RESEARCH COMMUNICATION

Knowledge, Attitude and Practice of Breast Self-examination Among Women in a Suburban Area in Terengganu, Malaysia

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Abstract

<u>Introduction</u>: Breast cancer is the most frequently diagnosed cancer in Malaysian women, irrespective of age group and ethnicity. The observed low survival rates are related to late stage at presentation despite the availability of breast self examination (BSE) as a reliable screening method for early detection. <u>Materials and Methods</u>: This cross-sectional study was designed to determine the knowledge, attitude and practice towards BSE amongst women aged 15 years old and above. Systemic random sampling was applied and information gathered through guided interview by using a structured questionnaire. <u>Results</u>: A total of 86 respondents were recruited, with a mean age of 40.5 years (SD: 15.51), more than 80% having a secondary or tertiary level of education. The total score was 16.9 (total mean percent: 60.4%) for knowledge, 37.1 (77.3%) for attitude and 9.56 (34.1%) for practice. The proportions of respondents with good score for knowledge, attitude and practice were 38.4%, 73.3% and 7.0%, respectively. Not knowing the correct method of BSE, lack of knowledge on cancer signs and lack of motivational support from parents, spouse or friends appeared to be related with the poor practices. <u>Conclusion</u>: Enhancement of breast cancer awareness and focusing on recognized barriers by health care professionals with the involvement of spouses, family and community would have a substantial beneficial impact on BSE practice.

Keywords: Breast self examination - knowledge - attitude - practice - barriers - Malaysian suburban women

Introduction

There are a substantial high in the number and proportion of female with breast cancer globally. More than one million women are estimated to be diagnosed with breast cancer every year, and more than 410,000 will die (Coughlin and Ekwueme, 2009). The average crude incidence rate for breast cancer was 94.93 per 100,000 in more developed countries, and 19.66 per 100,000 populations in less developed countries. In Malaysia, the crude incidence was estimated to be 34.86 per 100,000 populations (Hisham and Yip, 2004). Based on National Cancer Registry 2006, breast cancer is the most frequently diagnosed cancer in Malaysian women, irrespective of age groups and ethnicity, accounting for 30.4%.

Breast cancer in Malaysian women occurs more commonly in younger women, aged between 40 and 49 years. The similar high prevalent among middle age group also was noted in Nigeria in which the mean age for breast cancer in Nigeria was 48 years (Adesunkanmi et al., 2006). The major challenge in the breast cancer management is late presentation and later contributes to poor outcome and high fatality rate. It was noted that, majority of breast cancer patient in Nigeria were presented at advanced stage (Adesunkanmi et al., 2006). This same phenomenon also occurred in Malaysia setting (Hisham and Yip, 2004).

The survival rate of breast cancer patients vary greatly worldwide, ranging from 80% or over in North America, Sweden and Japan to around 60% in middle-income countries and below 40% in low-income countries. It has been reported that five-year survival rate was 56% for late detection and reached to 85% for early detection of breast cancer women (Gupta et al., 2009). It was noted that about 75% of women with breast cancer in developing countries are diagnosed in clinical stages III and IV, compared to approximately 70% of newly diagnosed women with breast cancer in developed countries like North America are in stages 0 and 1 (Coughlin and Ekwueme, 2009).

The available and advisable method for breast cancer screening worldwide are breast self examination (BSE), clinical breast examination (CBE) and mammogram. However, in most of developing countries the routine screening mammographies are often unavailable (Coughlin and Ekwueme, 2009). Therefore, it is important to empower women on the BSE as a primary tool in screening the breast cancer. American Cancer Society did recommends on BSE as option breast awareness and for early detection of breast cancer (Karayurt et al., 2008). It was reported that women who practicing regular BSE were presented more often with clinically early tumors and had shorter patient delay in presentation (Philip et al., 2006). The behind reasons are women become more familiar

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with both the appearance and the feel of their breasts and therefore would able to detect any changes in their breasts as early as possible. At the same time, BSE makes women more "breast aware", which again may lead to an earlier diagnosis of breast cancer (Karayurt et al., 2008).

