RESEARCH COMMUNICATION

Practice and Barriers Toward Breast Self-Examination Among Young Malaysian Women

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Abstract

Introduction:The etiology of breast cancer is still unknown and adequate primary prevention strategies or interventions are still not possible. Therefore, early detection remains the first priority and regular practice of breast self-examination (BSE) influences treatment, quality of life, survival, and prognosis of breast cancer patients. Objectives: The objective of this study was to determine the practices and barriers towards breast self-examination among young Malaysian women. Methodology:Cross-sectional study was conducted among 251 female students at the Management and Science University, Shah Alam, Selangor, Malaysia. Questionnaires were distributed at gathering places such as the university cafeteria, the university plaza, the Islamic center, and at the library. In addition, questionnaires were distributed in the lecture halls. The proposal of this study was approved by the Ethics and Research Committee of Management and Science University. Data was analysis using SPSS version 13, t-test was used to analyze the associated factors toward the practice of BSE. Results:A total number of 251 students participated in this study. The majority of them were older than 20 years old,of Malay racial origin, single and from urban areas (66.5%; 63.7%; 96%; 70.9% respectively). Regarding their lifestyle practices, the majority of participants do exercise, are non-smokers and do not drink alcohol (71.3%; 98.4%; 94.4% respectively). More than half of the study participants mentioned that they have practiced BSE (55.4%). Regarding the sources of information about BSE, the majority mentioned that radio and TV were their main sources of information (38.2%). Age, exercise and family history of cancer significantly influenced the practice of BSE (p = 0.045; p=0.002; p=0.017 respectively). Regarding the barriers to BSE, the majority who never practiced BSE mentioned that lack of knowledge, not having any symptoms, and being afraid of being diagnosed with breast cancer were the main barriers to practicing BSE (20.3%; 14.3%; 4.4% respectively). Conclusion:More than half ofthe participants practiced BSE. Age, exercise and family history of cancer significantly influenced the practice of the BSE. Lack of knowledge, not having any symptoms and being afraid of being diagnosed with breast cancer were the main barriers to practicing BSE. There is an urgent need to develop a continuous awareness campaign among university students on the importance of performing BSE.

Keywords: Practice - Barriers - Breast self examination - Malaysian women

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Introduction

Cancer is one of the most important health concerns of today. The bad news is that ten million people will be diagnosed with cancer in developing countries and six million people will die of cancer every year around the world (WHO 2002). The good news is that there is evidence-based research which showed that one-third of all cancers are preventable and a further one-third, if diagnosed early, is potentially curable. This observation demands that cancer control should be of increasing priority in health care programs of developing countries (Parkin 1994, WHO 1997).

Breast cancer is the most prevalent cancer worldwide with about 1 million new cases annually (Pisani et al., 2002; Zeeb et al., 2002; Parkin et al. 2005) and the second leadingcause of cancer death among women (Eidson et al. 1994; Jemal et al. 2005; Anderson et al. 2006; Groot et al. 2006).It accounts for 31% of cancers among women, and 19% of deaths among women are due to cancer (Jemal et al. 2005). Epidemiological data show that 1 in 8 women in the United States of America and 1 in 10 women in Europe will develop breast cancer at some time during their lives (American Cancer Society 2002). A primary reason for the increasing mortality is due to late diagnosis of the disease and a lack of early detection programs (Pinotti et al. 1995;

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Parkin 1994).Diagnosis at an earlier stage allows women more treatment choices and a greater chance of long-term survival and a better quality of life (Chong et al. 2002; American Cancer Society 2005; Al-Naggar et al. 2009, Redhwan et al. 2008).

One important strategy in reducing breast cancer mortality is the use of screening to achieve earlier detection of cancer (Christmas & Nicholas 1982).Women should practice breast self-examination for early detection because the most common symptom of breast cancer is a painless lump (Dhanessar 1980).Literature published to date supports the argument that regular practice of BSE influences treatment, prognosis and survival rates in women with breast cancer (Facione et al., 2000). Breast self examination is a unique procedure in many ways: it is inexpensive, non-invasive, involves little time and physical energy, is simple and does not depend on professional help (Lauver 1987).

