Socio-Cultural Barriers to Early Detection of Breast Cancer Among Malaysian Postgraduate Students

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Abstract

The present study focuses on societal factors influencing the breast cancer incidence and deaths due breast cancer. The delayed detection and late presentation of tumour is influenced by the knowledge and understanding of disease by women herself, family and people in her surroundings. The socio-cultural behaviour is key component of delayed detection of breast cancer and delayed presentation which leads to higher rates of morbidity and mortality. Though Breast cancer is the most common malignancy among females all around the world including Malaysia. Breast cancer accounts for 2.4% of deaths among women among Malaysia every year. The study was a quantitative questionnaire-based survey. The study includes female postgraduate students 25-30 years of age studying at University Sains Malaysia. The questionnaire was divided into five sections and total of 19 questions. A total of 50 women, between 30-39 years of age were interviewed. This study set out to explore the health promotion concepts and factors that impede health promotion as well as the barriers were also explored which might hinder women to go through mammogram. The results obtained in the study validated and confirmed the literature.

Keywords: Socio-cultural Barriers; Knowledge; Breast Cancer; Postgraduate Students; Malaysia

1. Introduction

The rate of breast cancer development among women is at the top, and it is the second among most leading causes of the cancer related deaths around the world (Dahlui, Ramli & Bulgiba, 2011). Breast cancer incidence is at rise and expected to rise more in the upcoming years. According to World Health Organization (2018) breast cancer impacts 2.1 million of women every year and it is one of major cause of deaths due to cancer around the world. Furthermore, in 2018 around 627,000 women died due to breast cancer which is nearly 15% of all cancer related deaths among females. Further, it was predicted that by the year 2030 there will be 13.1 Million cases of breast cancer every year. Though, it remains the topmost malignancy all over the world but there is a little geographical variation. As, highest rate is observed in United States of America and Northern South America whereas, the lowest cancer incidence is seen in Asia (Pisani et al., 2002).

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The main determinant of survival from breast cancer is early diagnosis of disease (Yip, Taib & Mohamad, 2006). Furthermore, the early detection on the other hand mainly depends on socio-cultural behaviours. As, breast cancer screening has revolutionized the management by early detection resulting in better survival, (Dahlui, Gan, Taib, Pritam & Lim 2012). Mammogram remains the standard method for screening (Dundar et al., 2006). The self-breast examination and clinical breast examination are also counted in as full package for women to get their breast cancers detected earlier. However, many developing countries have not yet implemented these screening programs at large. Thus, women are not aware of the self-examination and screening methods as well as recommendations (Rosmawati, 2010). This study was thus established aiming to evaluate Malaysian young women for their knowledge of screening and readiness for breast examination.

2. Breast Cancer in Malaysia

In year 2002 Malaysia published its first National report on incidence of cancer among Malaysian women, there were 26,089 cases and 1,109 deaths which makes around 2.4% of all cancer related deaths among women. According to the National Cancer Registry, the Age Standardized Rate (ASR) of breast cancer among Malaysian women is 47.4 per 100,000 populations in 2003 to 2005 and later dropped to 39.3 in 2006 (Zainal & Saleha, 2006). Furthermore, in 2006 the number of breast cancer cases reported were 35,525, accounting for 29.9 % of all cancer occurring in Malaysia. The death due to cancer in Malaysia was ranked 3rd (10.1%) after heart disease (14.3%) and septicaemia (16.5%) in 2005.

According to ministry of Health Malaysia Annual report (2010), a total of 43,569 cancer cases diagnosed and registered with NCR during three years from January 2007 until December 2010. Out of these 6,634 cases were from Penang. According to this report breast cancer was found as the most common cancer among females in the year 2007. Data presented in this report was comparable to that presented in 2003, which stated that breast cancer accounts for 30.4% of newly registered cases. The noteworthy point here is the reported data only includes registered cases; there are potential chances of missing out unregistered cases. Othman, Hayati, Zaini & Biswal (2008) stated in their study done in Kelantan Hospital Universiti Sains Malaysia; on cancer cases between years 1987-2007 found that rapid rise in cancer seen in Malaysia. The large increase in mortality due to breast cancer was found in Malaysia and Thailand, (Youlden, Cramb, Yip & Baade, 2014).