Early detection and effective treatment are important to reduce morbidity and mortality of breast cancer. The low survival rate of young breast cancer patients have been reported due to being diagnosed at advanced stages (Karayurt et al., 2008). BSE, mammography, and CBE are believed and proved to be appropriate and effective methods of ensuring early detection of breast cancer. In fact, BSE alone is believed to be appropriate and effective methods of ensuring early detection of breast cancer. It could detect 40% of breast lesion (Gupta et al., 2009) among women. Apart from that, BSE is known as an easy, cheapest, and could empower self monitoring especially among the high risk group.

Despite the effectiveness of breast cancer screening behaviors in reducing mortality, research findings indicate the screening rates remain low. In a prospective study of 304 patients with newly diagnosed breast cancer in England, 165 (54%) claimed to practice BSE (Philip et al., 2006). In different community study involving a diverse women group conducted in United States, the rates of performing monthly BSE ranged from 29% to 63% (Secginli and Nahcivan, 2006). Furthermore, 19.0% to 43.2% of women in Nigeria were reported practicing BSE (Okobia et al., 2006; Gwarzo et al., 2009). In fact, Malaysia study reported a very low proportion rate of women performing BSE. Out of 1,303 women registered and attending a Malaysian well person's clinic programme at Ipoh Hospital, only 1.3% (17 patients) practiced BSE regularly, and only 2.9% of the 207 women with a past or family history of other cancers done it regularly (Hisham and Yip, 2004). The foremost barrier for the poor practicing BSE were forgetfulness, lack of time (Gupta et al., 2009), ignorance, fear and anxiety (Hisham and Yip, 2004; Salazar, 2007) and low level of education (Okobia et al., 2006).

Therefore it is important to determine the level of knowledge regarding the BSE as well as the attitude and practice among women in our community to recognize their acceptance, belief and the magnitude of current practice. Hence, it will help healthcare professionals and planners to modify, emphasis, strengthening and select the best and more effective health education program and breast awareness campaigns pertaining to BSE. Finally it is hope that, the problem of late presentation can be curbed and the survival of breast cancer patients would be improved.

Materials and Methods

Study design and selection of participants

A cross-sectional study was conducted in Kampung Alor Lintang, Jerteh, Terengganu, a sub-urban area. It is located about 65 km from Kota Bharu, a city in Kelantan or 150 km from Kuala Terengganu, a city in Terengganu in November 2009. The population in this area is about 1800 peoples who live in 385 houses. The area is 15km2 and its density is about 1029 people/km2.

This study recruited female age above 15 year-old and excluded those with known to have psychiatric problem and already been diagnosed to have breast carcinoma. A systematic random sampling was applied in selecting the respondents.

Research instruments

The collection of data was carried out using a structured study questionnaire through guided interview process. The questionnaire consisted of socio-demography information including age, education level, occupation and monthly income. The knowledge of respondents was assessed through 15 items covering on the sign of breast cancer and method on performing BSE. Meanwhile, the attitude was determined based on thirteen items. Regarding the practice, there were seven items and lastly the knowledge on the mammogram was elicited through 10 items.

Categorical responses (True/False/Don't know) were applied for the knowledge items. For attitude items, 5 Likerts' scale (strongly agree/agree/neutral/not agree/ strongly not agree) was used (McDowell and Newell, 1987) and similar ordinals (never/seldom/neutral/frequent/ always) was applied for the practice items.

The following scoring method was used: for positive knowledge item, '2' marks for correct response, '1' mark for don't know, and no mark for incorrect response. The scoring was reversed for the negative knowledge item. For a positive attitude item, scores of '4', '3', '2', '1' and '0' for 'strongly agree', 'agree', 'neutral', 'disagree' and 'strongly disagree', respectively. This scoring was be reversed for the negative attitude items. For a good practice item scores '0', '1', '2', '3' and '4' was given for 'never', 'seldom', 'neutral', 'frequently' and 'always', respectively. The scoring was reversed for negative practice item.

Statistics

Data gathered were input into SPSS version 12.0 and analysed using same software. Continuous variables were described by descriptive statistics such as mean, and standard deviation. Meanwhile, categorical variables were expressed by the frequencies and percentage. The mean percent was calculated based on the mean score over maximum score times hundred. The total scores for the KAP was calculated than was categorized into good or poor level based on the 70% cut-off point out of total expected score for each domain.

