

# KNOWLEDGE OF BREAST CANCER AND SCREENING PRACTICES AMONG WOMEN AT OBSTETRICS AND GYNAECOLOGY CLINIC, HOSPITAL MACHANG, KELANTAN

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## ABSTRACT

Breast cancer is the most common form of cancer in women and the first leading cause of death among women worldwide. This study assessed the breast cancer knowledge and screening practices among women who attended the Obstetrics & Gynaecology Clinic, Hospital Machang, Kelantan. The data was collected from a sample of 70 women who were 18 years or older using the survey method.

This cross sectional, non-experimental study assessed breast cancer knowledge and behavior in terms of screening practices among women attending the health care clinic. Participation in this study was voluntary. This study used a questionnaire to gather data concerning knowledge of breast cancer and screening practice issues based on demographic characteristics such as age, ethnicity, occupation and educational status.

The results showed that these women had a good knowledge of breast cancer and screening practices. While participants demonstrated a fair knowledge of the screening methods, their participation in the screening procedures remained low. Statistical analysis showed no association between demographic data and level of breast cancer knowledge and screening practices.

In general women in Machang Kelantan had a good knowledge of breast cancer and screening practices. The screening practice known to them was breast-self examination. However, there was no association between their demographic data and knowledge of breast cancer and screening practices. The most outstanding factor that acted as barriers to practising breast - self examination among the women was their lack of confidence. This in turn was related to their lack of knowledge which affects their motivation plus not knowing the correct way to perform the breast self-examination.

**Keywords:** *Breast cancer, screening methods, screening practices*

## INTRODUCTION

Breast cancer is the most common and deadliest of cancer affecting women in Malaysia. About one in 19 women in this country are at risk, compared to one in eight in Europe and the United States (National Cancer Institute). The National Cancer Registry reports in the year 2002 revealed that for Malaysian female, breast cancer is the commonest cancer in all ethnic groups and all age group from the age of 20. There were 4337 cases of breast cancer in 2002, accounting for 30.4% of all cancer cases among Malaysian women. The main concern of the Ministry of Health (Malaysia), was that most of the breast

cancer cases reported in Malaysia was diagnosed at a late stage. Breast cancer mortality rates are higher in developing countries as a result of late detection and diagnosis. This could be attributed to genetics, cultural and social factors such as poverty, unequal access to prompt high quality treatment, lack of screening facilities, or lack of awareness and knowledge of the disease. Based on scientific research, the American Cancer Society has established recommendations to detect cancer early in asymptomatic people. They believe that early detection examinations such as self breast examination can help save lives and reduce suffering from cancer of the breast. Breast cancers can be

detected because the symptoms tend to be relatively conspicuous and confined to the breast. The five year survival rate for people with breast cancer is 82%. The outlook for survival with breast cancer is greatly improved with early detection. In fact, if women had early detection according to the American Cancer Society's recommendations, the five year survival rate would increase to about 95% (American Cancer Society, 2002).

Hospital Raja Perempuan Zainab II (HRPZ II) and Hospital Universiti Sains Malaysia (HUSM), Kelantan is regarded as the referral center for the East Coast region. From 2004 to 2007, the HRPZ II have seen and treated 176 cases of breast cancer, with an average of 44 cases per year. On the other hand HUSM has seen and treated 96 cases with an average of 24 cases per year (Annual reports of Health Department Kelantan, 2008). Statistic breast cancer cases for the whole Hospital in Kelantan is about 314 cases (data from 2004 to 2007). The annual incidence of breast cancer every year for this state is much lower than the incidence for the country although the incidence is almost equivalent to that recorded for Malaysia.

### Specific Objectives

- a) To determine the knowledge level regarding breast cancer and cancer screening practices among women attending the Obstetrics & Gynaecology Clinic in Hospital Machang.
- b) To identify demographic factors that influence their knowledge level regarding breast cancer and cancer screening practices.
- c) To identify factors that prevent the practice of breast self examination among women attending the Obstetrics & Gynaecology Clinic in Hospital Machang.

