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Awareness of Breast Cancer and Practice of Breast Self- Examination among Rural Women in Ife- North Local Government Area, Osun State, South-West Nigeria.

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KEYWORDS

Breast Cancer,

Breast Self-Examination,

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ABSTRACT

Background and Objective: Breast cancer is the commonest cancer among women in globally and in Nigeria. In Nigeria, cases of breast cancer cases have been prevalent for three decades and more than 90% of cases can be detected by women themselves through breast self – examination. The objective of this study therefore, was to assess rural women's level of awareness and knowledge of breast cancer and the practice of breast self- examination.

Methods: The data for this was collected in the months of March and April, 2011. A structured interviewer–administered questionnaire was used to collect data from 420 randomly selected volunteered women from two randomly selected wards in Ife North Local Government Area (a rural Local Government Area) in Osun State, SW Nigeria.

Results: 400 questionnaires were properly filled and subsequently used for data analysis and results showed that a large proportion (78.8%) had erroneous belief that keeping money in the brassier can cause breast cancer despite the fact that majority (87.8%) of them claimed to be aware of the disease. Cigarette smoking had the highest percentage (51.5%) among the correct risk factors for breast cancer being agreed to by the respondents. Their awareness and practices of breast self- examination (BSE) were also low (47% and 29% respectively). Age and religion of the respondents had significant effect on the practices of BSE ($p=0.013$ and $p=0.0001$ respectively).

Conclusion: Appropriate educational program is suggested in order to improve the knowledge of women regarding breast cancer and increase their practices of breast self examination.

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INTRODUCTION

Breast cancer is the commonest cancer among women in Nigeria and globally.[1-9] Medical advances have shown that one-third of all cancers are preventable and a further one third, if diagnosed sufficiently early, is potentially curable. This observation demands that cancer control should be of increasing priority in the health care programs of developing countries.[4, 5] The main methods of screening involve mammography, clinical breast

examination (CBE), and breast self– examination (BSE).[10-19] Despite the advent of modern screening methods, more than 90% of cases of cancers of the breast can still be detected by women themselves, stressing the importance of breast self – examination.[10-19] In Nigeria, breast cancer is the commonest malignancy recorded in women in most cancer registries across the country, and the proportion of it varies from 17.7% to 44.5%.3 According to Ajayi and Adebamowo [1] the incidence of breast cancer is 1.16 per 1,000 persons per year and from Cancer Registries in Nigeria were 35.3% in Ibadan, 28.2% in Ife-Ijesha, 44.5% in Enugu, 17% in Eruwa, 37.5% in Lagos, 20.5% in Zaria and 29.8% in Calabar.[3] In all the centers, except Calabar and Eruwa, breast cancer rated first among other cancers. Further reports indicated an alarming increase in incidence of cancer in general in Nigeria.[7]

It was reported that approximately 100,000 cases will occur annually and in developing countries, the incidence of breast cancer and the increasing mortality from the disease are major health concerns. Women in rural areas are the most hit by breast cancer as studies have identified ethnic, socioeconomic, genders, and geographic disparities compared with urban populations.[6] In addition, data have shown that most rural populations which are made up of older, poorer, and less educated encounter barriers to health care services and support thereby making them venerable to a higher incidence of breast cancer.[19] Therefore, the objective this study was to assess the knowledge of rural women on breast cancer and as well as their level of awareness and practices of self-breast examination in Ife North Local Government Area, Osun State, South-West Nigeria. Data obtained from the study can be used for future intervention in prevention and controlling the rising incidence of breast cancer among rural women in Nigeria.

METHODOLOGY

The study was carried out among female adults aged 20-60 years during the months of March and April, 2011 in Ife North Local Government Area (LGA), Osun State, SW Nigeria. The LGA covers an area of 889Km^2 and has its headquarters located at Ipetumodu town.[20] The 2006 National Population Census figure put the total population of the LGA at 153,694 (72,694 males and 81,000 females).[20] Majority of the inhabitants were petty traders and farmers but recently, a sizeable proportion of students attending the Obafemi Awolowo University Pre-degree programmes have joined the population.[20] The study design was a cross- sectional descriptive study.