Results

The total numbers of female involved in this study was 86 respondents. Most of them are Malay and all are Muslims. About 56.7% people are above 35 years old, 28.1% is below 24 years old and the rest fall in between. The mean age of respondents was 40.48 (SD: 15.51). Only a small proportion of the respondents did not access to formal education (5.8%) and more than 80% had secondary (72.1%) and tertiary (9.3%) level of education. Half of them were housewives (50.0%) and only 9.3% were professional workers. Students constituted 17.4%

and the remaining ware self-employed, labourers and others. Nearly one-third of them (31.4%) gain RM2000 and more monthly and 32.6% gain less than RM720 monthly. One-quarter (25.6%) of respondents still single and 66.3% married.

The mean for total knowledge score was 16.91 (total mean percent: 60.4%) and the highest mean score belongs to the knowledge on 'Hands should be raised up alternately above the head when doing the BSE in front of the mirror' (mean: 1.60) followed by 'BSE should be done in front of the mirror' (mean: 1.53). The knowledge on the 'BSE include armpit examination to check for any lump', 'Undress until the waist when doing the BSE', 'Need to observe for unusual change in shape and size of breast' and 'Use finger pulps to examine any lump or thickening of the skin' with the mean score more than 1.2.

The lowest mean score for knowledge were concerning to 'Lump is the early sign for cancer' (mean percent: 36.0%), 'BSE should been done every 2 month (mean percent: 36.5%)', 'Palpate on the right breast while left sided lying when doing the BSE' (mean percent: 40.0%), 'Retraction of nipple is the warning signs that should be observed' (mean percent: 40.0%), 'BSE can be done in supine position' (mean percent: 44.0%) and 'BSE must be done between day 7 until day 10 after menses' (mean percent: 45.0%) where the mean score below 1.0.

The mean for total attitude score pertaining to BSE was 37.1 (total mean percent: 77.3%) and the highest was regarding to 'I'm not afraid to think about the breast cancer' (mean percent: 82.8%). The mean percent of 'poor preference to seek traditional healers' was 75.8%. All the items assessing the attitude showed the mean score

Table 1. Scores for Knowledge, Attitude and Practice on BSE and Knowledge Towards Mammogram Among Respondents (n=86)

Variables Scores	Min	Max	Mean (SD)
Knowledge towards BSE			
BSE should been done every 2 month	0	2	0.73 (0.71)
BSE must be done between day 7 until day 10 after menses	0	2	0.90 (0.95)
BSE should be done in front of the mirror	0	2	1.53 (0.81)
Undress until the waist when doing the BSE	0	2	1.44 (0.85)
Hands should be raised up alternately above the head when doing the BSE in front of the mirror	0	2	1.60 (0.76)
BSE should be done from the front view only	0	2	1.02 (0.75)*
BSE can be done in supine position	0	2	0.88 (0.90)
Palpate on the right breast while left sided lying when doing the BSE	0	2	0.87 (0.84)
Use finger pulps to examine any lump or thickening of the skin	0	2	1.28 (0.93)
BSE can be done using vertical strip and circular technique	0	2	1.03 (0.96)
Need to press on the nipple to check any unusual discharge	0	2	1.10 (0.96)
BSE include armpit examination to check for any lump	0	2	1.48 (0.82)
Need to observe for unusual change in shape and size of breast	0	2	1.37 (0.90)
Retraction of nipple is the warning signs that should be observed	0	2	0.87 (0.96)
Lump is the early sign for cancer	0	2	0.72 (0.68)
Total knowledge score	0	28	16.91 (8.01)
Attitude towards BSE			
Doing BSE makes me feel so funny	0	4	2.85 (1.09)*
BSE will be embarrassing to me	0	4	3.01 (0.91)*
Doing BSE is wasting time	1	4	3.17 (0.79)*
Doing BSE make me feel unpleasant	0	4	2.86 (0.98)*
If there is a lump, I prefer to get treatment from traditional healer	0	4	3.03 (1.02)*
Feel uncomfortable can't do BSE once a month	0	4	2.20 (1.09)
All women should do BSE	0	4	2.77 (1.35)
I really care about my breast	0	4	3.06 (0.94)
I'm not afraid to think about the breast cancer	0	4	3.31 (0.89)
Avoid to do BSE because worry to get breast cancer	0	4	2.76 (1.10)*
Interested to do breast-self examination (BSE)	0	4	2.84 (0.93)
always search for information regarding BSE from the internet, magazine and newspaper	0	4	2.70 (0.97)
Discuss with my friends about BSE	0	4	2.55 (1.04)
Total Attitude score	21	48	37.10 (6.76)
Practice towards BSE			
Do BSE once a month	0	4	1.17 (1.10)
Avoid from learning the correct method of BSE	0	4	3.58 (0.79)*
Parents or partner always advice to do BSE	0	4	0.80 (0.93)
Advice friends to do BSE	0	4	0.99 (1.13)
Discuss the importance of BSE with friends	0	4	1.03 (1.03)
Have been thought on BSE by health staffs	0	4	1.09 (1.15)
If notice any breast abnormality, straightly go to public healthcare	0	4	0.88 (1.07)
Total Practice score	1	26	9.56 (4.87)

