

## COMMENTARY

# View Point: How to Make Women Familiar with their Breasts?

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### Abstract

**There is a consensus among researchers about the fact that women should be familiar with their breasts but there is a lot of argument as to how to make them aware of what is normal for them. For over decades breast self examination (BSE) was advocated for the same but as an outcome of work conducted by researchers in various countries a controversy has been raised in the West. In a country like India, where breast cancer screening is not popular and limited resources are available we should question what would be the best strategy to make women familiar with their breasts to facilitate best use of BSE.**

**Keywords:** Breast self exam - breast awareness - breast familiarity

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### Introduction

Breast self examination (BSE) and Breast Awareness (BA) are two terms that are used in relation to breast cancer. Whether it is old wine in new bottle and the semantic difference or whether actually there is a fundamental difference between the two, needs to be understood with clarity as there is disparity across the globe as to which strategy is appropriate. In such a scenario, India represents another dimension. It has limited resources, large population base where the numbers of breast cancer cases are on the rise and where there are no formal guidelines for breast cancer screening issued by the government. In such an existing scenario one needs to understand these two terms and the controversy surrounding them so that we see what is feasible for our country.

### Historical Background and Evolution of BSE

There was a time, not too long ago, when there were no mammograms. In the 1950s, Dr. Cushman Haagensen, a breast surgeon at Columbia University, New York, noticed a disturbing trend. Women were coming to him with such large lumps in their breasts that they were inoperable. Haagensen developed the BSE approach and encouraged his patients to examine themselves in order to find lumps while they were still operable. Over the years, BSE grew to be more widely encouraged and accepted as people realized that self-screening can find breast cancer in its early stages.

Haagensen appeared in a public education film 'breast self examination' released by the American Cancer Society (ACS) and the National Cancer Institute (NCI) in 1950. A series of educational leaflets were also produced. In 1955, Good House keeping reported that over five million women had viewed the educational film (Robert 2007).

Systematic breast self examination has been

recommended for the past 70 years (Adair, 1933), the first evidence of its effectiveness came in 1978 from 2 descriptive studies (Foster et al., 1978; Greenwald et al., 1978). Despite a call for more rigorous studies of BSE, many similar studies followed. These examined the correlation between the practice of BSE and the stage of disease at, or survival following, diagnosis (Moore, 1978). The conclusions from these correlation studies were questioned by 2 review groups because of the potential effects of recall, loss to follow-up, non response, self-selection, lead time and length biases (O'Malley and Fletcher, 1987; Hill et al., 1998).

More than 30 non-randomised studies have produced conflicting results, not providing any strong evidence to support the practice of breast self examination (IARC, 2002).

Programmes to support and encourage monthly breast self examination were first established in Europe, Australasia, and North America in the 1950s and implemented until recently. Surveys in many Western countries in the 1990s showed, however, that despite a high level of awareness about breast self examination only a small minority of women ever examined their breasts regularly (Murray, 1993). The rates were low even among women doctors—only 21% of American female doctors reported examining their breasts monthly (Frank, 2000). The reasons why most women did not examine their breasts were varied (Baines, 1983).

### What is BSE?

Breast self exam is a monthly examination of both the breasts by a woman at the end of menstrual flow. It requires systemic visual inspection standing in front of the mirror, feeling or palpation of both the breasts while lying down flat, using pads middle three fingers by a lady. It is to be done by all the women starting age of 20. The idea

is women will know what is normal for them by doing a monthly BSE and it will be easier for them to pick up any abnormal changes (ACS, 2012). BSE follows a systematic examination which might be associated with fear and anxiety.

## What is BA?

Breast awareness is part of general body awareness, promoting the process of a woman getting to know her own breasts and becoming familiar with what is normal for her, thus enabling her to recognise and report changes as they occur. This breast awareness approach was endorsed by the Government Advisory Committee Department, (1991) and the Royal College of Nursing, (1995).

It is believed that BA is not likely to be associated with anxiety which occurs in BSE.