### LITERATURE REVIEW

The key to fight and prevent breast cancer morbidity and mortality is early detection strategies which include using preventive screening services such as mammography, clinical breast examination and breast self-examination. These screening strategies continue to be the primary tools for early detection of breast cancer among asymptomatic women (Allen *et al.*, 2002). Mammography is the best

available method for detecting breast cancer at an early stage. The American Cancer Society (2003) recommends that women age 40 and older have a mammogram screening every year and should continue to do so for as long as she is in good health.

Clinical breast examination (CBE) is an examination of a women's breast done by a health care professional, such as a doctor, nurse practitioner, nurse, or physician's assistant (Muss, 2000). According to the American Cancer Society (2003), women in their 20s and 30s should have a clinical breast examination as part of their regular health exam by a health professional every three years and annually after the age of 40. Clinical breast examination can complement regular mammography screening. CBE is also an opportunity for women and their health care providers to discuss changes in their breast, risk factors, and early detection testing. Breast self-examination is an inspection done by the woman herself. A woman should report any changes relating to her breast to her health care provider right away (Centers for Disease Control and Prevention, 2003). Research has shown that BSE plays a small role in detecting breast cancer, but doing BSE is one way for the women to know how her breasts normally feel and to observe any changes (American Society, 2003)

### METHODOLOGY

The instrument utilized in the study was adapted by Breast Cancer Survey develop by Morenike (2007). The questionnaire was developed and available in English. It was translated in Malay language because majority of the respondents are Malay and does not speak English. The instrument in the form of questionnaire contained a total of 32 questions. It consisted of structured questions on breast cancer knowledge screening practices and other descriptive characteristics. The descriptive characteristics included age, ethnicity, level of education and occupation (questions 29-32). The questions on breast cancer knowledge and screening practices as well as those for descriptive characteristics consisted of selected response items using the option Likert scale.

The questionnaires were administered in a face to face clinical session on 70 women who were attending the Obstetric & Gynaecology Clinic, Hospital Machang. Respondents were randomly selected in the clinic session; whether they were there to obtain other services such as antenatal care, child health care,

family planning or as out-patient.

**DATA ANALYSIS AND RESULT**

Four demographic variables of the sample population assessed include ethnicity, age, education level and occupation. The participants' age ranged from 18 to 50 years or above. The majority were between the ages of 30-39 years (55, 78.6%) while the least represented age group was between 18–29 years (1, 1.4%) and 50 or above (2, 2.9%). The participants were from the ethnic groups Malay (63, 90%) and Chinese (7, 10%). The majority of the respondents have secondary school education level (45, 64.3%). Most of the respondents (38, 54.3%) were house wives, followed by civil servants (12, 17.1%) and business women (20, 28.6%).

**RESULTS:**

**Knowledge Regarding Breast Cancer**

*Table 1: Knowledge of Breast Cancer*

Knowledge	Frequency	Percentage
Good	31	44.3
Moderate	26	37.1
Poor	13	18.6
Total	70	100.0

Table 1 displays their general knowledge concerning breast cancer. The majority 31 (44.3%) of the women knew that breast cancer was the most common cancer among women, 26 (37.1%) had moderate knowledge and only 13 (18.6%) had poor knowledge of it.

**Knowledge of Breast Cancer Screening Practices**

*Table 2: Knowledge of Breast Cancer Screening Practices*

Screening Practices	Frequency	Percentage
Breast Self Examination	41	58.6
Clinical Breast Examination	23	32.9
Mammography	6	8.6
Total	70	100.0

As many as 33 (47.1 %), 18 (25.8 %) and 19 (27.1 %) of the participants were able to identify clinical breast examination, breast self-examination and mammography respectively as methods for breast cancer detection or screening.