*Negative items: The scoring was reversed

Table 2. Score Level of Knowledge, Attitude and Practice Towards BSE and Correlation Between Domain Score (n=86)

Variables	Score level		Correlation, r (p-value)	
	Good	Poor	Attitude	Practice
Knowledge	33(38.4%)	53(61.6%)	0.484(<0.001)	0.600(<0.001)
Attitude	63(73.3%)	23(26.7%)	-	0.398(<0.001)
Practice	6(7.0%)	80(93.0%)	-	-

Good refers to a score of 70% or more of the total

above 2.0.

Concerning the practice, the total mean score was 9.56 (total mean percent: 34.1%). The lowest score (mean score below 1.0) were concerning 'Parents or partner always advice to do BSE' (mean percent: 20.0%), 'If notice any breast abnormality, straightly go to public healthcare' (mean percent: 22.0%) and 'Advice friends to do BSE' (mean percent: 24.8%). The item with highest score (mean score more than 3.0) concerning the practice was disagreement towards 'Avoid from learning the correct method of BSE' (mean percent: 89.5%). Please refer to Table 1.

The proportion of respondents with good knowledge score was about 38%. Attitude showed the highest proportion with the good score, whereas practice showed the lowest proportion with good score. There were significant positive correlation between knowledge and attitude score, knowledge and practice score as well as attitude and practice score as illustrated in Table 2.

Discussion

Out of 86 respondents recruited in this study, about 56.7% constituted those above 35 years old and 28.1% were below 24 with the mean age of r 40.48. These give a good representation of very high risk group for breast cancer. The results also not masked by low education levels since only a small proportion of them had primary level of education.

The overall results from this study suggest the studied population have rather poor knowledge of breast cancer. This may partly explain the delay in presentation among Malaysian breast cancer patients and poor practicing BSE seen 1.3% to 2.9% in over 70% of women attended a well person's clinic programme (Hisham and Yip, 2004). A total mean percent score for the knowledge of 60.4% portray the level of community ignorance about BSE especially amongst the high risk group.

Based on 70% cut-off point out of total mean score, 61.6% of the respondents were categorized as having poor knowledge. Poor knowledge was found to be related with early sign of breast cancer, regularity of practicing BSE, method and position of performing BSE and the most suitable time to perform it. These findings were comparable with a study carried out in Negeria concerning cancer awareness. They claimed only 33% recognized that a breast lump was a warning sign and the knowledge on methods of early detection was also very low (Uche, 1999). In fact it was reported the knowledge regarding BSE also not sufficient among the adolescent in Turkey where 13.2% only have knowledge about appropriate

time for BSE, 21.8% know regarding the frequency of BSE and 26.6% know on the correct procedure of BSE (Karayurt et al., 2008).

Lack of awareness highlighted a considerable ignorance regarding breast cancer in this community. Probably breast cancer is still a shameful secret in this community. Perhaps more proactive effort could be done such as an open discussion or venues. For example in Egypt, religious leaders now speak out in favor of breast cancer awareness and screening, making it clear to husbands that their wives must be examined regularly (Coughlin and Ekwueme, 2009).

Attitude seems to be good in the higher proportion of respondents (73.3%). This is an indicator of positive medical help-seeking behavior among the respondents especially pertaining to the high mean score for the item 'all women should do BSE', 'poor preference to seek traditional healers', 'I really care about my breast' and 'I'm not afraid to think about the breast cancer'. This contrast with previous study as stated that fear is a potential barriers for not practicing BSE (Hisham and Yip, 2004; Salazar, 2007).