Breast awareness can be divided into five key principles. This is known as the breast awareness five-point code and has been found by health professionals to be very helpful when advising women about breast awareness: *i*) Know what is normal for you; *ii*) Look and feel; *iii*) Know what changes to look and feel for; *iv*) Report any changes without delay; and *v*) Attend for routine breast screening if aged 50 or over.

The changes that should be looked out for are: *i*) Size, if one breast becomes larger, or lower; *ii*) Nipples, if a nipple becomes inverted (pulled in) or changes position or shape; *iii*) Rashes, on or around the nipple; *iv*) Discharge, from one or both nipples; *v*) Skin changes, puckering or dimpling; *vi*) Swelling, under the armpit or around the collarbone (where the lymph nodes are); *vii*) Pain, continuous, in one part of the breast or armpit; *viii*) Lump or thickening, different to the rest of the breast tissue.

Now, unless a lady actually examines her breasts and feels her breasts thoroughly how will, she know what is normal for her? What seems reasonable is that in order to improve her proficiency a lady should examine herself every month.

## Controversy

The literature suggests that technique and level of skill may be important variables to consider when evaluating BSE. A case-control study by Newcomb and colleagues determined that the performance of more thorough breast self-exams resulted in a 35% decrease in the occurrence of late-stage breast cancer when compared with women who did not perform breast self-exams, independent of exam frequency. Ultimately, the authors concluded that, despite the decrease in late-stage breast cancer as a result of a more thorough exam, because the majority of the women in the study reported a lack of self-proficiency in BSE, the typical performance of BSE provides no benefit (Newcomb et al., 1991). The importance of a thorough exam is further supported by a study by Harvey and colleagues that stresses the importance of three components of the BSE: visual inspection of the breast, palpation with the finger pads, and examination with the three middle fingers (Harvey et al., 1997). When compared with women who performed all three of the components in regular breast

self-exams, women who omitted one or more of these components had an increased chance of death due to breast cancer or distant metastases (OR=2.20, 95%CI 1.30-3.71,  $p=0.003$ ), even after adjustment for confounding variables (Harvey et al., 1997). Based on these data, it seems possible that patient education regarding the necessary components of a thorough BSE could produce a potential benefit, even though with typical practice of BSE no benefit was seen; however, a meta-analysis of trials involving BSE instruction failed to identify lower mortality in the BSE group (pooled RR=1.01, 95%CI 0.92-1.12) (Harvey et al., 1997). A 2003 Cochrane Database meta-analysis examined the only two randomized clinical trials that have studied BSE versus no intervention in an attempt to determine whether screening for breast cancer by BSE reduces mortality (Thomas et al., 2002; Semiglozov et al., 2003). While both randomized clinical trials reported increased identification of benign tumors in the BSE group, the Russian study by Semiglozov and colleagues also found that increased numbers of malignant tumors were identified in the BSE group (RR=1.24, 95%CI 1.09-1.41), (Semiglozov et al., 2003) a finding not supported by the study of women in Shanghai by Thomas and colleagues (RR=0.97, 95%CI 0.88-1.06). Thomas et al. (2002a). Although the results of the Russian study show that BSE may promote identification of malignant tumors, both studies found no significant difference in tumor size or stage at diagnosis in the malignancies identified when comparing control versus BSE groups, implying that increased identification is not synonymous with earlier identification. Of all of the studies cited, the Shanghai study 5 provides the highest quality evidence we have about teaching BSE. It resulted in the analysis of 266,064 women randomly assigned to either a BSE instruction group or a control group. Intensive instruction in BSE and reinforcement over five years did not reduce the mortality rate from breast cancer. However it did result in a higher rate of benign breast biopsies in the BSE group than in the control group [relative risk (RR) 1.84, 95% confidence interval (CI) 1.73-1.95], these findings led to the conclusion that in the absence of mammography BSE alone will not reduce mortality. One of the criticisms was that the Shanghai study was based on only five years of follow-up, but the results were upheld in the publication of the 10-year data. Nekhlyudov and Fletcher, (2001) also pointed out that since the rates of breast cancer in China and Russia are lower than the rates in North America, false positive rates with BSE would likely be higher in those countries and questioned whether the false positive findings with BSE would be similarly high in countries that use concomitant screening methods. Also the Russian study referred only to the St Petersburg component. They questioned the statistical validity of the reports because of cluster randomization and suggested that recommendations based on the trial are premature in the absence of data approved by the WHO. Unfortunately, data from the Moscow branch are incomplete and may never be completed. Researchers have examined the efficacy of BSE in reducing breast cancer mortality.