Sample Size Determination:

Minimum sample size was calculated using Fisher's formula[21] for cross-sectional study; where minimum size (N) = $Z\ pq/d^2$, where p is the estimated proportion and this is taken as 50% (for convenience) and q=1-p. At 95% level of confidence, Z=1.96 and d= error margin of 5% a minimum sample size of approximately 384 was obtained. We increased this sample size to 420 in anticipation of non-response to certain questions. However, 400 questionnaires were recovered from the respondents who participated in the study giving a response rate of 95.2%.

Sampling Procedures:

A multistage sampling technique was used for the selection of respondents. In the first stage, two wards out of the existing nine (9) wards were selected to participate in the study using a convenient sampling frame. The second stage was selection of 420 houses from the two wards using sample frame of the number of houses in each ward. The next stage was selection of a household from each of the houses selected, and where more

than a household was found in a house, one was selected by a single one-time ballot. Finally, eligible female adults in the sampled households were chosen to participate in the study if they met the inclusion criteria. If more than one eligible respondent was found in a selected household, one respondent was selected through balloting.

Data Instrument and Collection Strategies:

Data was collected using both self- administered questionnaire (for literate respondents) and interviewer- administered structured questionnaire (for illiterate respondents). The questionnaire was pretested among female adults in another LGA (Ife South LGA) which shared rural characteristics with the study area. The purpose of the pre-test was to adjudge the strengths and weaknesses of the research instrument (questionnaire) so as to make necessary adjustment in the final design of the instrument. The first section of the questionnaire was designed to elicit information on the socio-demographic characteristics of the respondents, while the remaining sections were designed to collect information on awareness of breast cancer, knowledge of risk factors and early warning signs of breast cancer, awareness and practices of breast self- examination. The questionnaires were administered by trained research assistants (RAs) at the most convenient time being previously agreed to by the respondents. Yoruba language version of the questionnaire which has been previously validated by both Yoruba language and English language experts was provided for the RAs.

Data Analysis:

The data collected was analyzed using Statistical Package for Social Sciences (SPSS) version 16. Frequencies table and percentages were generated. The strength of association was tested using Chi-square statistic and significance value was set at $p < 0.05$.

The limitation of the study was that some prospective respondents refused to volunteer information on the basis of superstitious beliefs that talking about the disease can inflict them with it.[22]

RESULTS

Socio-demographic characteristics of respondents:

Out of 420 questionnaires administered, a total of 400 were properly filled and accepted for data analysis (response rate 95.2%).

The age of the respondents ranged from 20-60 years, their mean age was 36 years (SD= 11.6) and majority (43.0%) of them were in the age bracket 20-30 years. Christianity top the list (68.0%) of their religion, their major occupation was trading (47.0%). Those with primary school educational qualification had the highest percentage (38.0%) and most (68.0%) of them were married. They were predominantly (94.3%) Yoruba ethnic group (Table I).

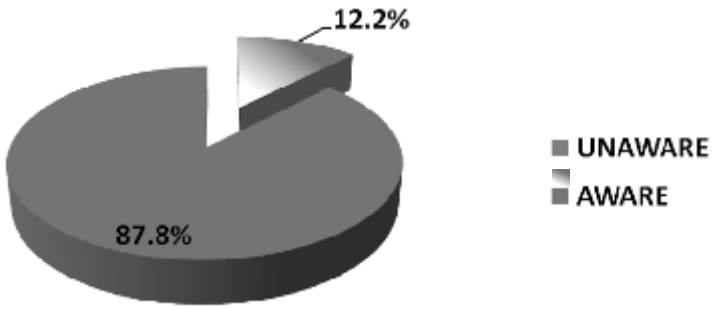

Figure1: Respondents' level of awareness of Breast cancer

Table I: Respondents' socio-demographic characteristics
(n=400)

Variables	Frequency	Percentage (%)
Age		
20-30 years	172	43.0
31-40 years	100	25.0
41-50 years	76	19.0
51-60 years	52	13.0
Religion		
Christianity	272	68.0
Islam	126	31.5
Traditional	4	1.0
Occupation		
Trader	188	47.0
Farmer	72	18.0
Student	73	18.2
Professional	2	0.5
Civil servant	9	2.2
Artisans	56	14.0
Educational attainment		
No formal education	81	20.2
Primary school	152	38.0
Secondary school	126	31.5
Tertiary institutions	41	10.2
Marital status		
Married	272	68.0
Single	103	25.8
Widowed	11	2.8
Separated	5	1.2
Divorced	9	2.2
Ethnicity		
Yoruba	377	94.2
Igbo	22	5.5
Hausa	1	2.0