This study found only 7% of respondent has good practice score and indeed not much differ with other previous studies. The percentage of those performing regular BSE was 3.4% among teenagers and 14.8% among students aged 17 to 30 years in Europe, 37% among female university nursing students in Australia and 27% and 6.7% of the students in Turkey (Karayurt et al., 2008). None of the studied participants had examined their breasts monthly for lumps during the past year had been reported in Middle Eastern Asian immigrant women residing in a major metropolitan U.S. city (Rashidi and Rajaram, 2000). These findings suggest the overall problem of not performing regular BSE amongst women all over the world. As noted in current study findings, the mean score for the items assessing the knowledge regarding method in performing correct BSE was not so good. All these could be the explanation for low percentage of respondents with good practice as supported by previous study who reported that the reason women did not perform BSE because they did not know how to perform it (Karayurt et al., 2008).

There were a good positive correlation between knowledge and practice and fair positive correlation between knowledge and attitude and attitude with practice. Unfortunately, there is a wide gap between each domain especially between attitude and practice. This is reflected by a small proportion (7.0%) of the respondents had good in practicing BSE instead of 73.3% of them had good attitude. The low score in practice mainly contributed by the items concerning 'Parents or partner always advice to do BSE' (mean percent: 20.0%) and 'Advice friends to do BSE' (mean percent: 24.8%). These suggest a poor family and community support for women in routinely practicing BSE and the sharing regarding the knowledge and benefits of the BSE also were not readily practicing in this community.

The wide gap of knowledge and attitude with practice in this study is consistent with other studies. It has been reported in previous studies the level of knowledge pertaining to BSE was 24.5% to 53.7% while the level

of practice was found to be 1.5% to 39.0% and indeed in Taiwan out of 3040 randomized sampled women only 8.4% had been performing BSE monthly. The barriers contributes to poor in practice would be more reliance on medial professionals for screening and forgetting to perform breast self-exam (Tang et al., 2000), low confidence, do not perceive the benefits from BSE practice and possessed poor knowledge of breast cancer (Dündar et al., 2006).

Furthermore, in reality they would not preferred to see health care workers if they noticed any abnormality on their breast as illustrated by 22.0% of the mean score of them instead of high mean score in their attitude toward poor preference to seek traditional healers (75.8%). In previous study done in Kulala Lumpur, the delay in presentation of breast cancer women was attributed to a strong belief in traditional medicine, fear and denial (Hisham and Yip, 2004). However, this study revealed women currently are more enthusiastic to see modern practitioner rather than traditional healer. On top of that, current finding also indicates women are no more fear to think of the disease and keen to perform BSE because it does not influenced by the fear of detecting breast cancer. This is an indication for the need of motivational, environmental and family support to enhance the positive attitude among women to end up with positive practices.

We found a good positive correlation between knowledge and practice (correlation coefficient: 0.600; p-value:< 0.001). This illustrates a good indicator for future possibility of successful awareness program regarding the BSE. If there is a well planned an educational and training outreach programs to inform the public that BSE is a valuable tool in screening and identifying breast cancer at early stages, certainly the knowledge level regarding this issue will increase and finally may result in the increment of the practice.

The spacious gap between knowledge and practice as well as attitude and practice can be reduced through a well defined awareness programmes. This awareness program would be better if collaborated with practical and consultation session and effective referral pathway for the special cases as going to be practiced in middle-income countries in South America, Eastern Europe and Asia (Coughlin and Ekwueme, 2009). There was a report that women who were informed about breast cancer were more likely to practice BSE (Nahcivan and Secginli, 2007). Furthermore, the highest mean score for the practice item regarding disagreement towards 'avoid from learning the correct method of BSE' (mean percent: 89.5%) supports the probability of this community to actively involve and participates. Furthermore, the significant fair to good positive correlation between the assessed domains high lightens the significant impact of the increment in community knowledge towards the improvement of good attitude and health practices.

In conclusion and recommendation, our results indicate that the knowledge and practicing regular BSE were poor in the study population. Few areas were found to contribute on these problems. Do not know the correct method of BSE, lack of knowledge on cancer signs and lack of motivational support from parents, spouse or friends would be related with the poor practices. However, there is a possibility to increase the knowledge, attitude and practices towards BSE through enhancement of breast cancer awareness and by reducing the recognized barriers. Health care professionals need to play a key role in educating the public especially the high risk women. However, the involvement of community, family especially parents and spouses need to be considered to maximize the understanding as well as commitment amongst women.

Acknowledgments

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