Knowledge and practice towards breast self-examination among accredited social health activists (ASHA) in the rural field practice area of a government medical college in north coastal Andhra Pradesh.

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Abstract

Background: Breast cancer is the most frequent cancer in the world, and it is the main cause of death and morbidity in Indian women. Breast self-examination (BSE) is a routine exam that can detect 40% of breast abnormalities and involves two key components that is looking and feeling. Women should learn what is normal for them, so that they can recognize any changes immediately.

Aim & objectives: 1) To assess Knowledge and Practice about Breast Self-Examination. 2) To assess awareness about warning signs of Breast cancer.

Methodology: A Descriptive cross-sectional study was conducted among 55 Accredited Social Health Activists (ASHAs) in the month of January 2021 in the Rural field practice area of Rural Health Centre (RHC) attached to the Department of Community Medicine, Government Medical College, Visakhapatnam. A predesigned, semi structured questionnaire was used to assess the knowledge and practice of BSE. Data was entered in MS Excel and analysed using SPSS Version 17. Chi square test was applied to find out the statistical associations if any between categorical variables.

Results: In the present study only 1.8% of the ASHA workers were found to have good knowledge. 41.8% and 56.3% had average and poor knowledge respectively about BSE. Out of 55 ASHA workers, 39 (71%) have heard of BSE, 25.4% were practicing regularly and 14.5% of them were practicing correct method.

Conclusion: The Knowledge and Practice of BSE among ASHA workers was observed to be inadequate which points out the need for training programs to educate them.

Key words: Breast Self-Examination (BSE), ASHA, Knowledge, Practice

Introduction

Breast self-examination (BSE) is a routine exam that can detect 40% of breast abnormalities and involves two key components that is looking and feeling. Women should learn what is normal for them, so that they can recognize any changes immediately[1]. Other screening methods, such as Clinical Breast Examination (CBE) and mammography, necessitate hospital visits, specialised equipment, and expertise, whereas BSE is a low-cost tool and the most important method that a woman can use on herself to detect any changes in her breasts as early as possible in order to detect breast cancer early. As a result, Health Care Workers have a unique responsibility: they must be knowledgeable about BSE and, as health advisers, they must educate rural women about BSE and other screening measures in order to detect breast cancer early.

Breast cancer is the most frequent cancer in the world, and it is the main cause of death and morbidity in Indian women. According to global statistics it was found that breast cancers contribute to 11.7% of all

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cancers in both genders. Breast cancer accounts for 22.9 percent of invasive cancers in women and 16% of all malignancies in women [2]. It was the most common cancer in Indian women, with an age-adjusted incidence rate of 25.8/100,000 women and a fatality rate of 12.7/100,000 women. According to studies, the age-adjusted incidence rate of breast carcinoma in Delhi is 41/lakh women, followed by Chennai (37.9), Bengaluru (34.4), and Thiruvananthapuram (33.7)[3].

In India, breast cancer burden is reported to be 178,361 cases and mortality of 90,408 deaths annually[4]. The mortality due to breast carcinoma can be prevented by the early detection and treatment of breast cancer [5]. The earlier the breast cancer is detected, the better the effectiveness of the treatment and likelihood of survival.

Because of the shortage of diagnostic facilities, especially for women in low-resource settings, it is critical to equip them with BSE as a primary screening technique[6]. BSE can be done by her own and it requires no invasive intervention. The goal is to familiarise women with their breasts' appearance and feel so that they might notice changes in their breasts at an early stage[7]. Several studies[8,9] have found a link between BSE performance and the diagnosis of breast cancer. Despite the fact that BSE is a simple and direct, quick, and cost-free technique, many women appear to conduct it wrong or not at all[6].

A community health worker accredited by the Ministry of Health and Family Welfare as part of India's National Rural Health Mission is known as an Accredited Social Health Activist. It would be a glimpse of hope for sub-centres as a facility and ASHA as a primary care provider in close contact with the community after the implementation of the Health and Wellness Centre programme under Government Of India (GOI) [10]. In a similar manner, the 2017 National Health Policy advocated that ASHAs be empowered to conduct community-based preventive education in order to alleviate the severe human resource shortage[11].