In developing countries, BSE is considered to be a simple, inexpensive, non-invasive, and non-hazardous intervention, which is not only acceptable, cost-effective and appropriate, but also encourages women to take an active responsibility in preventive health (Narimah et al. 1999).In Asia, there were more than 3 million new cancer cases and over 2 million cancer deaths. Projections suggest that the number of new cancer cases in Asia will increase to 7.1 million by the year 2020 if existing preventive and management strategies remain unchanged (Mackay et al., 2006).

Unlike developed nations, the mortality rate associated with breast cancer among women remains a matter of serious concern in the developing nations. Malaysia is a multi-ethnic developing country with Malay, Chinese, and Indian ethnic groups being the most common. 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 medically certified deaths (Narimah et al. 1999). Although it appears that the incidence of breast cancer in Malaysia is lower than in developed countries, the difference may be attributable to the difficulties in getting accurate data and due to under-reporting of cases (Hisham & Yip 2003). The age pattern showed a peak age-specific incidence rate for the 50-59 years of age, and then a decline in older women (National Cancer registry 2003). The overall age-standardized incidence rate (ASR) was 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 of 55.8 and Malay of 33.9 per 100,000 population.(National Cancer registry 2003). In Malaysia, 50–60% of women present in Stage 3 and Stage 4 with little or no benefit to be derived from any form of therapy (Hisham AN, Yip CH 2004).The objective of this study is to determine the practice and barriers of breast self-examination among female university students.

Materials and Methods

This study was conducted among 251 female students at the Management and Science University (MSU), Shah Alam, Selangor.The questionnaire was developed based on previous articles.The questionnaire consisted of two parts. The first part consisted of socio-demographic characteristics such as (Age, race, religion, marital status, type of faculty, semester, course, family monthly income, residency, weight and height)which had 11 questions in total. The second part was about lifestyle and practice of BSE which included 23 questions such as: Have you ever practiced BSE, what are the barriers towards BSE, and sources of information. Questionnaires were distributed to all faculties at MSU namely: the International Medical School (IMS), the Faculty of Business and Management Professional (FBMP), Faculty of Health and Life Science (FHLS) and Faculty of Informative Science and Engineering (FISE). The questionnaires were distributed among students by simple random sampling. Questionnaires were distributed at the gathering place such as the university cafe, university plaza, Islamic center, and the library. In addition, questionnaires were distributed in the lecture halls.The inclusion criteria were female students, 18 years old and above, of Malaysian citizenship and can speak, read and understand English. Female students less than 18 years old, female foreign students and male students were excluded from this study. All participants were given a full explanation of the methodology and purpose of the project and an assurance of confidentiality. Participants were also assured that their participation in the study was voluntary and that they could refuse to participate at any time during the interview. The proposal of this study was approved by the Ethics and Research Committee of the Management and Science University. Data obtained were analyzed using SPSS version 13. An independent T-test, was conducted to determine if there was a significant difference between the parameters studied. All tests were analyzed with the confidence interval, α=0.05. The significance level (p value) was set at 0.05.

Results

A total number of 251 students participated in this study. The majority of participants were older than 20 years old; of Malay racial origin; were single and from urban areas (66.5%; 63.7%; 96%; 70.9% respectively). About 46.6% were within normal body weight, followed

Table 1. Factors Influencing the Practice of BSE in Young Malaysians (n=251)

Variable		N (%)	t	p value
Age	≤ 20	84		
	> 20	167	2.032	0.045
Exercise	Yes	179		
	No	72	3.09	0.002
Smoking	Yes	4		
	No	247	0.217	0.828
Drinking alcohol	Yes	14		
	No	237	0.136	0.892
Family history of cancer	Yes	55		
	No	196	2.331	0.017
Residency	Urban	178		
	Rural	73	0.676	0.502

by overweight (32.3%).Regarding their lifestyle practices, the majority practiced exercise,were non-smokers and do not drink alcohol (71.3%; 98.4%; 94.4% respectively). More than half of the participants (55.4%) mentioned that they practiced BSE.

