

Research Article

Evaluation of impact of educational intervention on knowledge and practice regarding breast self-examination among paramedical workers in a teaching hospital Maharashtra, India

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ABSTRACT

Background: Breast self-examination (BSE) is an appropriate strategy for early case detection and improve survival of breast cancer and is probably the most feasible approach to wide population coverage in many developing countries. Health workers play a key role in disseminating the knowledge in community however several studies conducted in different countries documented poor knowledge among them. Hence present study was conducted to evaluate the change in knowledge level after educational intervention about BSE among paramedical workers.

Methods: An interventional study was conducted among 80 paramedical workers (nurses, lab technicians and social workers) of a teaching hospital and changes in knowledge were assessed with the help of pre designed questionnaire. Data was analyzed using appropriate statistical techniques.

Results: The mean score of knowledge changed from 8.55 to 12.48 after the training. Majority of the paramedical workers (73%) had poor or average knowledge about BSE and significant improvement occurred in the knowledge level after the intervention.

Conclusions: The knowledge regarding BSE was poor or average among the paramedical workers and educational intervention positively changed the knowledge level among them and almost all paramedical workers desired to impart this knowledge to the community.

Keywords: Paramedical workers, BSE, Educational intervention

INTRODUCTION

Breast cancer is by far the most frequent cancer among women in both developed countries and developing countries (25% of all cancers). In India, breast cancer incidence rate reported was 25.8 per lac population during 2012 and mortality rate was 12.7 per lac ranking number one killer in women.¹ The American Cancer Society guidelines for early detection of breast cancer recommend yearly mammogram starting at the age of forty, clinical breast examination once in every three years for women in their twenties and thirties, and every year for women at age forty and over. ACS also recommends Breast self-examination (BSE) for women starting in their twenties.²⁻⁴

Breast self-examination is one of the basic technique for early detection of breast cancer.⁵ Early detection and treatment yields favorable outcome in terms of survival. The purpose of breast self-examination is to increase the self-awareness and to help the woman to detect any abnormality in appearance or feel of breast.

Breast self-examination is an useful adjuvant to early case detection in many countries and probably the most acceptable and feasible approach for wide population coverage.⁶

Several studies have documented that health worker's knowledge and attitude is the most important factors which influence the screening programs for breast

cancer.⁷⁻⁸ However, poor awareness and knowledge about breast cancer symptoms and screening methods has been previously reported for their poor outcome by several different studies.⁹⁻¹⁰ For promotion of public health measure like breast self-examination among community, health care providers should be well equipped with comprehensive knowledge. Hence the present study was conducted among health workers in a teaching hospital to assess their baseline knowledge, to identify gaps in knowledge and to assess changes in knowledge after an educational intervention.

METHODS

Study design

Interventional study, Health education (HE) was used as an intervention

Study setting

Medical college hospital in urban area

Study participants

Paramedical female workers in a hospital.

Sampling technique and sample size-All paramedical workers from the hospital like nurses; lab technicians and medical social workers who were ready to participate were included in the study

Inclusion criteria

All paramedical female workers above 20 years of age and ready to participate comprising of 53 nurses, 24 lab technicians and three medical social workers participated in the study and the sample size was 80.

Study duration

Oct. 2015 to Mar 2016 (six months).

Data collection

Data was collected with the help of pre designed questionnaire prepared by search of previous literature on

subject.⁹⁻¹² Both open and closed ended questions were used to assess knowledge, attitude and practice of breast self examination. General information like age, education, occupation, marital status, number of children was recorded.

Baseline knowledge was assessed prior to intervention with the help of questionnaire. Educational intervention was imparted to the participants by lectures, demonstration and video clips. The same questionnaire was used to assess the change in knowledge after the intervention. The answers were evaluated and each correct answer was given one mark, Total 20 questions were asked and the impact of intervention was assessed by comparing the score prior and after educational interventions as stated earlier. Grading of knowledge was done as follows, <35 % score as poor, >35--55% as average, >55-75% as good and >75% as excellent.

Statistical analysis (SA)

The pre intervention and post intervention data was compiled and analyzed using statistical techniques like percentages, proportions and appropriate tests of significance like chi square test and standard error of difference between means were applied.

RESULTS

An interventional study was conducted among 80 paramedical workers to evaluate the impact of education regarding breast self-examination (BSE). Majority of the participants (67.5%) were in the age group of 20-40 years, 65% were married. 37% participants had one child, 24% of them had two and four % had more than two children, while 30% participants were nulliparous.

The mean score of knowledge prior to intervention was 8.55, which changed to 12.48 after the intervention. After applying the test of significance (standard error of difference between two means) significant improvement of knowledge was observed ($p < 0.005$).

Majority of the paramedical workers (73%) had poor or average knowledge prior to intervention and significant improvement occurred in the knowledge level after the intervention (Table 1).