Awareness and knowledge of risk factors of breast cancer:

Awareness of breast cancer is very high (87.8%) among the respondents and majority (71.0%) of them got their information from the media (Figures 1&2). Concerning knowledge of risk factors for developing breast cancer, cigarette smoking ranked highest (51.5%) in the list of correct risk factors, both alcohol and prolong breast feeding ranked next with equal percentage (50.5%) while "obesity" ranked lowest (20.2%). Majority of them (78.8%) that gave incorrect responses to the risk factors reported that keeping money in the brassiere may be a risk factor and this was followed by spiritual factor (37.5%) (Table II).

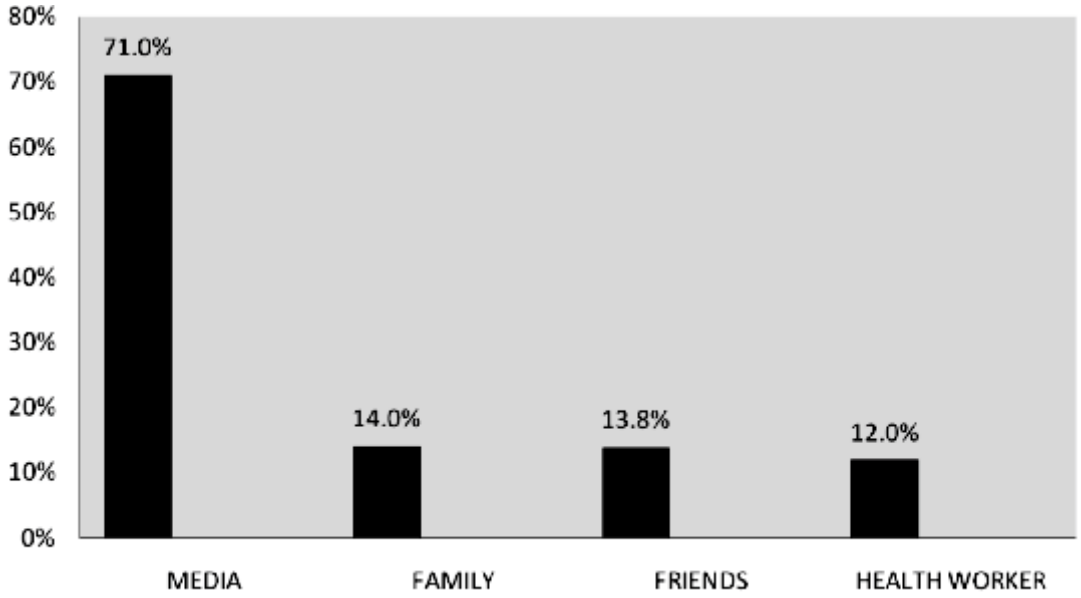

Figure 2: Respondents' sources of information about breast cancer

Awareness and sources of information of breast self- examination (BSE):

Table IV showed that less than half (47.0%) of the respondents claimed to be aware of BSE and majority (23.8%) of them got their information from the media, this was followed by information from health workers and friends respectively (11.2% and 11.0%) (Figures 3 & 4).

Practices, time and mode of practicing breast self- examination:

One hundred and eighteen (which represents 29.5%) of the respondents claimed to have practiced BSE in the past (Figure 5). Majority (55.0%) of them started practicing BSE from age 19 years and above, with those who practice it less than a month ago has the highest percentage (42.4%). Most of them (89.8%) normally practice BSE in the morning and those that practice it in front of mirror tops the list of the place of practice (Table V).

Factors influencing practices of BSE:

Only two of the predictor factors that were cross-tabulated against the practices of BSE had statistically significant association with (Age and Religion). In case of age, those in the age bracket 20- 30 years had the highest proportion (15.3%) of the respondents that were practicing BSE which was followed by the age bracket 31- 40 years (7.8%)

(p= 0.013). In case of religion as shown in table 5, the proportion of Christians was higher than that of Islamic faith (16.5% and 13.0%) (p=0.001)..