Regardless of the ethnic origin the overall risk of getting breast cancer among females in Malaysia during her lifetime is 1 in 20 whereas, Chinese women being on highest risk i.e. 1 in 14 (Dahlui et al., 2011). The disease occurrence rate is higher in Chinese ethnic group (66.1 per 100,000), Indian ethnic group (47 per 100,1000) and among Malay ethnic group (27.7 per 100,000) (Loh & Chew, 2011). Among Malaysian women Malay women have poorer survival from breast cancer 45.9%, Indians with 57.1% and Chinese

with 63.2% the factor of poorer survival is due to the late presentation of cancer among Malay ethnic group (Yip et al., 2006). Further the authors stated that the occurrence rate is higher in Chinese ethnic group and death due to breast cancer is higher in Malay ethnic group due to the late presentation of tumor. Furthermore, around five thousand four hundred and ten cases were reported in 2014 which accounted for 24.5% of total cancer related deaths in Malaysia for 2014. According to World Health Organization, Country cancer profile (2018) the incidence of breast cancer remained highest (17.3%) and highest mortality rate (11.0%) in Malaysia among all types of cancers in year 2018.

3. Malaysian Health Policy regarding Breast Screening and Examination (self and clinical)

The primary focus of the ministry of health Malaysia (MOH) is to promote primary and secondary prevention method of breast cancer, primary preventive activities includes increasing breast health awareness and promoting healthy lifestyles modification whereas, the secondary prevention method involves the early diagnosis and early treatment to prevent patients from severity of disease (Dahlui et al., 2011). Furthermore, for the early detection of breast cancer currently practicing opportunistic approach. The opportunistic approach refers to the screening or examination practice when an individual (with no symptoms of disease) presents himself to the medical practitioner for un related medical issues and the examination is performed (Bordoni, Hensch, Mazzucchelli & Spitale, 2009).

Since 1995 Malaysia is practicing three main activities for breast cancer screening self-Awareness (BSA) or Breast Self-Examination (BSE), Clinical Breast Examination (CBE) and third breast screening or mammogram. The proactive strategies of Ministry of health involves the promotion of Breast Self-Examination and annual breast examination by medical practitioner (Dahlui et al., 2011). The annual clinical breast examination is recommended for females aged 40 years or more; and women aged between 20 to 39 years must go through clinical breast examination after every three years. Women aged 40 and above should examine them self annually (MOH, 2010).

4. Barriers to Early Detection

The breast cancer and deaths due to the disease is not ignorable several studies have been done to find out the factors which affect the poor response towards the BSE, CBE and Mammography to diagnose breast cancer at earlier stage to increase the survival rate. The delayed diagnosis of breast cancer is highly influenced by social and cultural perception of breast cancer among Malaysian population (Parsa, Kandiah, Zulkefli & Rehman, 2008). The cultural attitudes, the socio-cultural and socio-economic factors influencing the women's behaviour towards screening as well as treatment of disease (Suriati et al., 2012). The other factors which were highlighted in the study by Snelling et al.

(2004) highlighted that late presentation of cancer is highly associated with the strong belief of Malaysian people on traditional medicines, their negative socio-cultural perception of breast cancer, being poor and lower level of education.