The sensitivity and specificity values of the BSE are difficult to determine. However, there are a number of

advantages to performing a BSE, such as allowing women to gain a sense of control over their health and to become comfortable with their own breasts. Additionally, it is a simple, noninvasive procedure that can be performed by non medically trained individuals (Tiffany et al., 2010). According to the National Breast Cancer Foundation, up to 70% of breast cancers are found by women performing their own BSE. The ACOG recommends the use of BSE as a tool for breast cancer screening, stating that palpable lesions can be detected through BSE. The ACS also states that BSE can also help women recognize normal versus abnormal breast tissue (Tiffany et al., 2010).

In another study conducted at Oncology Clinic at Kuala Lumpur among Malaysian women an association was observed with delayed presentation at the hospital and non performance of BSE. There were more delayers among Chinese patients (47.1%) than Malays (31.1%) and Indians (22.5%). There were more delayers among unmarried (47.1%) and divorced/widowed women (48.8%) compared to married women (27.8%). There was an increasing trend in the proportion of delayers among those who performed BSE regularly (23.6%), performed BSE irregularly (27.9%) and never performed BSE (41.6%). On a multiple regression model logistic model only never performing BSE was significantly associated with delay, having a more than two-fold odds of delaying (OR: 2.19, CI: 1.09, 4.38) compared to women who performed BSE regularly (Sumarni et al., 2013).

Although there are organizations that still recommend the practice of BSE, the use of this technique has come under scrutiny since newer screening technologies have been developed.

The National Comprehensive Cancer Network (NCCN) recommends that women should be familiar with their breasts and promptly report any change to their healthcare provider. NCCN uses the term "breast awareness" to describe a woman's familiarity with her breasts and suggests that periodic consistent BSE may facilitate this breast awareness. Furthermore, they point out that this does not need to be done in any specific formalized education program and base this on the results of the Shanghai study.

Doctors who still believe in doing self-exams say it's an important part of early detection, especially for women who can't afford mammograms. "For people who don't have access to care, BSE is better than nothing," says Marisa C. Weiss, MD, president and founder of Breastcancer.org, who recommends that her patients do a comprehensive BSE once a month or every other month. The problem is, there's also a downside to doing these monthly self-exams. Early detection of breast cancer is crucial not only to the 'survivorship' of a patient, but to her quality of life while treating the cancer, and thereafter. For many patients, early detection could mean not having to lose a breast through mastectomy or not having to experience aggressive chemotherapy," says Dr. Weiss (Temkins, 2008).

The fact remains, however, that most breast tumors are found by someone's fingers, usually the woman's own.

We now know that BSE is a highly specific skill that cannot be practiced effectively without proper training.

Many of the studies that inspired criticism of BSE were done before we knew how to teach BSE correctly. Also in the studies there was no way to make sure that women actually practiced BSE correctly. As a result, the quality of the BSE studied was deemed by experts to be not particularly useful. The good news is that some of the most eloquent critics of BSE hastened to advise that BSE done correctly could be of considerable value in early detection. For example, David Thomas, senior author of the widely publicized Shanghai study says:

*"It is possible that highly motivated women could be taught to detect cancers that develop between regular screenings, and that the diligent practice of BSE would enhance the benefit of a screening program."*

*"...there is no reason to discourage women who choose to practice BSE from doing so. However, it should be emphasized to such women that they must practice BSE regularly and with a high degree of proficiency."* (Thomas et al., 2002b).