Most (98.0%) of the respondents said they were willing to know more about breast self-examination (Figure 6).

Table II: Respondents' knowledge of risk factors

Risk factor	Frequency	Percentage (%)
Fat women are more prone to breast cancer than thin women	81	20.2
Infertility is a risk factor for developing breast cancer	62	15.5
Delayed first pregnancy is a risk factor for breast cancer	56	14.0
Taking of oral contraceptive pills is a risk factor for breast cancer	92	23
Early menarche and late menopause is a risk factor for breast cancer	48	12
Prolong breast feeding is a risk factor for breast cancer	202	50.5
Multiparity is a risk factor for breast cancer	158	39.5
Breast cancer is more common in older women than younger women	152	38
Alcohol is a risk factor for breast cancer	202	50.5
Smoking is a risk factor breast cancer	206	51.5
Positive family history of breast cancer is a risk factor for breast cancer	164	41
Keeping money in the brassiere is a risk factor for breast cancer	315	78.8
Spiritual factor	150	37.5

Table III: Respondents' knowledge of early warning signs

Early warning signs	Frequency	Percentage (%)
Asymptomatic (no symptom)	62	15.5
Painless lump	185	46.2
Nipple discharge	192	48.0
Breast skin changes	203	50.8
Nipple retraction	161	40.2
Pain in the breast	263	65.8
Breast swelling	249	62.2

