inexpensive, non invasive and universally accessible means of identifying early stage neoplasms.^{6,7} In spite of its less efficacy projected in various literature, this tool is very useful in developing countries like India. With this basic idea in the background, we conducted this study with a goal of assessing the knowledge, attitude and practice of SBE among the women attending our tertiary care hospital.

MATERIALS AND METHODS:

A cross sectional study was conducted among the women who attended the department of surgery of our institute. We did a purposive sampling of 600 women who attended Dr Panjabrao Deshmukh Memorial Medical College during Sept 2020 to December 2020. All women between 18 to 60 years of age and who were willing for consent were included in the present study. Those women who were already diagnosed to have breast cancer, those who underwent surgery of breast and having debilitating illness were excluded from the study. Previous literature reported around 50% of the women having a basic knowledge about SBE in their studies.⁸ With this proportion, with 95% confidence interval and 4% absolute error, we got final sample size of 600 in the present study.

A self administrated questionnaire was used to collect the data. After careful review of literature, we finalised a questionnaire. After piloting the final changes in the questionnaires were done. It was converted to native language during the time of collection and later back translated to analysis purpose. The questionnaire had 4 sections which included sociodemographic particulars, questions related to knowledge, attitude and practice about SBE. Study participants were given a

printed copy this questionnaire and allowed time to fill their response at their will. Strict anonymity and confidentiality was maintained throughout the study. The form had a written informed consent prior to start of the study. We took permission from institutional ethics committee before the start of the study. A total of 12 questions were in the questionnaire. A score of 1 was assigned for every correct answer and 0 for wrong answer. A total score was calculated in percentage in the final sheet. This score was classified into poor, moderate and good score and interpreted. After the session of data collection, we conducted a demonstration of SBE for those women who filled the forms in that session. The general idea of breast cancer, its burden, risk factors and preventive strategies were part of talk to the women.

Statistical Analysis:

The data was collected, compiled, and analyzed using EPI info (version 7.2). The qualitative variables were expressed in terms of percentages. The quantitative variables were both categorized and expressed in terms of percentages or in terms of mean and standard deviations. The difference between the two proportions was analyzed using chi-square or Fisher exact test. All analysis was 2 tailed and the significance level was set at 0.05.

RESULTS:

We have included 600 women in the present study.

Table 1: Demographic particulars

Demographic particulars	Frequency	Percentage
Age (in years)		
21 to 30	116	19.33
31 to 40	196	32.67
41 to 50	193	32.17
51 to 60	95	15.83
Annual income*		
<25000	245	42.24
>25000	335	57.76
Educational status		
Uneducated	69	11.50
Upto primary school	59	9.83
Upto secondary school	68	11.50
Upto 12 th standard	210	35.00
Graduate and above	194	32.33
Family history (Present)	103	17.17

Marital status		
Single	123	20.50
Married/Divorce/widow	477	79.50
Addictions (Present)	28	4.67
Breast feeding done (n=477)		
Yes	465	97.48
No	12	2.52

*Median value has been considered

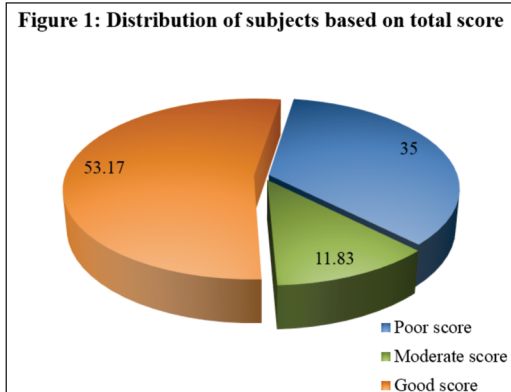
The mean age of the study participants was 39 years in the present study. More than 50% had annual income more than 25000, majority of the subjects were educated upto 12th standard and had graduate degree or above, 17.17% had family history of cancer, 20.50% were single, 4.67% had at least one addiction and 97.48% had breast feeding done after delivery.