Regarding the sources of information about breast self-examination, the majority mentioned that radio and TV were their main sources of information (38.2%), followed by family members (21.1%), friends (14.7%), and then newspapers (12.4%).

Regarding the factors that influenced their practice of BSE; age significantly influenced the practice of BSE ($p = 0.045$).Exercise was also significantly associated with the practice of BSE ($p=0.002$). A family history of cancersignificantly influenced the practice of BSE ($p=0.017$). Smoking, drinking alcohol, and residency were not significantly associated with the practice of BSE.

Regarding the barriers towards breast self-examination, the majority of participants who never practiced BSE mentioned that the lack of knowledge was their main barrier to practicing BSE (20.3%), followed by'do not have the symptoms' (14.3%), then 'scared of being diagnosed with breast cancer' (4.4%).

Discussion

Regarding the practice of breast self-examination, the American Cancer Society and other leading cancer agencies recommended monthly BSE to women (Maurer 1997; Miller et al. 2000; Epstein et al. 2001).

In this study, more than half of participants (55.4%) reported that they had ever practiced BSE. Similar to our findings, a study from Singapore reported that 62.7% nurses examined their breasts every month (Chong et al. 2002). In a similar study, Budden (1998) reported that 46%had practiced regularly at least once per month.This finding is consistent with that of a study in Nigeria, where 59.1% had ever practiced BSE (Uche 1998).One study from Australia among female university students reported that 37% practiced BSE monthly (Budden 1995). Another study from Europe reported that 14.8% of students aged 17 to 30 years practiced BSE on a monthly basis (Wardle et al. 1995). About 27% female nursing students practiced BSE monthly (Dittmar et al. 1989).

In another Malaysian study,only 1.3% ofwomen attending a Malaysian Well-Person's Clinic were found to practice BSE regularly (Chan 1999).The difference between this study and Chan's study was due the fact that our participants were chosen from the higher institution of learning and they may have more knowledge about BSE.In another study, the percentage of monthly BSE performance has been found to be 3.4% among teenagers (Ludwick & Gaczkowski 2001).In a study that was conducted among South Asian women living in the United Kingdom aged above 40 years, it was found that 12% of participants practiced BSE monthly(Choudhry et al. 1998). In a study among Chinese womenin Hong Kong only 16% reported that theyperformed BSE every month (Fung 1998).

In another study, less than one-fifth of the women interviewed reported practicing BSE. This level is however higher than women studied in the United Arab Emirates, South Asia and Brazil (Bener et al. 2001; Choudry et al. 1998; Odusanya 2001). In this study, only 4.3% of participants reported that they practiced BSE on a regular (monthly) basis, a result that is consistent with previous studies conducted in the USA (Islam et al., 2006; Lee et al., 2006)and in Jordan (Petro-Nustus and Mikhail, 2002; Shakhtreh and Mas'ad, 2006).

In this study, age significantly influenced the practice of BSE among the participants.Similar findings reported that there was a statistically significant correlation between age and women's practices of breast self-examination(Parsa & Kandiah 2005).Another study reported that there is a relationship between BSE practice and age (Alsaif 2004; Jarvandi 2002; Perssan et al. 1997). Similar findings reported that there was a significant relationship between BSE practice and age (Karayurt et al. 2008).

This study reported that family history of cancer significantly influenced the practice of BSE, while two studies showed a relationship between family history ofbreast cancer and regular BSE performance (Maxwell et al. 2001; Maxwell et al. 2000).Another two studies reported no relationship between a family history of breast cancer and BSE performance (Jarvandi et al. 2002; Budden 1995).

