

RESEARCH COMMUNICATION

Awareness of Breast Cancer and Screening Procedures Among Malaysian Women

KC Kanaga*, J Nithiya, MFV Noor Shatirah

Abstract

Breast cancer is the most frequently occurring cancer in women globally and early detection increases the survival rate of patients. Therefore, this study was done to determine factors which influence the awareness of breast cancer and practice of screening procedures. A cross-sectional study was performed on 125 women aged 19-60 years in urban and rural areas in Malaysia using a validated questionnaire covering knowledge of breast cancer and screening practices. A total of 99.2% respondents knew that breast cancer is the leading cancer with a mean knowledge of $67.3 \pm 15.3\%$ for urban and $50.2 \pm 14.7\%$ for rural women. Mann Whitney U showed rural women had significantly less awareness compared to urban women ($p > 0.05$). Spearman correlation test showed a significant positive relationship between education and awareness ($p > 0.05$). Regarding awareness of the screening methods, 92.8%, 50.4% and 47.2% of respondents correctly answered questions on capability of BSE, CBE and mammography, respectively. In conclusion, the study showed awareness of breast cancer and practice of screening procedures increases with higher education and urban living. Therefore, there is an urgent need for an intensive breast cancer awareness campaign and availability of screening centres prioritized in rural areas.

Keywords: awareness - breast cancer - early detection - practice - women

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Introduction

Breast cancer is the most frequently occurring cancer in women globally. According to National Cancer Registry, 2003 the average standard incidence is 149.4 per 100,000 populations for Malaysian women (Lim & Halimah, 2003). A study done in Klang Valley, indicated 50-60% of new cases identified were in stage 3 and 4 breast cancer with large tumour size (Cheng et al., 2006). According to Hisham & Yip, (2003) the mean tumor size at presentation was 5.4 cm (range: 1-20 cm) with an advanced stage of breast cancer. Socio-cultural factors and poverty maybe the underlying factors for the delay presentation among Malaysian breast cancer patients (Lim & Halimah, 2004).

In order to reduce morbidity and mortality and improve the survival rate of breast cancer patients, there is an urgent need to create awareness and encourage breast screening among the population. The screening methods being breast self examination (BSE), clinical breast examination (CBE) and mammography (Okobia et al., 2006). Unlike CBE and mammography, which require hospital visits and specialized equipment and expertise, BSE is inexpensive and can be carried out by women themselves. However, women over 40 years of age are recommended to undergo mammography screening which improves breast cancer survival rates due to its early detection in comparison to

BSE and CBE (Smith et al., 2005).

Several studies have been conducted worldwide to elicit women's knowledge about breast cancer and breast screening practices but in Malaysia very few studies have been reported. There is a need to know the awareness level and screening practices in a country with wide sociodemographic status. Therefore this study was done to determine the factors which may influence the awareness and practices of breast cancer screening. Baseline data on women's knowledge is essential in developing an effective and targeted awareness campaign and instill practice habits to prevent delayed presentations of breast cancer.

Materials and Methods

Study design

A cross-sectional study was conducted among 125 Malaysian women from urban and rural areas between the ages of 20-60 years.

Instrument

The questionnaire was developed to include questions on general knowledge of breast cancer and screening practices. Content validity of the questionnaire was ascertained by an expert panel. The following structured

sections were included: a) Background, Information of Respondents Respondent's age, ethnic origin, educational level and marital status. b) Breast Cancer Knowledge, A total of 14 questions, which included 3 questions on general facts about breast cancer, 5 question on risk factors, 3 question on symptoms and 3 on method of early detection. c) Breast Cancer Screening awareness and practices, Information on breast cancer screening knowledge and practices was obtained.

These questions were then scored: one point for the correct response and zero for a wrong or uncertain response. A correct response was based on the current practice and literature. The maximum attainable score was 37.

The screening practices included are: Breast self examination (BSE) is a screening method that involves women looking at and feeling each breast for possible lumps, distortions or swelling as an approach in detecting early stage breast cancer. Clinical breast Examination (CBE) is a physical examination done by a health professional on the breast to detect early changes. Mammography is used as a screening tool for human breast using low energy X-ray with a high sensitivity in detection of characteristic masses and/or microcalcifications.

Data analysis

Mann Whitney U, spearman correlation and chi square test were performed in data analysis, using SPSS version 17.0. Significance level was set at $p < 0.05$.

Results

The total numbers of respondents involved in this study were one hundred and twenty five with an age range of 20- 60 years (Table 1). Majority (99.2%) knew that breast cancer is the leading women's cancer in Malaysia. A total of 76% were aware that increasing age and family history were risk factors. Most of them agreed that breast cancer can be fatal but knowledge on breast cancer risk factors were lacking like usage of hormonal replacement therapy. With regards to symptoms of breast cancer, 72% knew that bloody discharge from the nipple was abnormal, while 76.8% knew that there is an association between lumps and breast cancer.

Figure 1 shows the awareness level among the women based on demographic status, age and education. The mean total score of breast cancer knowledge were $67.3 \pm 15.3\%$ for urban and $50.2 \pm 14.7\%$ for rural women. Mann Whitney U showed that rural women had significantly less knowledge on screening methods compared to urban women ($p > 0.05$). Spearman correlation test showed a significant relationship between the education level and awareness of early detection of breast cancer ($p > 0.05$).