ASHA is significant in detecting breast cancer early and limiting its burden. ASHA's job responsibilities included enlisting all persons aged 30 and above, completing the Community Based Assessment Checklist (CBAC), which contains questions about breast cancer symptoms, planning a screening day, and participating in community health promotion activities. CBAC enabled ASHAs remember critical risk factors, identify those who needed to be prioritised for screening, and recommend those who needed to be referred[12]. ASHAs are in a great position to take advantage of numerous possibilities to encourage women to raise awareness about BSE and practice it on a regular basis. As a result, because they interact with women more frequently than other health professionals, they can play an essential role in educating them[13].

Furthermore, because these workers are part of the community, they are trustworthy and approachable, making it easier for them to educate the people[14]. They can advise women in the community about BSE by interacting with women personally by making home visits or organizing group meetings only when they are themselves well equipped with a thorough knowledge about technique of BSE[15].

ASHAs are those who deliver information to the general public in order to improve knowledge and practice, as well as motivate women in the community to follow suggested breast cancer screening guidelines. Studies from developed nations indicate that healthcare providers' attitudes and orientation are primary factors of breast cancer screening programs utilisation[16].

As a result, the current study was conducted with an objective to assess their knowledge and practice about BSE and study awareness about warning signs of breast cancer. Based on the observations from the study necessary trainings can be given to ASHAs to improve their knowledge and practices for better disposal of their services to the women in their community.

Materials and Methods:

A Cross-sectional descriptive study was carried out in the Rural Field Practice area of a government medical college in Visakhapatnam, which is attached with the Department of Community Medicine for a period of one month. Accredited Social Health Activists between the age group of 20 and 60, working in the Rural field practice area of RHC under government medical college were included in the study.

Sample size

The calculation of sample size was based on the awareness on Breast cancer screening method (BSE), p as 26% [17] prevalence of BSE and allowable error of 12% at 95% level of significance, using the standard formula for calculating sample size (N) = 4pq/L2.

The required sample size was calculated to be 53, which was then rounded up to 55.

Study tool - A standard questionnaire[18] for breast cancer screening awareness was modified to include questions on socio-demographic variables, breast cancer knowledge, and awareness of breast cancer warning signs [19].

Ethical considerations

Prior to the initiation of the study, the Institutional Ethics Committee gave its approval. Permission for conducting the study was taken from the Principal of Andhra Medical College and Head of the Community Medicine Department. Each participant gave their informed consent, which was sought and obtained. Complete confidentiality of the participants was maintained and the information obtained for this study will not be used for any other purpose except for academic purpose.

Statistical Analysis: Data entry was done in MS excel and analysed in SPSS version 17. Chi square test was used to find the association between knowledge scores of BSE and warning signs scores of breast cancer with sociodemographic variables. A p-value of less than 0.05 was considered statistically significant.

Results:

Mean age of ASHAs was 38.7. About half of the study subjects (51%) were in the age group 31-40 years, 24% were between 41-50 years, 14% between 21-30 years and 11% were in the age group of 51 -60 years in the current study.

Table 1: Distribution of Study Population According to Sociodemographic Characteristics

Sociodemographic Characteristics	Number (Percentage)
Age (years)	
21-30	8 (14)
31-40	28 (51)
41-50	13 (24)
51-60	6 (11)
Marital Status	
Married	50 (91)
Unmarried	2 (4)
Widow	3 (5)
Education	
Primary education	5 (9)
Secondary education	39 (71)
Higher secondary	9 (16)
Graduate	2 (4)

In the present study, about half of the study subjects (51%) were in the age group 31-40 years and majority were married (91%). More than half (71%) of them were having secondary education, 16% higher secondary, 4% graduates and 9% were having only primary education. [Table 1]

Table 2: Knowledge on BSE among study participants

Knowledge on BSE	Number (Percentage)
Heard of BSE (n=55)	39(71)
Useful tool for early detection	34 (61.8)
At what age BSE should be started	3 (5.4)
How often BSE should be done	15 (27.2)
Best time to do BSE	23 (41.8)
BSE should be done by	28(51)
What will you do if there is abnormality observed during BSE	39 (71)
Benefits of BSE	30 (54.5)

Around 71% of them have heard of BSE, 29% never heard of BSE. Those who were aware of BSE, 61.8% acknowledged that BSE is an important tool for the early detection of breast cancer but only 5.4% had answered correctly about the age of BSE should be started i.e 20 years. While assessing the knowledge on awareness about best time to do BSE, among 71% of ASHAs who heard about BSE, 41.8% could rightly answer that the best time for BSE is 3-5 days after start of menstrual cycle and 31% have no idea about when to perform BSE. Nearly one-third of the ASHAs (34.54%) did not know how often BSE should be done. About 27.27% of them said correctly that BSE should be done monthly, 14.54% daily, 20% weekly and 3.63% yearly. [Table 2]