In the same issue of the Journal of the National Cancer Institute, editor Russell Harris opined,

*"The results from the Shanghai trial do not mean, however, that all physical examinations of the breast are ineffective. There is evidence that excellent physical examination practice, whether CBE or BSE, may indeed be effective. Not only is there case-control evidence that excellent BSE may reduce mortality, there is also randomized, controlled trial evidence that excellent CBE done by trained nurse-examiners may be as effective as mammography in reducing breast cancer mortality."* (Harris, 2002).

*"Breast self-examination remains an important contributor to early detection in women at high risk for the development of breast cancer," "Breast self-exam should be emphasized and well taught to high-risk women,"* according to lead study author Lee Gravatt Wilke, MD, assistant professor of surgery at Duke University Health System, in Durham, North Carolina. In addition to high-risk women, BSE plays a role in screening young women, suggested Barbara Smith, MD, PhD, association professor of surgery at Harvard Medical School, in Boston, Massachusetts, while presenting the results of their study at a press conference organized the American Society of Breast Surgeons 10<sup>th</sup> Annual Meeting, held in San Diego, California, 2009 (Mulcahy, 2009).

Based on the data available at this moment, several groups have reached very different conclusions, the U.S. Preventive Services Task Force (USPSTF) recommends against the practice of physicians teaching patients how to perform a BSE (USPSTF, 2009). The USPSTF recommendation is in direct opposition to recommendations offered by the American College of Obstetricians and Gynecologists (ACOG, 2009), which recommends BSE, despite the lack of definitive data to support or refute the recommendation, because the practice of BSE has the potential to identify palpable breast cancer. Despite the lack of concrete evidence, studies show that a majority of primary care providers polled feel that BSE is "somewhat effective" and a majority also recommend BSE to their patients aged 40 and older, but only a minority classify this examination as "very effective." (Meissner

A study on Application of Health Behavior Theories to Breast Cancer Screening among Asian Women suggests that interventions are needed that effectively and efficiently target the personal motivation of at-risk Asian women to seek out and engage in breast cancer prevention. Multi ethnic settings could go a long way in informing and guiding intervention in women pertaining to breast cancer screening (Maryam Ahmadian and Asnarulkhadi Abu Samah, 2013).

Whether we talk about sensible alertness or breast exploration or breast awareness or breast self examination. One thing is clear as women become more familiar with their breasts there are chances they will be able to pick up abnormal changes and that is most feasible by doing a regular monthly self exam. BSE is a skill which needs to be learned and practiced correctly for it to be effective, just a cursory examination (BA) may not be the solution.

## Conclusion

Breast self exam should be promoted and one should find means to make sure women actually practice it. India has a wide IT sector which can aid in setting up a reminder system for women.

Physicians should also make most of the opportunity they get when a lady comes to them with a health problem to do a clinical breast examination. This practice is sadly missing right now. Gynaecologists being mostly females in our country are usually the first contact point of ladies with breast problems.

All the primary care physicians, gynaecologists and nurses along with surgeons should be made aware of proper steps of doing a breast self exam. And they should encourage the women to do a BSE.

BSE clinics may be started at hospitals where the trained paramedical staff can teach women the steps of an effective breast self exam.

BSE alone is not the solution mammography also has to be made available. Unless good quality mammography is provided mortality from the disease is unlikely to decrease.

In a country where resources are limited and due to socio cultural influences women do not talk about breast problems it is best that women are empowered to examine their breasts.

India is witnessing an increase in number of breast cancer cases and this trend is likely to continue in the future unless we put forth and implement a very clear and well defined guideline for breast cancer screening for our country.

## References

Adair FE (1933). Clinical manifestations of early cancer of the breast. With a discussion on the subject of biopsy. *N Engl J Med*, **208**, 1250-5.

Allen TL, Van Groningen BJ, Barksdale DJ, McCarthy R (2010). The breast self-examination controversy: what providers and patients should know. *Journal for Nurse Practitioners*, **6**, 444-51.

