

An Educational Intervention to Promote Breast Self Examination for Early Diagnosis of Benign/Malignant Breast Disease

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Abstract

Background: Breast cancer is the second most common malignancy affecting female worldwide. Study was done with the objectives of to educate female for detection of benign/malignant breast disease by breast self examination (BSE).

Objectives: To detect new cases and promote them to teach other females in their contact.

Methodology: This was a community based cross sectional study.

Results: Total 110 women were educated about BSE, according to age majority (40%) was between 15-25 years, in our observations delay of menarche(15-18 years) in women is having more chance to get lump 37.77%, followed by 20% among menopausal women and 23.5% unmarried women. According to age of early marriage (15 years), only 18% were detected lump in contrast age of marriage increases from 15 to 21 years chance of detecting lump increases two times higher 40%. Nulliparous women were detected lump in little higher percentage 33% than one child 23%, in our observation chance of lump decrease with increase parity. Age at birth of first child if is less than 16 years only 7% were detected lump in contrast if delay in birth of first child up to 23 years or more three time more lump was detected 23% . No major percentage deference between those who users of oral contraceptive pills (OCPs) and non-users, both are observed 28% & 26% respectively. 25% of females was detected lump in the breast during study. All 28 females were referred to medical college hospital and 2 were confirmed malignancy in biopsy report and operated.

Conclusion: All the participants were unaware of breast self examination techniques initially and now they are aware of it and participating regularly, around 25% females were detected lump in the breast during study. All 28 females were referred to medical college hospital and 2 (7.14%) were confirmed malignant in biopsy report and operated. According to our observation females who have late menarche (at 17-18 year of age) late marriage (after 25 years) and who don't breast feed or feed less than 3 months are prone to develop benign or malignant breast diseases. According to our observation OCPs consumption is not significant risk factor for breast diseases.

Key words: Breast self Examination, ICDS, Breast lump (disease)

Short title: *Educational intervention for breast cancer*

Introduction

Breast cancer is the second most common malignancy affecting female worldwide. Breast cancer causes 3,76,000 deaths a year worldwide; about 90,000 females are diagnosed every year with the disease mortality rate from breast cancer have increased during past 60 years in every country.^{1,2} Early diagnosis and treatment of the disease in precancerous stage can reduce the incidence of this widely prevalent malignancy among women. A strong family history, early puberty and late menopause are major risk factors for breast cancer in females.⁷ Breast self examination (BSE)³, clinical examination, mammography and biopsy are few of the techniques used to diagnose breast cancer. But in the developing countries like India where resources are scarce, early diagnoses and treatment is the best option for reducing the incidence and complication of this disease and so BSE is the most appropriate technique by which we can make females aware, so that they can detect the lump or any change in the breast, such as dimpling of the breast, pain and redness in the breast etc., by their own. Breast cancer is most frequently found by themselves by self examination than by a physician in a routine examination. Standard treatment options include local therapy like surgery or radiation therapy and systemic therapy like chemotherapy, biological therapy and hormone therapy. The causes of breast cancer is not known their fore there is not known way to prevent the disease. The best alternative is to discover the disease as early as possible through regular breast examination.

Objectives

- 1) To educate female for detection of benign/malignant breast disease by BSE
- 2) To detect new cases of benign/malignant breast disease and to promote them to teach other females in their contact about BSE

Methodology

The present cross sectional study was carried out among females attending ICDS units of the Bhopal city (Ambedkar nagar, Sudama nagar, Rahul nagar, Om nagar), total 110 subjects

participated. Selected females were divided in five groups (Around 25 in each), lectures and demonstration were taken regarding breast self examination techniques, self reading materials also provided to each participant, like pamphlets, booklets etc., in local language. All participants were motivated to teach these techniques to other females in their family and contact. Information about each participant were collected in predesigned and pretested proformas after obtaining informed consents, data was collected regarding their age, socioeconomic status, age of menarche and menopause, parity and duration of breast feeding etc. Assessment of socio-economic status done by using Gupta and Mahajan classification¹¹, clinical examination was done of all participants for detection of any change/lump in breast.

Action Plane

First step: Female volunteers and doctors taught about breast self examination technique to integral child development scheme (ICDS) workers and females attending ICDS unit, and encourage them to tell about breast self examination (BSE) technique to others female friends/relatives.

Second step: By this method we detected lump cases in community.