Table 3: Breast Cancer Awareness and Source of Information among Study Participants

Awareness About Breast Cancer	Number (Percentage)
Heard of Breast Cancer	55 (100)
Source of information	
Hospitals	43(78.1)
Media (TV, Radio, Internet)	6 (10.9)
Friends/Relatives	6 (10.9)

All the ASHA's have heard about breast cancer. For most of them Hospital staff (78.1%) were the main source of information followed by media (10.9%) and friends & relatives (10.9%). [Table 3]. Family history of breast cancer was reported by 12 (21.8%) participants.
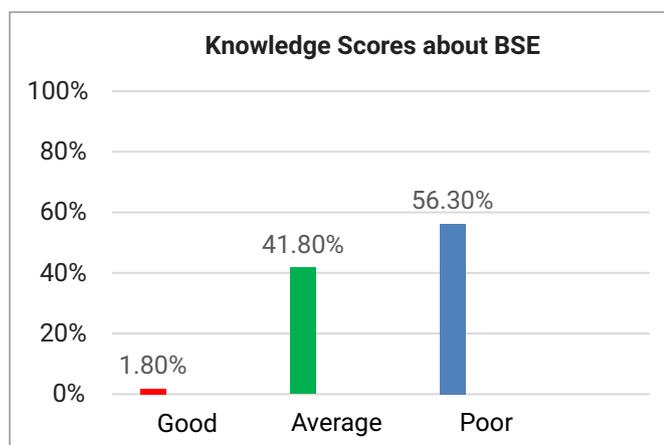
Figure 1: Knowledge scores about BSE

While assessing their knowledge on BSE, total score ranged from 0-7. 0-3 was interpreted as poor knowledge, 4-5 as average/fair and 6-7 as good.

Knowledge score about BSE was found to be good among 1.8%, average among 41.8% and poor among 56.3% of the respondents. [Figure-1]

Only 5.45% of the participants responded correctly about the appropriate age (i.e., from 20 years) to initiate BSE. Among the study subjects 34.54% said that BSE should be started at the age of 30 years, 29.09% from puberty, 29.09% had no idea and 1.8% said from menopause.
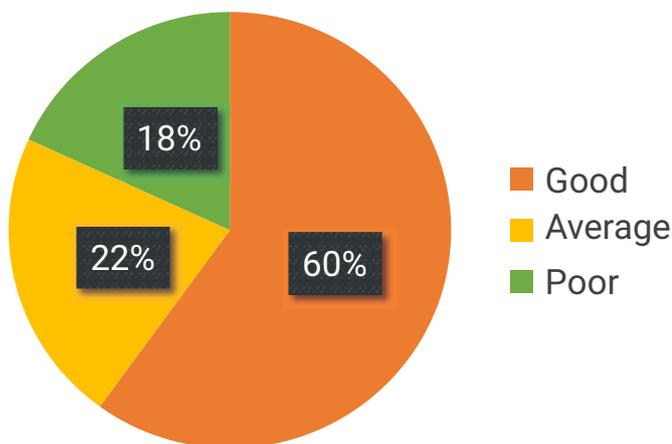

Figure 2: Scores - Warning Signs of Breast cancer

While assessing their knowledge on warning signs of breast cancer, total score ranged from 0-8. 0-3 was interpreted as poor knowledge, 4-5 as average/fair and 6-8 as good. Out of 55 ASHAs, 60% have good knowledge score, 22% have average and 18% have poor knowledge score [Figure-2]. Only 32% of the respondents were aware of all the warning signs of breast cancer. Distribution of knowledge on individual warning signs showed that 94% had knowledge on presence of lump, 87% on nipple discharge, 67% on pulling of nipple, 62% on rash on nipple, 58% on

redness, 85% on change in size and shape of nipple, 71% on pain and 56% on dimpling.

