RESEARCH ARTICLE

Practice of Breast Self-Examination Among Women in Malaysia

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Abstract

  Objectives: The objective of this study was to examine the practice and associated factors of breast self-examination (BSE) among Malaysian women. **Methods**: For this cross-sectional study 250 women were selected by a simple random sampling technique. The questionnaire was consisted of three parts: socio-demographic characteristics, knowledge about BSE, and practice of BSE. Obtained data was analyzed using SPSS version 13. T-test and ANOVA test were used to explore the relation between socio-demographic characteristics and the practice of BSE. **Results**: About 32% of the participants reported that they have had family history of cancer and about 20% of the participants reported that they have had family history of breast cancer. The majority of the participants (88.8%) have heard about breast cancer and 78.4% of the participants have heard about BSE. Race, marital status, residency, regular exercise, awareness about breast cancer, belief that breast cancer can be detected early, belief that early detection improves the chance of survival, family history of cancer, family history of breast cancer, awareness about BSE, and belief that BSE is necessary, significantly influenced the practice of BSE among women. Practice of BSE on monthly basis was found to be 47.2% among the study participants. **Conclusion**: The socio-demographic characteristics significantly influence the practice of BSA among women in Malaysia. The findings of this study might not only influence the planning of specific screening interventions and strategies in Malaysia but might also be important for the relevant international communities, interested in the peculiarities of BSE incidence in different countries.

  Keywords: Breast self-examination - general population - Malaysia

Introduction

The total number of new cases of breast cancer diagnosed annually exceeds one million worldwide (WHO, 2007). Breast cancer is the most common cancer in women and the second leading cause of death (WHO, 2007). Over the past two decades, breast cancer has become a matter of serious public health concern in developing countries due to a high incidence of this cancer and associated mortality, especially among women (WHO, 2007). It is established that early detection and early treatment lead to improved survival (UK Trial of Early Detection of Breast Cancer Group, 1999; WHO, 2007; Youlden, 2012).

Breast self examination (BSE) is a simple and cost-effective method for early detection of breast cancer (Yip et al., 2008; Wilke et al., 2009; Ma et al., 2011; Miller and Baines, 2011). However, there is some controversy over the effectiveness of BSE (Yip et al., 2008; Wilke et al., 2009; Ma et al., 2011; Miller and Baines, 2011). A study of Haji-Mahmoodi et al. (2002) found that BSE improves the early detection of breast cancer and reduces mortality but other studies found that there is no improvement in stage shifting or mortality reduction (Semiglazov et al., 1999;

Thomas et al., 2002). Despite the existing controversy, it is commonly thought that BSE is important in awareness program and initial screening, especially in countries with limited resources (Yip et al., 2008; Wilke et al., 2009; Ma et al., 2011; Miller and Baines, 2011). The socio-economical peculiarities might affect the incidence of the practice of BSE (Odusanya, 2001).

In Malaysia, 3738 female breast cancer cases were reported in 2003, making it the most commonly diagnosed cancer in women (Ministry of Health, 2002; National Cancer Registry, 2003). It is accounted for up to 31% of all new cancer cases in women in Malysia (Ministry of Health, 2002; National Cancer Registry, 2003). Breast cancer is the second leading cause of cancer admissions in the Ministry of Health hospitals in Malaysia and this cancer is responsible for 6-8% of all cancer deaths (Ministry of Health, 2002; National Cancer Registry, 2003). It is the fourth leading cause of cancer deaths since 1991 (Ministry of Health, 2002; National Cancer Registry, 2003). National Health and Morbidity Survey (NHMS II) conducted by the Ministry of Health Malaysia in 1996 showed that the overall prevalence for breast cancer screening was 46.8% (Ministry of Health, 2002; National Cancer Registry, 2003). The prevalence of BSE

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was reported to be 34.1%, followed by clinical breast examination (CBE) (31.1%) (Narimah, 1997). Although mammography was claimed to be the best method for the detection of breast abnormalities, only 3.8% of women have been screened by the procedure (Narimah, 1997). Early detection of breast cancer is important for effective treatment and remedial measures and can be easily carried out through the simple procedures of BSE (Yip et al., 2008; Wilke et al., 2009; Ma et al., 2011; Miller and Baines, 2011). BSE is promoted by the Ministry of Health of Malaysia as part of its wellness paradigm and early detection programmes (Narimah, 1999).