Rosmawati (2010) argues in her study conducted in Suburban Area in Terengganu Malaysia states that; Probably breast cancer is still a shameful secret in this community. In most societies' women, do not get time for them and particularly if there are not serious health issue the women herself even does not focus on preventive health care (Okobia, Bunker, Okonofua & Osime, 2006). In a study done by the Department of Social and Preventive Medicine, Universiti Malaysia for the Community Residency Program (CRP) of medical students in 2009 the study found that 97.7% of study population was living within 20 km radius from the nearest medical center some of them living 5 km radius from the nearest hospital / clinic (CRP report 2009). This proposes that geographical accessibility may not be the main reason for delaying in seeking medical treatment, moreover the possible constraints may include financial and cultural accessibility of Malaysian women (Dahlui et al., 2011). The negative influence of relatives in Malaysia and Singapore was explored as barrier among the women of both countries (Lim et al., 2015) lack of social acceptance (Youlden et al., 2012) and may be the possible barriers in women's less practice of screening and examination uptake.

There is a good positive relationship between the practice of BSE, BCE and performance of mammography among the women who have a support network (Dahlui et al., 2012) like family, friends, physicians' community programs, training programs advice by health professionals; like doctors and nurses. The women show better practice of early detection methods if they have support available. Ghazali et al. (2013) stated that the practice of breast SE and clinical examination and mammography rate was low among the women who were living alone. Lack of motivational support from parents, spouse was found as barriers by Rosmawati (2010). Further the author states that the family parents, partner and friends play important role by supporting and motivating women by sharing knowledge about breast cancer and benefits of early detection and importance of regular breast examination and screening. The women who lack this support have lower rates of screening and examination.

5. Benefits of Breast Screening and Mammography, BSE and BCE

Mammogram and screening is found as the most reliable method to detect breast cancer earlier compared to all other methods (Youlden et al., 2012). There are evidence-based results obtained for declined mortality rates due breast cancer and survival benefits have been observed from screening (Saquib, Saquib & Ioannidis, 2015). According to Breast Health Global Initiative Global Summit 2007; detecting breast cancer at early stage is key determinant to the survival in breast cancer and treatment of breast cancer in early stage requires lesser resources for provision of effective breast cancer

treatment (Anderson et al., 2008). A systematic review was done by Gotzsche & Nielson (2006) showed that for 2000 women who undergone mammographic screening all around 10 years, the survival rates were higher compared to women who did not follow the screening guidelines to go through mammographic screening. Further the potential survival benefit of mammographic screening is found higher among younger women when compared to the older women, with a high screening frequency resulting in more lifetime gained.

According to Yip et al. (2006) currently Malaysia has very limited resources to treat breast cancer as a smaller number of expert oncologists, radiotherapy centres limited number of radiography treatment facilities, which makes difficult to treat advanced cases of breast cancer. Looking at the situation the only and most determinant survival factor is early detection. Which is depends on the awareness of women and their readiness for the following early detection guidelines. Hence the treatment of advanced stage cancer requires advanced level of treatment resources, intensive care and it increases the financial burden for the care givers. Often the cure is not possible in case of advanced stages and the early diagnosis is favourable in terms of reduced mortality and suffering (Mitra, 2011). Youlden et al. (2014) states that the early detection and optimal treatment can decrease number of deaths due to breast cancer, but the cultural and economic barriers persist.

6. Methods
This study was a quantitative with cross-section questionnaire-based survey. The women studying at USM in Masters and higher courses were included. For recruitment convenient sampling method was adopted and among students aged ≥30 years without any personal or family history of breast cancer were included. As the study was focused on Malaysian women thus other nationalities were excluded. They were requested to respond to the questionnaire at their own convenience. The researcher has personally requested the respondents to respond the questionnaire at the main campus of Universiti Sains Malaysia.

For data collection structured questionnaire was designed including following five sections:

Section 1: Knowledge of breast cancer

Section. 2. Knowledge regarding Screening and examination

Section. 3. Information regarding barriers keeping women away from breast cancer screening

Section 4. Knowledge of Breast screening policy

Section.5. Recommendations of respondents to enhance the knowledge awareness and readiness of women regarding breast cancer.

Each section had a relevant set of questions which were asked during interview.