Regarding awareness of the screening methods 92.8%, 50.4% and 47.2% of respondents selected correct answers on capability of BSE, CBE and mammography respectively. Figure 2 shows the awareness and practice of breast screening procedures. Chi-square test showed significant differences between the awareness and practice of breast self and clinical examination respectively ($p <$

Table 1. Sociodemographic Variables of Study Participants

	Urban Area		Rural Area		TOTAL	
	(n)	(%)	(n)	(%)	(n)	(%)
Respondent	64	51.2	61	48.8	125	100
Age						
20-30	17	26.6	13	21.3	30	24.0
31-40	17	26.6	15	24.6	32	25.6
41-50	15	23.4	17	27.9	32	25.6
51-60	15	23.4	16	26.2	31	24.8
Ethnic						
Malay	46	71.9	53	86.9	99	79.2
Chinese	16	25	5	8.2	21	50.4
Indian	2	3.1	3	4.9	5	4.0
Education						
No education	0	0	1	1.6	1	0.8
Primary school	2	3.1	10	16.4	12	9.6
Secondary school	25	39.1	41	67.2	66	52.8
Higher education	21	32.8	9	14.8	30	24.0
Other	16	25.0	0	0	16	12.8

0.05) but no significant differences between awareness level and mammogram practice ($p > 0.05$).

Discussion

Breast cancer is commonly diagnosed at late stages in countries with limited resources. Awareness would lead to early detection and reduce the stage at diagnosis, potentially improving the odds of survival and cure

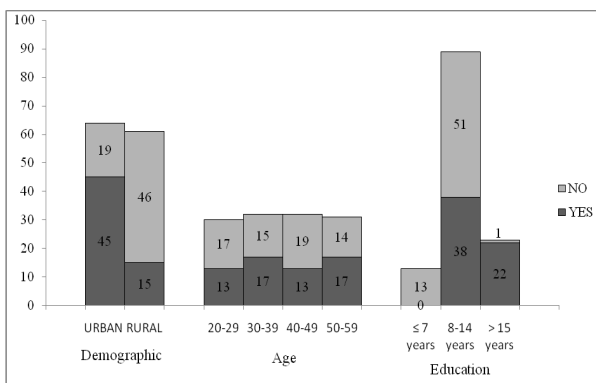


Figure 1. Awareness of Numbaer of Respondents Based on Demographic, Age and Education in Awareness of Breast Cancer

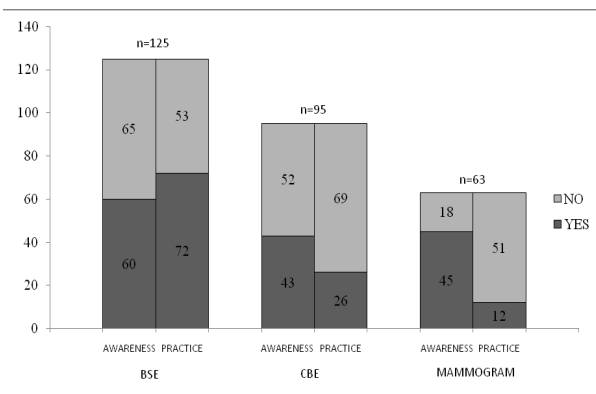


Figure 2. Number of Respondents with Awareness and Practices Screening Procedures

with simpler and more cost effective treatment. Key prerequisites for early detection are ensuring that women are supported in seeking care and that they have access to appropriate, affordable diagnostics tests and treatment.

The current findings is supported with previous reports that awareness of early detection of breast cancer is higher among women in urban compared to the rural women (Wu et al., 2006; Muhammad et al., 2010). Several studies suggested, it may due to differences in socioeconomic status and level of education that exist between women from two different locations with majority of awareness campaigns organized in urban areas.

A higher education showed an increase in the awareness level consistent with a previous studies (Montazeri et al., 2003; Okobia et al., 2006). These women are exposed to health-related issues through mass media, internet and a better socioeconomic status enables support of screening services.

Practices of BSE and CBE by women in this study were influenced by awareness of early detection of breast cancer as agreed by several studies (Seiz & Aziz, 2000; Dündar et al., 2006; Okobia et al., 2006; Karayurt et al., 2008). However, practice of mammography was 19% in comparison to Rosmawati, 2010 which was 10.5% but much lower than studies done in other countries (Parsa et al., 2008). Barriers to mammography as reported by previous studies were embarrassment, low income, non availability and lack of health insurance coverage (Alexandraki & Mooradian, 2010).

The limitations in this study are number of respondents and sampling done in few areas. However the results of this study provided the factors that influence awareness of breast cancer and screening procedures among Malaysian women.

The low rates of BSE, CBE and mammography practiced by this group of women are of concern and suggest that increased awareness and subsidised mammography be given to the population in general. Breast cancer affects younger women in Malaysia unlike in western societies where it is predominant in menopausal and post menopausal women. A public health education program targeted at younger women is essential to create awareness and reduce the fear, denial, myths and misconceptions among Malaysian women. Immediate measures should be taken to increase the awareness through campaigns by non governmental organizations focussed on rural areas and the family physician may be called upon to raise awareness and perform opportunistic screening. Findings from this study, may be useful in helping the clinicians understand perceptions of patients regarding breast cancer and screening procedures.

Furthermore, an effective public screening could be initiated in primary health care settings making it easily available to all women. Larger studies are needed to confirm the present study findings to provide healthcare service.

In conclusion, awareness of breast cancer and practice of screening procedures increases with higher education and urban living. Hence, there is an urgent need for an intensive breast cancer awareness campaign and availability of screening centres prioritized in rural areas.

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