Third step: All those who had lump referred to medical college hospital

Steps of Breast Self Examination (BSE)

Breast Self examination (BSE): BSE done monthly, 7-10 days from the first day of your period, same day every month if you are not menstruating. (Shown in the Graph at Appendix)

Criteria used for diagnosis of benign or malignant breast disease.^{8,9}

Types	Malignant	Benign
Skin over breast	Redness	No redness
Nipple		
1) Discharge	Present	Absent
2) Inversion	Present	Absent
3) Scaliness	Present	Absent
Pain	Usually absent	Usually present
Lumps		
1) Margin	Irregular	Regular
2) Surface	Rough	Smooth
3) Size	Usually big and fixed	Usually small
4) Mobility	Fixed	Mobile

Results

Results are displayed in the Figures and Tables which are shown at the end of the manuscript.

Discussion

Breast cancer is the second most common malignancy affecting women worldwide. Mammography has long been used as a screening tool in developed country it involves sophisticated imaging technology, complex quality control procedures with enormous cost in terms of manpower and material resources. This method is therefore unsuitable for developing countries.

Breast self examination (BSE) on the other hand is an inexpensive method. BSE is the visual and manual examination of your normal breast structure so that you can easily identify any unusual spontaneous changes. The majority of breast lumps are found by the women herself. Early medical attention to these changes can greatly impact the treatment and prognosis if you are diagnosed with breast cancer. It is also important to have an annual clinical breast examination by a physician or health care professional.

Other diagnostic techniques are USG, Computed tomography, 3D ultrasound guided biopsy, MRI, laser mammography. In India 50% of women with breast cancer and 70% of cervical cancer present themselves in late stages 3rd and 4th, so the interventions feasible are physical examination of the breast by the trained female health worker along with the teaching of BSE techniques.¹⁰

According to our observation there is no increased risk of breast cancer in women using OCPs, which has already been proved in several other studies, with the increase in the age of menarche risk of getting benign / malignant breast disease have found to be increase. Breast cancer can be controlled by significant awareness and adequate steps taken at right time.

Conclusion

All the participants were unaware of breast self examination techniques initially and now they are aware of it and participating regularly, around 25% females were detected lump in the breast during study. All 28 females were referred to medical college hospital and 2 (7.14%) were confirmed malignant in biopsy report and operated. According to our observation females who have late menarche (at 17-18 year of age) late marriage (after 25 years) and who don't breast feed or feed less than 3 months are prone to develop benign or malignant breast diseases. According to our observation OCPs consumption is not significant risk factor for breast diseases.

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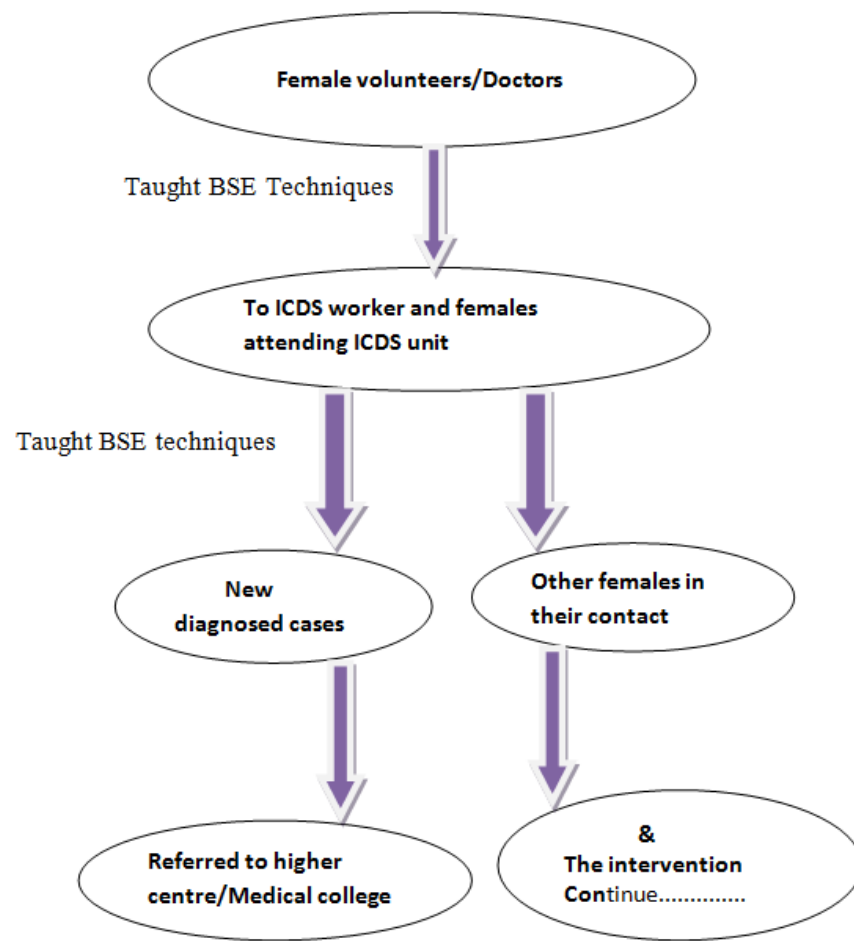