Table 2: Questions related to knowledge, attitude and practice of SBE

Questions	Correct		Wrong	
	Number	%	Number	%
Knowledge of self breast examination				
Main purpose of doing self breast examination	474	79.00	126	21.00
Ideal age when to start self breast examination	392	65.33	208	34.67
Ideal day of performing self breast examination	402	67.00	198	33.00
Observation of any unusual change in the shape and size of the breast	338	56.33	262	43.67
Method of self breast examination	377	62.83	223	37.17
Attitude of self breast examination				
Self breast examination is embarrassing to me	321	53.50	279	46.50
Feels doing it as waste of time	220	36.67	380	63.33
Practice				
Do self breast examination every month	202	33.67	398	66.33
Learning correct method of self breast examination	183	30.50	417	69.50
Advise friends about self breast examination	348	58.00	252	42.00
Discuss the importance of self breast examination with friends	361	60.17	239	39.83
It notice any abnormality, directly go to health care facility	379	63.17	221	36.83

Among the knowledge section majority of the women gave correct answers related to the main purpose of self breast examination and ideal day of performing breast examination. Among attitude section, 321 women reported that it is embarrassing for them. About 63.17% of the patient had practice of going to medical facility if any abnormality they found during SBE. About 58% of them said that they will advise to their friends about SBE. About 33.67% of women said they practice SBE every month.

Figure 1: Distribution of subjects based on total score



Of the 600 women we interviewed, 35% had poor score, 11.83% had moderate score and 53.17% had good scores.

Table 3: Association of total score with various demographic particulars

Demographic particulars	Poor		Moderate		Good		P value
	Num ber	%	Num ber	%	Num ber	%	
Age (in years)*							
<39	12	5.71	9	12.86	261	81.82	<0.001
>39	198	94.29	62	87.32	58	18.18	
Annual income*							
<25000	170	89.47	30	42.25	45	14.11	<0.001
>25000	20	10.53	41	57.75	274	85.89	
Educational status							
<Secondary school	179	85.24	9	12.68	8	2.51	<0.001
>Secondary school	31	14.76	62	87.32	311	97.49	
Family history (Present)	33	15.71	14	19.72	56	17.55	0.7152
Marital status							
Single	20	9.52	0	0	103	32.29	<0.001
Married/Divorce/widow	190	90.48	71	100.00	216	67.71	
Addictions (Present)	19	9.05	0	0	9	2.82	0.0006
Breast feeding done (n=477)							
Yes	190	100.00	67	94.37	208	96.30	0.0113
No	0	0	4	5.63	8	3.70	

Overall total score was significantly higher among the age less than 39 years, more annual income, with higher educational status, more among married women and higher among women who have breast fed. (p<0.05)

DISCUSSION:

Self breast examination is one of the non invasive methods as a preventive strategy to detect early breast cancer. ⁵ We conducted this study to understand the knowledge attitude and practice related to SBE in our population. In the present study, majority of the women gave correct answers related to the main purpose of self breast examination and ideal day of performing breast examination.

A study conducted by Menkenon et al⁹ reported that 89.3% of the respondents though SBE was necessary. Another study by Sideeq K et al¹⁰ reported that only 26% of the participants had ever heard of breast cancer and among them for 50.8% the source of information was media. More educational activities have to be done among various ranges of communities and hospital about SBE and share knowledge about breast cancer and its early detection. In the present study, 321 women reported that it is embarrassing for them. Similar inferences were given by a study conducted by Menkenon et al⁹, about 63.17% of the patient had practice of going to medical facility if any abnormality they found during SBE. About 58% of them said that they will advise to their friends about SBE. In the present study, 33.67% of women said they practice SBE every month. Bellgam HI et al¹¹ reported that about 28.94% respondents practiced SBE. Myths and facts about SBE have to be clarified to the women by using community participation as a role model. A recent campaign for early screening for breast cancer was flagged by some pharmaceutical companies with a slogan of 'men for pink'. This campaign was involving men in persuading their sisters, wife, mothers and other female relatives to get screened for breast cancer.

Of the 600 women we interviewed, 35% had poor score, 11.83% had moderate score and 53.17% had good scores. A study conducted by Osman et al¹² among undergraduate nursing student about SBE knowledge yielded a satisfactory score in 69%, attitude was satisfactory in 48% and practice was satisfactory in none of the students. A study conducted by Rosmawati NHH et al¹³ reported that 38.4% had good knowledge, 73.33% had good attitude and 7% had good practice of SBE in their study. Another study conducted by Shretha S et al¹⁴ revealed that the majority 232 (72.5%) of the respondents had average level of knowledge, 70 (21.9%) had poor level of knowledge and only 18 (5.6%) had good level of knowledge respectively. On the other hand, majority of the respondents 304 (95%) had good attitude whereas only 16 (5.0%) had poor attitude regarding Breast Self Examination. Over all total score was significantly higher

among the age less than 39 years, more annual income, with higher educational status, more among married women and higher among women who have breast fed. ($p < 0.05$) A pan India study conducted by Sachdeva S et al¹⁵ inferred that higher educational status was one significant predictor for the total KAP score in their study. Good knowledge scores were significantly higher among the women who had family history of breast cancer. This was contradictory to the present study. Kalligudi S et al¹⁶ reported that score of SBE among IT professional to be over all good. This reflects the role of education in prevention and control of breast cancer. Another study conducted by Shretha S et al¹⁴ reported that there was statistically significant association between knowledge and age, ethnicity and marital status ($p < 0.05$). Attitude was associated with age, religion, profession and level of education ($P < 0.05$). There was very weak correlation ($r = 0.094$) between knowledge and attitude. Another study by Sideeq K et al¹⁰ reported that educational status, occupation and income status of the patients are good predictors for the overall higher KAP score among their population. The association of various demographic particulars reflects what should be the target population to improve the efficacy of SBE as a screening tool in the community.