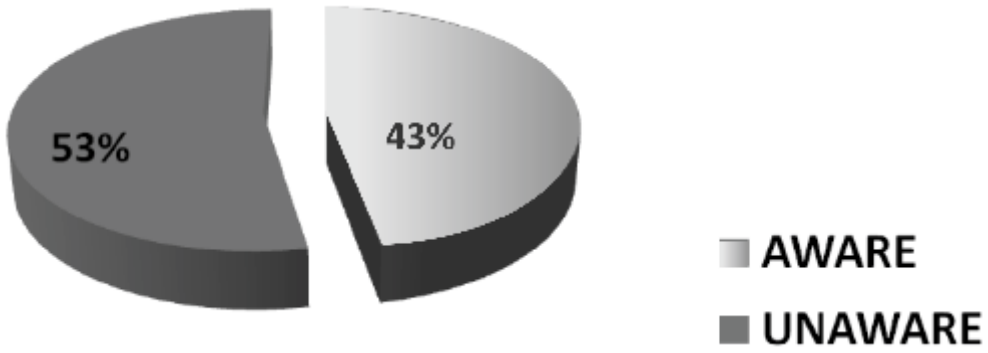

Figure 3: Respondents' level of awareness of self-breast examination

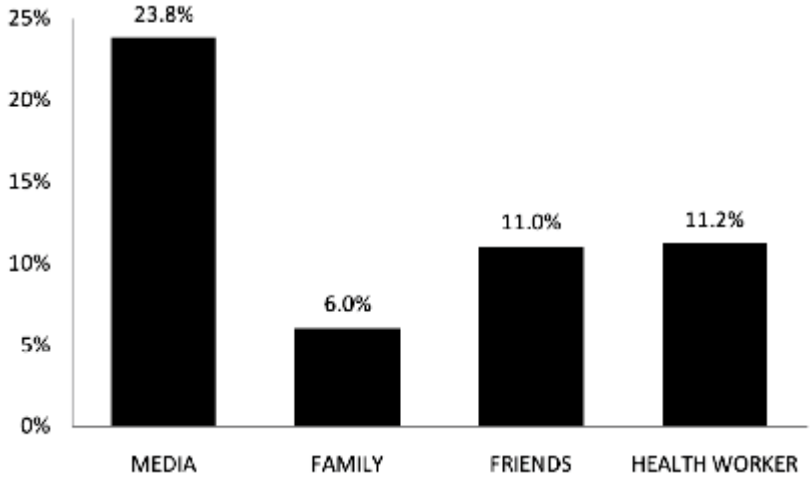

Figure 4: Respondents' sources of information about self-breast examination

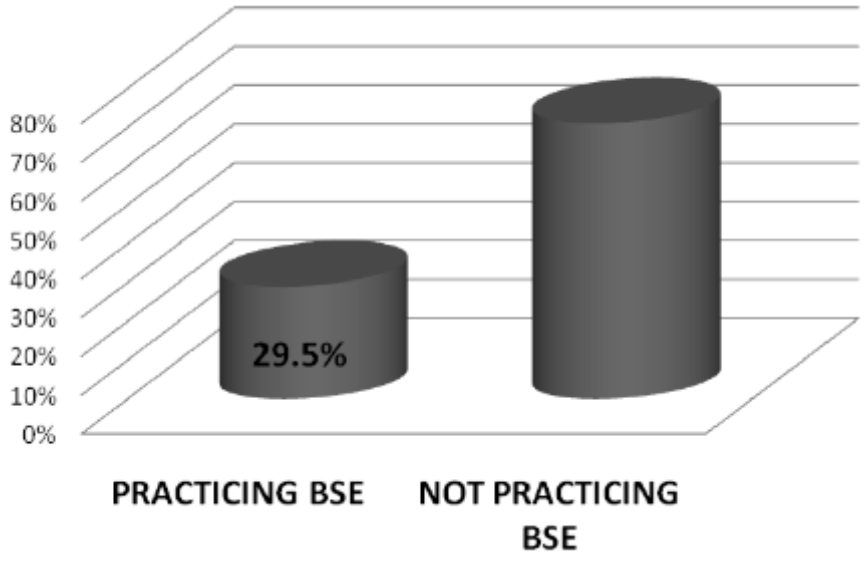

Figure 5: Practice of Breast Self- Examination among respondents

Table IV: Practice of breast self-examination among the respondents (N=118)

Practice of self breast examination	Frequency	Percentage
At what age did you start SBE?		
<19years	53	45.0
>19years	65	55.0
When was the last time you performed SBE?		
Less than a month ago	50	42.4
Less than 3-6 months	42	35.6
Less than a year ago	26	22.0
What time do you normally perform SBE?		
Morning	106	89.8
Afternoon	7	5.9
Evening	5	4.2
Where do you normally perform SBE?		
In front of the mirror	38	32.2
Lying on the bed	38	32.2
In the bathroom	42	35.6

Table V: Practice of BSE versus demographic variable the among respondents

Variable	PRACTICE OF BSE		X^2	df	P
	YES N (%)	NO N (%)			
Age					
20-30years	61 (15.3)	111 (27.8)			
31-40years	31 (7.8)	69 (17.3)	**10.699**	**3**	**0.013**
41-50years	16 (4.0)	60 (15.0)			
51-60years	8 (2.0)	44 (11.0)			
Level of Education					
No Formal Education	20 (5.0)	61 (15.3)			
Primary School	48 (12.0)	104 (26.0)	**2.444**	**3**	**0.486**
Secondary School	39 (9.8)	87 (21.8)			
Tertiary School	11 (2.3)	30 (7.5)			
Marital Status					
Single	31 (7.8)	72 (18.0)			
Married	79 (19.8)	193 (48.3)	**1.180**	**2**	**0.881**
Others	8 (2.0)	17 (4.3)			
Religion					
Christianity	66 (16.5)	102 (25.5)	**11.637**	**1**	**0.001**
Islam	52 (13.0)	180 (45.0)			