Figure 1: Action Plan

Stand in front of a mirror and look at each breast separately. Note the size, shape, colour, contour and direction of your breasts and nipples.



Raise your arms over your head and look at your breasts, as you turn slowly from side to side.



Press your hands on your hips and push your shoulders forward. Look at each breast separately.

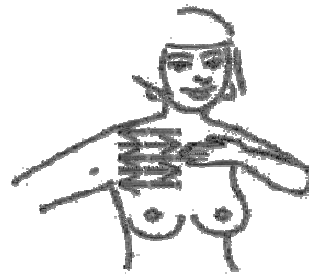


Stand in front of a mirror and start BSE just below the collar bone.



Figure 2: Steps of Breast Self Examination (BSE)

- Use the left hand for the right breast. Moisten the pads of your three middle fingertips with body lotion. Apply firm pressure and make small circles as you go back or forth (up or down, circular or spoke style) in a pattern covering all the breast area including the nipple.
- Extend the examination to the breast tissue in the underarm.
- Change your hand and repeat BSE on the opposite breast.



Lie down and raise one arm above your head. Examine your breasts as before, omitting the underarm.



- Change your arm and repeat BSE on the opposite breast.

Record your observations and mark your calendar for BSE next month!

Figure 2: Steps of Breast Self Examination (BSE) [Continuation]

Table 1: Distribution of respondents according to age

Serial No.	Age groups in years	Number	Percentage
1	15-25	44	40%
2	26-35	35	33%
3	36-45	26	23.50%
4	46 and above	4	3.50%
	Total	110	100%

Table 2: Distribution of respondent according to age of menarche and lump

Serial No.	Age of Menarche in years	Lump present Number	Percentage
1	12-14	13 (N68)	19.11%
2	15-18	15(N42)	37.77%
	Total	28 (N110)	25.45%

Table 3: Distribution of women according to breast lump

Categories	Lump present (Number)	Percentage
Menopause (N5)	1	20%
Non- menopause (N105)	27	25.7%
Marital status:		
Married (N93)	24	25.8%
Unmarried (N17)	4	23.50%
Age of marriage:		
Below 15 yr (N22)	4	18.18%
16-20 (N61)	16	26.22%
21-30 (N10)	4	40%
Parity:		

Nulliparous (N 3)	1	33.3%
Having one child (N22)	7	31.8%
Having two child (N17)	5	29.4%
Having more than 2 child (N51)	11	21.6%
Age of bearing first child:		
<16 (N14)	01	7.1%
17-22(N64)	20	31.25%
23-28 (N13)	03	23.7%
Breast feeding:		
Less than 6 months(N14)	4	28.57%
6-12 months(N16)	3	18.75%
12-24 months (N39)	14	35.89%
>24 months (N18)	2	11.11%
Family planning:		
Adopted (N56)	15	26.8%
Non-adopted (N37)	9	24.3%
Oral contraceptive pills:		
Taking (N14)	1	28.60%
Not taking(N79)	20	25.30%

Table 4: Distribution of Breast lump according to socio-economic class

Serial No.	Socio-economic class	Total females	Lump Present	Percentage
1	Upper class I	14	4	28.60%
2	Upper Middle II	10	2	20%
3	Middle III	47	9	19%
4	Lower Middle IV	36	13	36%
5	Lower V	3	0	0%
Total		110	28	25.45%

Table 5: Distribution of breast lump cases according to past history of radiation exposure

Serial No.	Radiation exposure	Total females	Lump present	Percentage
1	History of Exposure present	37	11	29.7%
2	No history of exposure	73	17	23.3%
	Total	110	28	25.45%