The present study had limitations. It was a single center study and a cross sectional type of study. Nonetheless, it was one of a major sample studies conducted in the present geographical location with sample of 600 women. Role of interventions in persuading the women to opt for this screening tool, pre and post intervention studies on knowledge attitude and practice of SBE in general population have to be explored.

CONCLUSION:

Among the knowledge section majority of the women gave correct answers related to the main purpose of self breast examination and ideal day of performing breast examination. A majority amount of women reported that it is embarrassing to them. This taboo should be handled using education as a tool. About 1/3 rd of the women practiced SBE regularly in the present sample. More than 2/3rd of the women had moderate to poor KAP score in the present study.

REFERENCES:

- Benson JR, Jatoti I. The global breast cancer burden. *Futur Oncol* 2012;8(6):697–702.
- Bellanger M, Zeinomar N, Tehranifar P, Terry MB. Are Global Breast Cancer Incidence and Mortality Patterns Related to Country-Specific Economic Development and Prevention Strategies? *J Glob Oncol* 2018;4:1–16.
- Malvia S, Bagadi SA, Dubey US, Saxena S. Epidemiology of breast cancer in Indian women. *Asia Pac J Clin Oncol* 2017;13(4):289–95.
- Wang L. Early Diagnosis of Breast Cancer. *Sensors (Basel)* 2017 Jul 5;17(7):1572.
- Milosevic M, Jankovic D, Milenkovic A, Stojanov D. Early diagnosis and detection of breast cancer. *Technol Heal care Off J Eur Soc Eng Med* 2018;26(4):729–59.
- Jacob TC, Penn NE. The need and value of breast self-examination. *J Natl Med Assoc* 1988;80(7):777–87.
- Roth MY, Elmore JG, Yi-Frazier JP, Reisch LM, Oster N V, Miglioretti DL. Self-detection remains a key method of breast cancer detection for U.S. women. *J Womens Health* 2011;20(8):1135–9.
- Udoh RH, Tahiru M, Ansu-Mensah M, Bawontuo V, Danquah FI, Kuupiel D. Women's knowledge, attitude, and practice of breast self-examination in sub-Saharan Africa: A scoping review. *Arch Public Heal* 2020;78(1):1–10.
- Mekonnen M, Asefa T. Knowledge, attitude and practice of breast self examination among female undergraduate nursing students at university of gondar, college of medicine and health sciences. *Hosp Palliat Med Int J* 2019;3(5):167–73.
- Sideeq K, Ayoub T, Saim Khan SM. Breast self-examination: assessing its knowledge attitude and practice among ethnic Kashmiri females. *Int J Community Med Public Health* 2017;4(9):3288.
- Bellgam HI, Buowari YD, State R, Medical C, Woji N. Knowledge, Attitude and Practice of Breast Self Examination among Women in Rivers State, Nigeria. *Niger Heal J* 2012;12(1):16–8.
- Osman H, Jothirajan D, Conde M, Thanganadar C, Rasheed L, Reshmi R. Breast Self-examination: Knowledge, Attitude and Practice among Female Nursing Undergraduate Students in the Northern Border University, KSA. *J Med Sci Clin Res* 2020;08 (09): 233–42.
- Rosmawati NHN. Attitude and Practice of Breast Self Examination in Malaysia. *Asian Pacific J Cancer Prev* 2010;11:1503–8.
- Shrestha S, Shrestha R, Parajuli P, B RK, Bhandari B. Knowledge, attitude and practice regarding breast self examination among female health personnel. 2017;6(4):156–60.
- Sachdeva S, Mangalesh S, Dudani S. Knowledge, Attitude and Practices of Breast Self-Examination Amongst Indian Women: A Pan-India Study. *Asian Pacific J Cancer Care* 2021;6(2):141–7.
- Kalliguddi S, Sharma S, Gore C. Knowledge, attitude, and practice of breast self-examination amongst female IT professionals in Silicon Valley of India. *J Fam Med Prim Care* 2017;6(2):169–70.