Regarding the sources of information about breast self-examination among the participants in this study, the majority mentioned that radio and TV were their main sources of information, followed by family members, friends, and then the newspaper. A similar study reported that nurses often mentioned that their information sources were the media and their academic education (Vurur et al. 2005; Franek et al. 2004).Another similar study reported that the most important information sources about BSE were written materials (books, magazines and booklets), academic education and other health professionals (Demirkiran et al. 2007). For instance, more articles in the newspapers, as well as seminars and workshops in local communities about cancer in general and breast cancer in particular could enhance knowledge (Modeste et al. 1999).Several studies indicated that itis not enough to have information about BSE but that it is also of vital importance to provide BSE instruction with an emphasis on proficiency and long-term practice (Aydın 2004; Secginli and Nahc-ıvan 2006; Petro-Nustas and Mikhail 2002; Du¨ndar et al. 2006). In similar studies found that nearly half of the students reported their main sources of information on breast cancer and BSE was the media (Karayurt et al. 2008; Budden 1995 Milaat 2000; Milaat 2000; Budden 1995).

In this study, the barriers towards breast self-examination, the majority of participants who never practice BSE mentioned that the lack of knowledge was the main barrier to practicing BSE (20.3%); followed by they 'do not have the symptoms' (14.3%). Similar findings reported by Karayurt et al. that the most common reasons for not doing BSE was "not knowing how to perform BSE" (98.5%), "not expecting to get breast cancer" (45.6%) and "not having a close relative with breast cancer" (42.9%). Many people believe that they do not get cancer in adolescence. Adolescents tend to deny that they are also

vulnerable to disease like all humans do (Karayurt et al. 2008).Consistent with the results of this study, students reported that they did not perform BSE because they did not know how to perform it (Ludwick & Gaczkowski 2001; Cole & Gorman 1984).In another study the most common reason for not doing BSE was lack of knowledge (Parsa & Kandiah 2005).In an Iranian study, the most frequent barrier for breast self- examination was having 'no problem in the breasts' i.e. no symptoms (Ebrahimi et al. 2001). Similar findings reported that women who did not perform BSE believed that it was not necessary (Jarvandi et al. 2002).Similarly, other investigators have shown that the most common reasons for not doing BSE was lack of knowledge (Jarvandi et al. 2002).

In this study 4.4% of women mentioned that being 'scared of being diagnosed with breast cancer' is one of the barriers towards practice of BSE. These findings are consistent with the results of other researchers in Iran (Jarvandi et al., 2002), Malaysia (Hisham and Yip, 2003), United Arab Emirates (Bener et al., 2002) and Jordan (Petro- Nustas and Mikhail, 2002). These fears and worries may be due to wrong perceptions that the women held. Therefore, teaching the realistic risks of developing breast cancer and the importance of BSE can reduce these fears and would enable women to overcome the barriers due to their wrongly held beliefs.If there is health education regarding the importance of breast self-examination program including awareness of better survival rates when breast cancer is detected early and treated promptly, a high percentage of female students may learn and practice BSE. Health program planners would be wise to consider these barriers in designing effective interventions to improve BSE.

More than half of participants practiced BSE. Age, exercise and family history of cancer significantly influenced the practice of BSE. Lack of knowledge, not having any symptoms and being scared of getting diagnosed with breast cancer were the main barriers to practicing BSE.

Health education focusing on breast health awareness and early detection may help change the negativebarriers towards BSE and empower women to participatemore actively in making important decisions regarding their health.There is an urgent need to develop a continuous awareness campaign among university students.

Since the sample of this study included only university students, the result cannot be generalized to the larger population in Malaysia.We strongly believe that the findings and recommendations of this study may be applicable for program development and implementation for Malaysian female university students. One limitation is that we did not ask about the frequency of BSE among the participants. Another limitation was that this was a university-based survey. Those not attending classes or did not come to the university during the survey period did not participate. These students may not have the same practice of BSE.This study relied on self-reporting of their usual behaviors which can overestimate its actual practice, therefore, an estimate of the actual evidence of behavior needs to be treated with caution.This study was conducted in our university only which is a private university. Socio-cultural and economic profiles of the students participated to this study may be different from students attending other universities in Malaysia.

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