**Breast Self Examination (BSE)**

*Table 3: Knowledge of Breast Self Examination*

Practices	Frequency	Percentage
Good	31	44.3
Average	27	38.6
Poor	12	17.1
Total	70	100.0

Table 3 displays the knowledge of Breast screening practices (breast self examination) among women was good. The majority 31 (44.3%) women knew about breast self examination, 27 (38.6%) had moderate knowledge and only 12 (17.1%) had poor knowledge.

**Clinical Breast Examination (CBE)**

*Table 4: Knowledge of Clinical Breast Examination*

Practices	Frequency	Percentage
Good	33	47.1
Average	18	25.7
Poor	19	27.1
Total	70	100.0

Table 4 displays the knowledge of Breast screening practices (clinical breast examination) among women. The majority 33 (47.1%) women knew about the clinical breast examination, 18 (25.7%) moderate knowledge and only 19 (27.1%) had poor knowledge.

**Mammography Screening**

*Table 5: Knowledge of Mammography Screening*

	Frequency	Percentage
Good	35	50.0
Moderate	10	14.3
Poor	25	35.7
Total	70	100.0

Table 5 displays the knowledge of Breast screening practices (mammography) among women. The majority 35 (50.0%) women had a good knowledge about the mammography screening, 25 (35.7%) with poor knowledge and only 10 (14.3%) had moderate knowledge.

**Ultrasound Screening**

Table 6: Knowledge of Ultrasound Screening

	Frequency	Percentage
Good	17	24.3
Moderate	28	40.0
Poor	25	35.7
Total	70	100.0

Table 6 show the knowledge of Breast screening practices (ultrasound screening) among women. The majority women had a moderate knowledge with 28 (40.0%), 25 (35.7%) had a poor knowledge and only 17 (2.3%) women had a good knowledge about the mammography screening.

**Demographic Factors and Knowledge of Cancer Screening Practices**

Table 7: Race and Knowledge of Mammography

Race	Knowledge of Mammography			Total
	Good	Moderate	Poor	
Malays	28	10	25	63
Chinese	7	0	0	7
Others	0	0	0	0
Total	35	10	25	70

Chi Square = 7.778, df=2, p=0.020

**Factors determining Self Breast Examination**

Table 8: Factors determining Self Breast Examination

Factors	Frequency	Percentage
Fear	13	18.6
Do not know how	19	27.1
Husband does not allow	2	2.9
Lack confidence	25	35.7
Against religious teachings	4	5.7
Takes time	7	10.0
Total	70	100.0

**DISCUSSION**

**Knowledge Level Regarding Breast Cancer**

This study found that among women attending the Obstetrics & Gynaecology Clinic in Hospital

Machang only 70 volunteered to participate. Among these majority 31 (44.3%) of them knew that breast cancer was the most common cancer in women, 26 (37.1%) had a moderate knowledge and only 13 (18.6%) had poor knowledge. A similar study was conducted before in Shah Alam (Al-Dubai *et al.*, 2011). However, there the researchers targeted women in shopping complex and took about 250 participants. It was found that generally women in Shah Alam were aware about breast cancer. Therefore knowledge regarding breast cancer was the most common especially in Malaysia (80%), which was higher than the response from the women attending the Obstetrics & Gynaecology Clinic in Hospital Machang. While a study done by Rosmawati (2010) in sub-urban Terengganu involving 86 participants found that the knowledge about breast cancer was lower than this study (61.6%).