American College of Obstetricians and Gynecologists Committee on Gynecologic Practice (2009). ACOG Committee Opinion No. 452: Primary and preventive care: periodic assessments. *Obstet Gynecol*, **114**, 1444-51.

Baines CJ (1983). Some thoughts on why women don't do breast self-examination. *CMAJ*, **128**, 255-7.

Foster RS Jr, Lang SP, Costanza MC, et al (1978). Breast self-examination practices and breast-cancer stage. *N Engl J Med*, **299**, 265-70.

Frank E, Rimer B, Brogan D, Elon L (2000). US women physicians' personal and clinical breast cancer screening practices. *J Women's Health Gender based Med*, **9**, 791-801.

Greenwald P, Nasca PC, Lawrence CE, et al (1978). Estimated effect of breast self-examination and routine physician examinations on breast cancer mortality. *N Engl J Med*, **299**, 271-3.

Harris R, Linda S, Kin S (2002). Routinely teaching breast self-examination is dead. What does this mean? *J National Cancer Institute*, **94**, 1420.

Harvey BJ, Miller AB, Baines CJ, Corey PN (1997). Effect of breast self-examination techniques on the risk of death from breast cancer. *CMAJ*, **157**, 1205-12.

Hill D, White V, Jolley D, Mapperson K (1988). Self examination of the breast: Is it beneficial? Meta-analysis of studies investigating breast self examination and extent of disease in patients with breast cancer. *BMJ*, **297**, 271-5.

International Agency for Research on Cancer (2002). Working Group on the Evaluation of Cancer Preventive Strategies. Efficacy of screening by breast self-examination. In: Vaionio H, Bianchini F, editors. Breast cancer screening. Lyon: IARC Press; pp. 107-113. 5. Murray M, McMillan C.

Maryam A, Asnarulkhadi AS (2013). Application of Health Behavior Theories to Breast Cancer Screening among Asian Women. *Pac J Cancer Prev*, **14**, 4005-13.

Meissner HI, Klabunde CN, Han PK, Benard VB, Breen N (2011). Breast cancer screening beliefs, recommendations and practices: primary care physicians in the United States. *Cancer*, **117**, 3101-11.

Moore FD (1978). Breast self-examination. *N Engl J Med*, **299**, 304-5.

Mulcahy N ASBS (2009). Breast self-exam as accurate as mammography, MRI in High risk women. *Medscape*, Apr 24, 2009.

Murray M, McMillan C (1993). Social and behavioural predictors of women's cancer screening practices in Northern Ireland. *J Public Health Med*, **15**, 147-53.

Nekhlyudov L, Fletcher SW (2002). Is it time to stop teaching breastself-examination? *CMAJ*, **164**, 1851-2.

Ne wcomb PA, Weiss NS, Storer BE, et al (1991) Breast self-examination in relation to the occurrence of advanced breast cancer. *J Natl Cancer Inst*, **83**, 260-5.

O'Malley MS, Fletcher SW (1987). Screening for breast cancer with breast self-examination: a critical review. *JAMA*, **257**, 2197-203.

Robert A (2007). Aronowitz. *Unnatural History: Breast Cancer and American Society*. Cambridge, UK: Cambridge University Press, 366 pp.

Semiglazov VF, Manikhas AG, Moiseenko VM, et al (2003). Results of a prospective randomized investigation [Russia (St.Petersburg)/WHO] to evaluate the significance of self-examination for the early detection of breast cancer. *Vopr Onkol*, **49**, 434-41.

Sumarni MZ, Zabedah O, Kee CC, et al (2013). Non-practice of breast self examination and marital status are associated with delayed presentation with breast cancer. *Asian Pac J Cancer Prev*, **314**, 1141-5.

Thomas DB, Gao DL, Ray RM, et al (2002). Randomized trial of breast self-examination in Shanghai: final results. *J Natl Cancer Inst*, **94**, 1445-57.

US Preventive Services Task Force (2009). Screening for breast cancer: US Preventive Services Task Force recommendation statement. *Ann Intern Med*, **151**, 716-26.