In Malaysia, breast cancer is the most common cancer among all ethnic groups and principal cause of cancer death in women, accounting for about 11% of all medical certified deaths (Narimah, 1997). Although it appears that the incidence of breast cancer in Malaysia is lower than in developed countries (Narimah, 1997; Hisham and Yip, 2003), the difference may be attributable to the difficulties in getting accurate data and to under-reporting of cases (Hisham and Yip, 2003). The age pattern shows a peak age-specific incidence rate for the 50-59 years of age and then declines in the older women (National Cancer Registry, 2003). The overall age-standardized incidence rate (ASR) has been found to be 46.2 per 100,000 women. The Chinese ethnic group had the highest incidence, with an ASR of 59.7 per 100,000 population followed by Indian - 55.8 100,000 population and Malay - 33.9 per 100,000 population (in 2003) (National Cancer Registry, 2003). According to a report of the Malaysian Cancer Registry, one of every 19 Malaysian women has a chance of getting breast cancer in her lifetime and more than 4000 new cases of breast cancer are diagnosed every year. Breast cancer is currently the most common female cancer in Malaysia, accounting for 30.4% of all cancers diagnosed among women (National Cancer Registry, 2003).

Little is known about practice and associated factors of BSE among general population in Malaysia (Al-Naggar et al., 2011). The aim of this study is to examine the practice and associated factors of BSE among women in the general population in Malaysia.

Materials and Methods

This cross-sectional study was conducted among 250 women during the Academic year 2010/2011. Data was collected using a simple random technique in housing areas located in two states, namely, Selangor (Selayang, Shah Alam, Klang [Meru], Kepong [Metroprima]) and Penang (Simpang Ampat). Written informed consent was obtained from all participants and all potential candidates were invited to participate through written information letter containing information about the purpose and objectives. The invitation letter to participate in the research also indicated that the participation in the survey was voluntary and that privacy and confidentiality would be strictly protected. The exclusion criteria were: women aged less than 18 years and individual unable to communicate in English or Malay language. The questionnaire consisted of three parts: socio-demographic characteristics, knowledge about BSE and actual practice

of BSE. The questionnaire was given in both English and Malay languages. The protocol of this study was approved by the ethics committee of the Management and Science University (MSU), Malaysia. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 13. T-test and ANOVA test were used in order to examine the relation between the socio-demographic parameters and the practice of BSE.

Results

A total number of 250 women participated in this study. The mean age was 34.7±11.8 years, the minimum age was 16 years old and the maximum was 76 years old. The majority of the participants were older than or equal 30 years, Malays, living in urban areas and ever married (57.2%, 40.8%, 74%, 58.8%; respectively). As for lifestyle, the majority of the women were practicing regular exercise, were non-smokers and were non-drinkers of alcohol (54.8%, 88%, and 82.4%; respectively). As for

Table 1. Socio-Demographic Characteristics of the Study Participants (n= 250)

Variable	Categories	No.	%
Age	< 30	107	42.8
	≥30	143	57.2
Race	Malay	102	40.8
	Chinese	67	26.8
	Indian	68	27.2
	Others	13	5.2
Residency	Urban	185	74.0
	Rural	65	26.0
Marital status	Never married	103	41.2
	Ever married	147	58.8
Regular exercise	Yes	137	54.8
	No	113	45.2
Smoking	Yes	30	12.0
	No	220	88.0
Drinking alcohol	Yes	44	17.6
	No	206	82.4
Family History of cancer	Yes	80	32.0
	No	170	68.0
Family history of breast cancer	Yes	49	19.6
	No	201	80.4

Table 2. Knowledge and Practice Towards Breast Self-Examination (BSE) (n=250)

Variable	Categories	No.	%
Ever practice BSE	Yes	120	48.0
	No	130	52.0
Regular practice of BSE	Monthly	118	47.2
	Others	132	52.8
"Heard" about breast cancer"	Yes	222	88.8
	No	28	11.2
"Heard" about BSE	Yes	196	78.4
	No	54	21.6
BSE is necessary	Yes	204	81.6
	No	46	18.4
Breast cancer can detected early	Yes	194	77.6
	No	56	22.4
Early detection improve the chance of survival			
	Yes	182	72.8
	No	68	27.2