Association between scores of knowledge on BSE and warning signs of breast cancer with education and age was not significant (p>0.05).
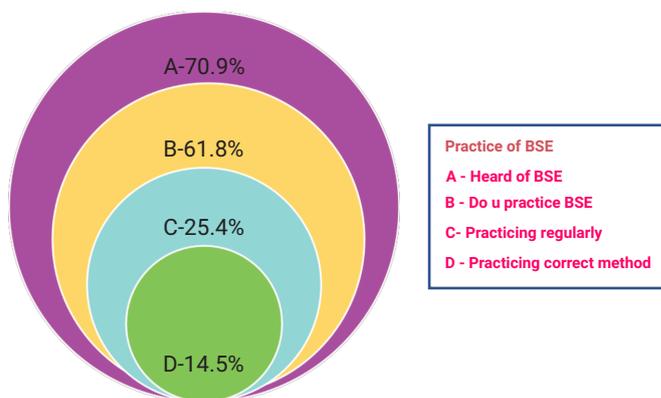

Figure 3: Practice of BSE among study participants

Out of 55 ASHA workers, 71% have heard of BSE, 25.4% were practicing BSE regularly, of them, only 14.5% were practicing correct method of BSE. [Figure -3]

Discussion

About half of the study subjects (51%) were in the age group 31-40 years, 24% were between 41-50 years, 14% between 20-30 years and 11% were between 51-60 years in the present study. As the recruitment age for ASHAs is between 25 to 45 years as per NHM, half of the ASHAs in this study were observed to be in the age group 31-40 years followed by 41-50 years (24%). In a study conducted by Kavitha M et al showed that majority of their respondents (47.15%) were in the age group of 31-40 years. Another community-based study by Sunita Sreegiri et al reported that 46% of women in urban areas and 36% in rural area were in the age group of 20-30 years[17].

In the present study, 90.9% of the ASHAs were married. A study by Memon et al[20] showed that 85.71% of the participants in intervention and 79.71% in control group were married and in Mahnoush Reisi study a total of 79.7% of the participants were married [21]. Majority i.e., 82% in rural and 78% in urban area were married in a study by Sunitha et al. But our observation was differing from an observation made by Shallo et al in West Shoa Zone in 2019 on female healthcare workers where 55% of the study subjects were married[22] Since the minimum age at marriage for women in India is 18 years as per Child marriage restraint act and minimum age to recruit ASHAs is 25 years and the minimum age of enrolled ASHAs in this study was 20 years, majority of them got married at the time of study.

In India female literacy rate as per National Statistical Office (NSO) data, 2021 was 70.30% [23] which is similar to that of our study population where 3/4th of the (71%) of the respondents were having secondary education, 16% higher secondary, 4% graduates and 9% were having only primary education. Whereas Mahnoush Reisi found that 37% of their study population were graduated with midwifery certificate, 37% health, 59% nursing and 18.50% medical[21]. Our findings are in contrast with the observation made by Kavitha M et al [24] where one-third of their participants had education of higher secondary level, 57.39% had completed high school education. Less than half of the women in rural areas were either illiterates or educated up to primary level (23% & 22%) whereas about 70% of the urban women were educated either up to high school or intermediate or graduation as reported by Sunitha et al[17] and Shallo et al observed that 58.2% of the respondents were nurse professionals and more than two thirds were degree holders followed by diploma 20.9%[22].

When the knowledge of ASHAs on BSE was assessed by using score, each correct response was scored as 1 and each wrong response was scored zero as 0. Total score ranged from 0-7. Scores 0-3 were interpreted as poor knowledge, 4-5 as average/fair, 6-7 as good. Knowledge score was found to be good among 1.8%, average among 41.8% and poor among 56.3% of the respondents in our study. Educational qualification for recruitment of ASHAs is 8th standard in India. Though majority of the ASHAs were having secondary education in the present study, knowledge score was found to be good among only 1.8% which could be due to poor training programs conducted among them at the time of recruitment.

Among the participants in this study, 71% have heard of BSE, 29% never heard of BSE. Poor / average Knowledge and practices among ASHAs in the present study could be due to low levels of education and inadequate training programs conducted after recruitment in to the job. Studies by Parashar M et al and Sunitha Sreegiri et al showed that 73.3% of ASHAs and 76% of the urban and 26% of the rural women have heard of breast self-examination respectively[13,17].

Those who heard of BSE, 61.8% acknowledged that BSE is an important tool for the early detection of breast cancer. In a study by Kavitha et al (24) reported that all of their study subjects (100%) had heard about BSE and 77.25% were aware that BSE helps in early detection of breast cancer. Out of those who heard of breast self-examination, 51.3% of the urban and 69.2% of the rural women acknowledged that BSE is an important tool for the early detection of breast

cancer as observed by Sunitha et al [17].