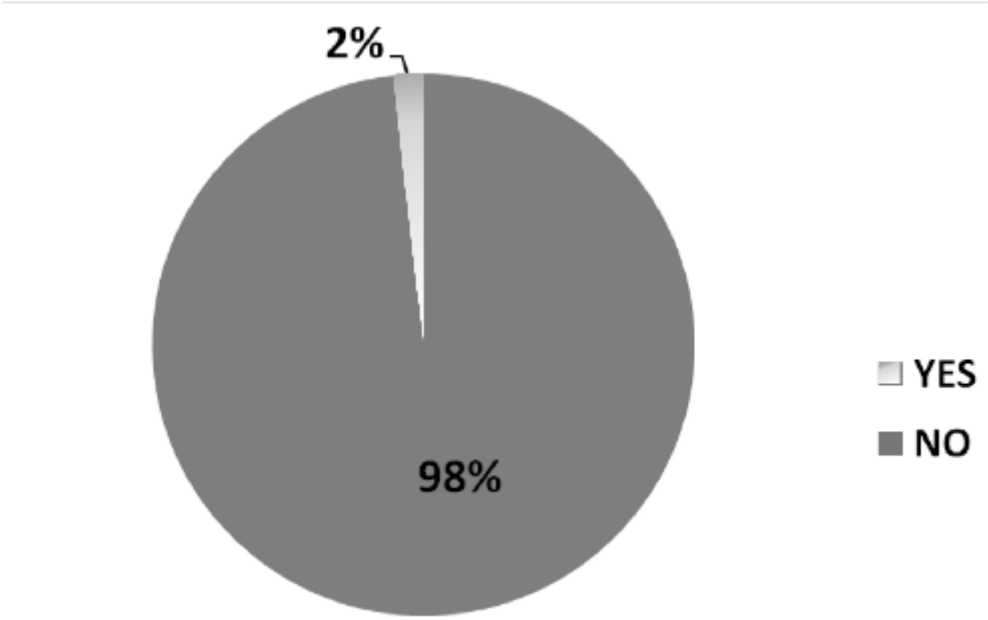

Figure 6: Do you want to know more about self-breast examination?

DISCUSSION

The findings of this study indicate that awareness of breast cancer was high among the respondents (87.8%). This is similar to a study done in Ibadan by Oluwatosin and Oladepo[12] in which 85.7% of the rural women were aware of the disease. Media was the highest source of information for these rural dwellers, this is in keeping with that found by Kayode, et al[13] in Ilorin West LGA . Despite the high level of awareness of breast cancer among them, knowledge of risk factors for breast cancer was generally low. For example, in response to the question on obesity as a risk factor for breast cancer, only 81 (20.2%) answered correctly. Also, there were some erroneous impressions about the etiology of breast cancer as a large proportion of participants (78.8%) believed that keeping money in brassier is a major cause of breast cancer. This finding calls for further researches because it has not been documented in any previous studies. Another 37.5% believed in spiritual factor in the cause of the disease. This implied that lack of accurate information about breast cancer exists in the rural community where our study was carried out. This finding is also similar to the study Oluwatosin and Oladepo[12] and that of Khadiga and Abdurrahman Al-Mohaimeed in Saudi Arabia.[23] By the study criterion on awareness of breast self- examination, our study showed that less than half (47%) of the respondents were aware of self breast examination despite the fact that a large percent were aware of breast cancer. This is similar to the finding of 32% by Balogun and Owoaje[14] in Sango market Ibadan , but their study was carried out among women in urban community. Media still remain the most popular source of information (23.8%) among the rural women. The low level of awareness of breast self- examination (BSE) obtained in the study calls for great concern in an environment where it seems to be the only means of early detection for breast cancer. The low level of awareness of BSE is similar to its practice of among our respondents as only 29.5% of them had ever practiced it. Majority (55.0%) of those who practice BSE started practicing it from age 19 years and above. This low

level of practice is similar to a results obtained from the study of Balogun and Owoaje14 among traders. Of those that practice BSE, only 42% did so in the last one month. The results also showed that women's practice of breast self- examination has been linked significantly to their knowledge of breast cancer and several studies have demonstrated this linkage.24, 25 By study criteria, age and religion were the only two factors that influenced the practice of BSE ($p=0.013$ and $p=0.001$ respectively). This finding was in contrast with that of Oluwatosin and Oladepo12 which found that marital status, educational status, knowledge of treatment of breast cancer and knowledge of BSE/CBE are predictors of practice of BSE in their study.

Conclusion and Recommendations

The study revealed that majority of this rural populace had erroneous belief that keeping money in the brassier can cause breast cancer despite the fact that most of them claimed to be aware of the disease. In view of this finding, we recommend that further research should be carried out in order to validate it. Cigarette smoking ranked highest in the list of the correct risk factors for breast cancer among the respondents. Their awareness and practices of breast self- examination (BSE) were also low. Age and religion of the respondents was predictive on the practice of BSE. Most of the respondents were interested in knowing more about BSE. Thus, media activities should be intensified to improve the awareness and practices of BSE since it ranked the highest among the sources of information among the respondents. Similarly, health workers should be encouraged to visit the community frequently especially the religious centers and educating them on the benefits of practicing BSE through organization of seminars and workshops with full community participation. The effort of health workers is also important in correcting erroneous beliefs of the various risk factors for breast cancer noted among the respondents.

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