Table 3. Factors Associated with Practice of Breast Self-Examination (BSE) (n=250)

Variable	Categories	No.	(%)	p-value
Age	< 30	107	(42.8)	
	≥30	143	(57.2)	0.354*
Race	Malay	102	(40.8)	
	Chinese	67	(26.8)	
	Indian	68	(27.2)	0.001**
	Others	13	(5.2)	
Marital status	Never married	103	(41.2)	
	Ever married	147	(58.8)	0.001*
Residency	Urban	185	(74.0)	
	Rural	65	(26.0)	0.001*
Exercise	Yes	137	(54.8)	
	No	113	(45.2)	0.001*
Smoking	Yes	30	(12.0)	
	No	220	(88.0)	0.355*
Drinking alcohol	Yes	44	(17.6)	
	No	206	(82.4)	0.106*
Family history of cancer	Yes	80	(32.0)	
	No	170	(68.0)	0.001*
Family history of breast cancer	Yes	49	(19.6)	
	No	201	(80.4)	0.017*
Heard about breast cancer	Yes	222	(88.8)	
	No	28	(11.2)	0.001*
Heard about BSE	Yes	196	(78.4)	
	No	54	(21.6)	0.001*
Belief that BSE is necessary	Yes	204	(81.6)	
	No	46	(18.4)	0.001*
Belief that Breast cancer can detect early	Yes	194	(77.6)	
	No	56	(22.4)	0.001*
Belief that early detection improves the chance of survival	Yes	182	(72.8)	
	No	68	(27.2)	0.001*

*t-test , **ANOVA test

family history, about 32% of the participants reported that they have family history of cancer. About 20% of the participants reported that they have family history of breast cancer (Table 1).

Regarding the practice of BSE, less than half of the participants (48.0%) reported that they ever practiced BSE and 47.2% of the participants reported that they practiced BSE on monthly basis. The majority of the participants (88.8%) have heard about breast cancer and 78.4% of the participants have heard about BSE. The majority of the participants have mentioned that BSE is necessary, believed that breast cancer can be detected early and early detection of breast cancer improves chance of survival (81.6%, 77.6%, 72.8%; respectively) (Table 2).

As for factors associated with BSE, marital status, residency, regular exercise, awareness about breast cancer ("heard about breast cancer"), belief that breast cancer can detected early, belief that early detection improve the chance of survival, family history of cancer, family history of breast cancer, and awareness about BSE ("heard about BSE"), and belief that BSE is necessary significantly influenced the practice of BSE among women (Table 3). Race was found to be significantly associated with

the practice of BSE; the pos hoc test showed that the differences existed between Malay and Chinese in one hand (p=0.001) and between Malay and Indian in other hand (p=0.001). However, age, smoking and drinking alcohol did not influence significantly the practice of BSE.

Discussion

This study was conducted in order to examine the practice and associated factors of BSE among Malaysian women in the general population. In this study 88.8% of the participants heard about breast cancer. This indicates that the respondents were aware about breast cancer. Similar findings reported in other studies where 97% and 92% of the respondents were aware of breast cancer. (Ekanem and Etukudo, 1990; Nwagbo and Akpala, 1996).

BSE is one of the screening techniques for early breast lump and cancer detection (Yip et al., 2008; Wilke et al., 2009; Ma et al., 2011; Miller and Baines, 2011). In this study the majority of the participants (78.4%) mentioned that they heard about BSE. Similar findings have been reported in a study that surveyed Chinese women in which 80.9% of women reported that they have heard of BSE (Wong-Kim and Wang, 2006). Similarly, in a Nigerian study (Uche, 1998) 73.3% of the studied population had heard about BSE. In a study conducted in Saudi Arabia it has been found that only 30.3% of the women have heard about BSE (Jahan, 2006).

In the present study only 48% of the participants practiced BSE. A study from Nigeria documented that only 34.9% claimed to ever-practiced BSE (Okobia, 2006). In contrast, a study that surveyed Chinese women revealed that only 55.9% of the women performed BSE (Wong-Kim and Wang, 2006). In our previous study undertaken by a survey of students in a Malaysian University (Al-Naggar et al., 2011), more than half of participants (55.4%) reported that they ever practiced BSE. The present finding is also consistent with the data provided in a study conducted in Nigeria, according to which 59.1% of women ever practiced BSE (Uche, 1998). Another study from Saudi Arabia reported that 18.7% of participants practiced BSE (Jahan, 2006).