Sim *et al.*, (2009) did the same study in Singapore and found that among 1000 Asian women the scores were high for general knowledge and disease progression, but poor for risk factors, screening, symptoms and treatment. Karbani *et al.* (2011) also agreed that South Asian women were unfamiliar with the subject of cancer. In their qualitative study involving 24 patients diagnosed with breast cancer, they expressed lack of knowledge of cancer regarding disposition of the disease and its symptoms. In Turkey among 244 women, majority of the sample (76.6%) reported that they had heard or read about breast cancer, but only 56.1% of them had sufficient knowledge of it (Dundar *et al.*, 2006)

However when compared to western population, this study finding was much lower. A study among Irish population revealed that most of the participants (81%) had seen or heard something about breast cancer in the recent past and knowledge of symptoms along with treatment was good (McMenamin *et al.*, 2005). However a previous study in Appalachian, Toronto involving about 185 educated women found that they had poor knowledge about breast cancer especially about risk factors and screening practices guidelines (Leslie *et al.*, 2003). This was different from a study in South African where most of the 100 women involved were from the Bonteheuwel a township in the Western Cape. They were aware about breast cancer and its dangers (87%; 95% CI: 80%-94%) and severity (88%; 95% CI: 82%-94%) disease, which, if treated early, could be cured in most cases (82%; 95% CI: 74%-90%) (Krombein and De Villiers, 2006). In Nigerian 1000 women who

participated in survey regarding knowledge of breast cancer also had good scores (Okobia *et al.*, 2006).

### **Knowledge Level Regarding Cancer Screening Practices**

Regarding the type of cancer screening practice, most women in Obstetrics & Gynaecology Clinic in Hospital Machang know about breast self-examination (58.6%). However when asked about their knowledge on specific type of breast screening, most of them had good knowledge about mammography (50%), followed by knowledge on clinical breast examination (47.1%), breast self-examination (44.3%) and ultrasound (24.3%). Compared to this result, the study been done in the public university in Malaysia involving the female staff revealed that the knowledge of women in Obstetrics & Gynaecology Clinic in Hospital Machang were much lower. Among 394 female staff in the public university, most know about breast self-examination as type of breast screening (95.8%). They also have high knowledge of other type of screening such as clinical breast examination (89.2%), and mammography (59.5%), (Nor Afiah *et al.*, 2011). Only 32.9% of women in Obstetrics & Gynaecology Clinic in Hospital Machang know about clinical breast examination and 8.6% know about mammography. This may due to the fact that most participants from this study were housewives (54.3%). A study done in rural and urban Malaysia regarding knowledge on breast screening also found much higher results, 92.8%, 50.4% and 47.2% of breast self-examination, clinical breast examination and mammography respectively (Kanaga *et al.*, 2011)

A survey done in public health clinics in Al Ain, United Arab Emirates involving 1445 women found that knowledge about breast cancer screening was low. The researcher believed this due to being employed and infrequently instructed or being offered with the screening methods by health professionals (Bener *et al.*, 2001). The findings are the same as the study done in mid-sized Southeastern United States city among Korean American women (Han *et al.*, 2000). Khanjani *et al.* (2012) also mentioned that study done among Kimerian, Iran women regarding types of breast cancer screening showed lack of knowledge as there was limited public education.

### **Demographic Factors that Influence their Knowledge of Breast Cancer and Screening Practices**

This study only focused on four types of demographic factors which were age, race, education

and profession. Analysis using Pearson Chi Square showed that none of the demographic factors were associated with the knowledge of breast cancer and screening practices except for race and knowledge of mammography.

These findings were totally different with finding from a study done in Shah Alam (Al-Dubai *et al.*, 2011). Using multiple linear regressions to explore the association between level of knowledge of Breast Cancer and Screening Practices, and demographic data they were able to find association between all variables,  $p < 0.05$ . This study also involved bigger sample size of 250 participants compared to the study done in Hospital Machang using only 70 participants. The study mentioned that women with higher level of education-degree (59.6%), civil servant and private worker (48.4 and 12.8%, respectively) and older than 45 years (9.6%) have higher knowledge. Among women in Hospital Machang distribution of women with higher education (27.1%), civil servant (17.1%) and older than 45 years were small.

A study done in rural and urban Malaysia also found an association between demographic data and level of knowledge regarding Breast Cancer and Screening Practices especially for level of education (Kanaga *et al.*, 2011). The researcher opined that higher education would increase their level of awareness and that they were more exposed to health-related issues through mass media, internet and a better socioeconomic status that enables support of screening services.