When awareness about best time to do BSE was assessed it was found that 31% of ASHAs were not aware of when to perform it, 41.8% could rightly answer that the best time for BSE is 3-5 days after start of menstrual cycle. 42% of them said that one week after periods, 18% during menstruation, 5% breast feeding and 4% during pregnancy. A study by Sunitha et al showed that 36.8% urban women and 23.07% rural women could rightly answer that the best time for BSE is 3- 5 days after start of menstrual cycle. [17].

When awareness about best time to do BSE was 41.8%, this finding is higher as compared to a study by Sunitha et al[17] which showed that 36.8% urban women and 23.07% rural women could rightly answer that the best time for BSE is 3-5 days after start of menstrual cycle as the present study was conducted among ASHAs who had prior knowledge on BSE due to training program done in RHC by Health Care Professionals. However, 58.2% of ASHAs did not have knowledge. Therefore, there is a need for regular training programs and periodic reinforcement to educate Health Care Workers about BSE and other screening methods as it helps in early detection of breast cancer.

Only 5.45% of the participants responded correctly about the appropriate age i.e from 20 years to initiate BSE. Around 42.1% of urban and 38.4% of rural women responded correctly about the appropriate age to initiate BSE and 28.9% of urban women and 30.7% of rural women responded correctly that BSE should be a monthly routine reported by Sunitha et al. 34.54% said that BSE should be started at the age of 30 years, 29.09% from puberty, 29.09% had no idea and 1.8% said from menopause.

Nearly one-third (34.54%) ASHAs did not know how often BSE should be done. About 27.27% of them said correctly that BSE should be done monthly, 14.54% daily, 20% weekly and 3,63% yearly. Kavitha M et al found that 66.60% of their study population knew that it is necessary to do the self- examination every month. However, only 53.65% of them knew how to perform BSE[24].

Only 32% were aware of all the warning signs of breast cancer. Distribution of knowledge on individual warning signs was, 94% had knowledge on presence of lump, 87% on nipple discharge, 67% on pulling of nipple, 62% on rash on nipple, 58% on redness, 85% on change in size and shape of nipple, 71% on pain and 56% on dimpling. Mahnoush Reisi reported that the average grade of the participants about awareness of breast cancer symptoms was 71.57%[21].

All ASHA have heard about breast cancer in our study when compared to 91.05% by Kavitha M et al and 26% of the rural and 76% of urban women by Sunitha et al. For most of them Hospital staff (78.1%) were the main source of information followed by media (10.9%) and friends & relatives (10.9%). Sunitha et al found that 26% of the rural women and 76% of urban women have heard about breast cancer and for most of them media was main source of information (50% in rural, 65.7% in urban) followed by friends and relatives (34.6% rural & 19.7% urban).Family history of breast cancer was reported by 21.8% of the ASHAs whereas about 8% and 14% of participants did have family history of cancer in the intervention and control group respectively in a study done by Memon F et al and Reisi M et al observed that 12.6% of them had a family experience of cancer [20, 21].

Among the study subjects, 25.4% of the ASHAs were practicing BSE regularly. Of them, only 14.5% were practicing correct method of BSE. Kavitha M et al reported that 36.5% of their participants has been practicing BSE, of them only 22.76% were practicing BSE every month and 16.2% of them were performing it within 5 days after menstruation each month. Olumuyiwa O et al found that in their study done among nurses that BSE was most frequently done by 89% of the nurses, with 39% conducting this procedure at monthly intervals [25]. Reisi M et al reported in their study that 66.4% of the population perform BSE on the appropriate time and after menstrual period [21]. Parashar M et al found that 50% of their participants are practicing and among them only 4.1% check their breasts once every month[13].

It is evident from this study that most of the study participants had not updated regarding the knowledge and practices on breast self-examination and breast cancer in general. Health education regarding BSE and warning signs of breast cancer was given after the study.

Conclusion:

In a developing country like India, ANMs, ASHAs, and other female paramedical professionals can help women with breast cancer screening, diagnosis, and awareness. Knowledge and Practice of BSE among ASHA workers was observed to be inadequate in this study.

Recommendations:

All the ASHAs need to be trained in an effective manner to perform BSE for better delivery of screening services for breast cancer. Refreshed and reinforced training programs and CME need to be conducted at regular intervals to educate the Healthcare workers about BSE and other screening methods as it is most sensitive and cost-effective method and helps in the early detection of Breast cancer and improve in outcome and survival. Display of IEC material such as posters in all health centers and Anganwadi centers regarding symptoms and basic aspects of breast cancer awareness and ASHAs should be empowered to provide community-based breast cancer prevention education[20].

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