Table 1: Change in knowledge level of the participants (pre and post-test).

| Knowledge level | No. of participants Prior to intervention | No. of participants after intervention | Total |
|-------------------|--|---|-------|
| Poor (<35%) | 30 (37.5%) | 03 (3.7%) | 33 |
| Average (>35-55%) | 29 (36.2%) | 18 (22.5%) | 47 |
| Good (>55-75%) | 17 (21.2%) | 40 (50%) | 57 |
| Excellent (>75%) | 04 (5%) | 19 (23.7%) | 23 |
| Total | 80 | 80 | 160 |

Table 2: Changes in knowledge regarding BSE (n=80).

| Variables | Correct response prior intervention | Correct response after intervention | Significance level |
|---------------------------------------|-------------------------------------|-------------------------------------|--|
| Age after which BSE should be started | 41 (51.2%) | 61 (76.2%) | Z=3.26, p<0.005 Significant |
| How frequently BSE should be done | 31 (38.7%) | 66 (82.5%) | X ² =31.6, p<0.001 highly significant |
| When to perform BSE before menopause | 17 (21.2%) | 50 (62.5%) | Z=5.9, p<0.005 Significant |
| When to perform BSE after menopause | 23 (28.7%) | 52 (65%) | Z=4.9, p<0.005, Significant |

Out of 80 participants, 56 (70%) had the opinion that BSE is necessary 20% felt that doing BSE will give awkward feeling while after the training 95% women agreed that BSE is necessary.

Only 19 (23.7%) paramedical workers had ever done breast self-examination and only 5 (6.2%) were doing BSE regularly.

Out of 80 participants 41 (50.1%) were knowing the correct technique of BSE and only 30% were knowing that BSE can be done at home in front of mirror and the

percentage increased upto 70% after training. Only one fourth of the participants were aware about the day on which BSE should be done before menopause and after menopause after training three fourth of the participants had correct knowledge about it. Significant improvement occurred in practice related knowledge after intervention (Table 3, P<0.005).

After the intervention almost all of the participants agreed that BSE is essential, beneficial and as a health worker they can impart necessary education regarding BSE to all the females coming to the hospital and in community.

Table 3: Impact on attitude and practice related response.

| Variable | Correct response Prior intervention | Correct response After intervention | Significance level |
|--|-------------------------------------|-------------------------------------|--|
| Can early diagnosis of breast cancer improve survival? | 32 (40%) | 68 (85%) | X ² = 5.4, p<0.005 Significant |
| Is BSE beneficial? | 62 (77.5%) | 76 (95%) | Z=3.20, p<0.005 significant |
| Is this training essential for every woman? | 66 (82.5%) | 77 (96.2%) | Z=2.7 p<0.005 significant |
| How to perform BSE | 41 (51.2%) | 57 (71.2%) | X ² =6.72, p<0.005 significant |
| When BSE should be performed? | 24 (30%) | 56 (70%) | X ² =25.6, p<0.001 highly significant |

DISCUSSION

BSE is an appropriate screening test for breast cancer and practicing BSE can reduce the mortality by early detection of breast cancer. Health care providers can play an important role in disseminating this knowledge to the community.

Changes in knowledge regarding breast self examination were evaluated after educational intervention of paramedical workers of the medical college hospital. Significant improvement occurred in knowledge score, only 26.2% participants had good knowledge prior to

training, this percentage increased up to 73% after the training. Similar finding was observed by Shalini et al in their study, knowledge scores shows that 72.5% of students had average knowledge on BSE in pre test and 85% of students had good knowledge score in post-test.¹² Mojahed et al in his study conducted among nurses and midwives reported that only 13.21% had a good level of knowledge, most of them had a moderate and low level of knowledge of BSE.¹³

Prior to intervention, only 38.7% participants knew that BSE should be done every monthly, and only 21-28% were knowing that when BSE should be done ;after intervention significant improvement occurred ,82.7%

participants had given correct answer regarding frequency and 65% were aware about correct time of BSE. In study conducted by Dalal et al, Majority (89.2%) of the participants knew that BSE is recommended to be done monthly and less than half of the study sample (46.8%) was aware about the correct time of BSE.¹⁴

In present study 72% participants before training and 95% participants after training agreed that BSE is beneficial and 85% participants after training agreed that early detection by BSE will improve survival chances. In study conducted by Raini et al, majority of respondents (72.5%) had positive attitude towards BSE and 94.2% agreed that early detection improves survival.¹⁵ Doshi et al also reported that almost all participants in their study agreed that all the women should do BSE.

Only 23% of paramedical workers had ever done breast self examination and only 6% were doing it regularly. Similar to our study, Dalal et al reported that only 17% of female medical students perform BSE regularly, Doshi et al also reported alarmingly low practice of performing BSE among dental students in his study in India.¹⁶ Other studies conducted in other countries among the health-care providers, also reported that practice of BSE was in the range of 28-70%.¹⁷⁻¹⁸

CONCLUSION

Breast self-examination is one of the strategies to reduce the mortality and improve the survival and health care providers need to be trained for effective implementation of this strategy. Educational intervention of paramedical workers significantly changed and improved the knowledge and awareness regarding BSE and almost all paramedical workers desired to impart this knowledge to the community.

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