A study involving one-thousand community-dwelling women from a semi-urban neighbourhood in Nigeria (Okobia *et al.*, 2006) found that women with higher education ( $X^2=80.66$ ,  $p<0.0001$ ) and those employed in professional jobs ( $X^2=47.11$ ,  $p<0.0001$ ) were significantly more knowledgeable about breast cancer. While in Singapore, the same study found that increasing age, Malay race, lower educational level, lower socioeconomic class and not knowing anyone with breast cancer were significant independent factors for poor knowledge development (Sim *et al.*, 2009)

A community based study was done in southeastern Michigan to examine differences in knowledge with respect to socioeconomic factors concerning types of breast cancer screening (Williams *et al.*, 2008). This intervention study recruited 341 women (112 Arab, 113 Latina and 116 African American). They found that there was an association

between race and knowledge level of types of breast screening. This was believed due to socioeconomic characteristics differences among races. However study among women in hospital Machang only found an association between race and knowledge of mammography, ( $X^2=7.778$ ,  $p=0.020$ ). While study done across Malaysia found that race was not associated with screening so many studies did not included race as demographic data (Han *et al.*, 2000; Bener *et al.*, 2001; Khanjani *et al.*, 2012).

### Factors Detering the Practice of Breast Self-Examination

The factors that prevent the practice of breast self-examination among women in Obstetrics & Gynaecology Clinic in Hospital Machang were lack of confidence among women with 25 (35.7%); don't know how to do it correctly, 19 (27.1%); afraid of picking up a breast lump, 13(18.6%); takes too much time, 7 (10.0%); religion is against it, 4 (5.7%) and the last factor is husband does not allow, 2 (2.9%).

While study done in Urban Shah Alam involving 222 women found that amongst 45% of respondents who did not practice BSE, 79.8% did not know how to do it, 60.6% feared being diagnosed with breast cancer, 59.6% were worried about detecting breast cancer, 22% reported that they should not touch their bodies, 44% and 28% reported BSE is embarrassing or unpleasant, 29% time consuming, 22% thought they would never have breast cancer or it is ineffective and finally 20% perceived BSE as unimportant (Al-Dubai *et al.*, 2012). Al-Naggar *et al.* (2011) also done a study in Malaysia found lack of knowledge (20.2%) and afraid of being diagnosed with breast cancer (4.4. percent) were the barriers to performing breast self-examination.

In other countries, lacks of knowledge is also a major barrier to performing breast self-examination. Study among university students in Yemen regarding

this issue found that despite 76.9% of participants have heard about it; only 17.4% of them were performing it. As many as 55.9% mentioned lack of knowledge about the technique as a reason for not practicing BSE. This finding was higher compare to result from this study among women in hospital Machang as only 27.1% did not know to perform it correctly.

A study in western Turkey had results similar to this study. The reason of not practicing breast self-examination was due to lack of confidence (Dundar *et al.*, 2006). This study mentioned that lack of confidence related to lack of knowledge as most of the information they got are mostly through the mass media. Women who practiced had higher confidence and motivation to do it. Therefore strategies for education in health-care must be promoted so women can understand better the importance of the self-exam and so that they gain enough confidence to do it, granting them physical, social and emotional well-being. It is important to help developing confidence among women regarding their breast self-examination technique as well as accurate information to reduce their fears.

### CONCLUSION

Women in Machang Kelantan had moderate knowledge regarding breast cancer and its screening practices. The screening practices most known to them was breast-self examination. This study also found that there was no association between demographic data and knowledge of breast cancer and its screening practices apart from that of race and knowledge of mammography. The most important factor that Factors determine Self Breast Examination them from practising breast self examination was due to the lack of confidence. This was also related to lack of knowledge that make them less motivated and they did not know the correct way to perform the breast self-examination.

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