In the present study 47.2% of the participants practiced BSE on monthly basis. Similarly, a study performed by Fung (1998) also reported that less than half of the women examined themselves and only 16% of those practiced BSE regularly. Mbanaso et al. (2005) have found that, even though 84% of the surveyed population practiced BSE, only 47.9% of these performed it monthly. A study which was carried out in America by Sadler et al. (2007) revealed that 31% of the study population practiced BSE monthly. A study from Singapore has showed that 62.7% nurses examined their breasts every month (Chong, 2001). In a study performed among female university students in Australia 37% of the students were found to practice BSE monthly (Budden, 1998). In contrast, a study conducted in Europe reported that only 14.8% of students aged 17 to 30 years practiced BSE on a monthly basis (Wardle et al., 1995). Likewise, a study conducted among South Asian women aged above 40 years found that only 12% of participants practiced BSE monthly (Fung, 1998). In

another report (Fung, 1998) only 16% of Chinese women in Hong Kong performed BSE every month.

In our study, race, marital status, residency, regular exercise, awareness about breast cancer, belief that breast cancer can detected early, belief that early detection improve the chance of survival, awareness about BSE, and belief that BSE is necessary, significantly influenced the practice of BSE among women. Thiese findings are similar with those from an Iranian study (Jarvandi, 2002) which documented that performing BSE significantly related to age, marital status, education, knowledge about breast cancer and its screening programs.

In our present study, family history of cancer, family history of breast cancer significantly influenced the practice of BSE among women. Similar findings were reported in a number of earlier studies conducted in other countries (Salazar, 1994; Petro-Nustus, 2002; Secginli, 2006). In one of our previous studies (Al-Naggar et al., 2011) we reported that family history of cancer significantly influenced the practice of BSE; this in accordance with other studies that showed a relationship between family history of breast cancer and regular BSE performance (Maxwell, 2000: 2001). It worth to noting here, however, that two studies reported no relationship between a family history of breast cancer and BSE performance (Maxwell, 2000: 2001).

Several studies have reported that socio-economic status, level of education, referral from a physician, health insurance coverage and family history of breast cancer have also been associated with the practice of BSE (Phillips, 1995; Juon, 2002; Petro-Nustus, 2002; Legg, 2003). This may be due to the fact that women with family history of breast cancer are more aware about breast cancer (Phillips, 1995; Juon, 2002; Petro-Nustus, 2002; Legg, 2003).

In the present study, belief that BSE is necessary significantly influenced the practice of BSE among women. Previous studies have showed variable results about the relationship of perceived seriousness of breast cancer with BSE practices. While studies in USA, (Champion and Menon, 1997) and Korea (Han, 2000) suggested that BSE screening increases with increased perceived seriousness of breast cancer, other studies performed in Turkey (Secginli and Nahcivan, 2006) and Hong Kong (Fung, 1998) found no association between perceived seriousness and BSE behaviors.

Women need to be helped to avoid misconceptions about breast cancer and learn more about the benefits of early detection methods and timely treatment of breast cancer (Yip et al., 2008; Wilke et al., 2009; Ma et al., 2011; Miller and Baines, 2011). It is interesting to noting here that several studies have reported a significant positive relationship between perceived benefits of screening and BSE practice (Champion and Scott, 1997; Bazargan, 2003; Secginli and Nahcivan, 2006), whereas others have found no significant effect (Smiley, 2000; Petro-Nustus, 2002). This indicates a need for well-designed awareness programmes that underline the benefits of preventive care and early breast cancer screening (Yip et al., 2008; Wilke et al., 2009; Ma et al., 2011; Miller and Baines, 2011).

In conclusion, little is known about practice and associated factors of BSE among general population in Malaysia. In the present study we found that the practice of BSE on monthly basis was 47.2% among the study participants. The study found that race, marital status, residency, regular exercise, awareness about breast cancer, belief that breast cancer can detected early, belief that early detection improve the chance of survival, family history of cancer, family history of breast cancer, awareness about BSE, belief that BSE is necessary significantly influence the practice of BSE among women. This report might not only influence the planning of specific screening interventions and strategies in Malaysia, but also provides actual up to date information for the relevant international communities interested in about peculiarities of BSE incidence in different countries.

Acknowledgements

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