7. Statistical analysis

The data were analysed using statistical Package for Social Sciences version 22 (SPSS). Statistical analysis such as frequency tables and descriptive tables were included in the process of analysis. The correlation of independent and dependent variables was measured using the bivariate (chi square). A p-value <0.05 was be considered significant.

8. Results

A total of 50 women were interviewed, aged between 30 to 39 years (median age = 34 Mean age=34.34, SD=2.60). Malay (i.e. 50%) were predominant ethnic group in the study followed by Chinese (i.e. 30%) and Indian (i.e. 20%) origin respectively. A summary of the data is given in Table 1. The study population was predominantly Muslims (i.e. 44%) followed by Buddhist (i.e. 36%) and Hindus (i.e. 20%). Greater number was married (i.e. 54%), 78% were insured and 54% were enrolled in PhD program.

A total of 82% (n=41) knew of the risk factors associated with breast cancer. There were only 14% (n=7) women having experience of breast related problem which forced them to seek medical advice. There were 22% (n=11) with a positive family history of breast cancer. Only 14% (n=7) had personal risk evaluation of breast cancer done in their life time. There were 12% (n=6) participants who have their regular check-ups done by medical practitioners.

A greater proportion (42.9%) of the participants were not aware of the definition of mammogram. Thirty eight percent of the participant population was aware of the frequency of the self-breast examination. Great majority (i.e. 58%) of study population have never examined their breasts, while 20% thought to examine before start of their menstrual periods, 12% during first week of start of periods and 10% two weeks after cessation of periods.

A total of 24% women in the study population were aware of getting their breasts examined by a qualified medical practitioner on annual basis, while great majority thought of getting it done on six monthly basis. A total of 46% of women considered finance as the main barrier to stop them from having breast cancer screening, followed by lack of information of the disease (22%), 16% thought lack of screening facility while 14% considered social taboos stopping them from screening. Greater majority agreed that fear of knowing the diagnosis of breast cancer is the major factor stopping them from having their screening done. The 10% women understood that the normal women should undergo breast cancer screening every year between the age 50 60. 12% women thought after every two years between the age of 50 to 60 years. The clear majority of respondent thought every year after the age of forty. Only 22% of women knew that normal risk women should undergo breast cancer screening every two years after the age of 40.

Hypothesis 1 H0 There is no significant relationship of age and knowledge of breast screening and breast examination recommendations.

A Chi-square test showed a statistically no significant relationship between knowledge of breast cancer and age group with P value p=0.09 >

0.05. The null hypothesis accepted that there is no statistically significant relationship with age and knowledge of breast screening and breast examination recommendations.

Hypothesis 2 H0 There is no significant relationship of level of education and knowledge of breast screening and Examination recommendations.

There was significant difference in the education level (Masters and PhD) and the knowledge of breast screening and Examination recommendation (p0.009<0.05). The Ph.D. students had better knowledge of breast screening and Examination recommendations.

The null hypothesis was rejected that there is no significant relationship of level of education and knowledge of breast screening and Examination recommendations.

Hypothesis 3 H0 There is no significant relationship of marital status and knowledge of breast screening and breast examination recommendations

A Chi-square test showed a statistically significant relationship between marital status knowledge of breast screening and Examination recommendations and ethnicity with (p 0.008<0.05). The married women had better knowledge compared to the unmarried female students. The null hypothesis was rejected that there is no significant relationship of marital status and knowledge of breast cancer.

Hypothesis 4 H0 There is no significant relationship of ethnicity and knowledge of breast screening and breast examination recommendations.

A Chi-square test showed that there is statistically significant relationship between knowledge of breast screening and Examination recommendations. And ethnicity with P value p= 0.007< 0.05. The Malay women had better knowledge compared to Indian and Chinese students. The null hypothesis rejected that there a no significant relationship between knowledge of breast screening and breast examination recommendations and different ethnicities.

Hypothesis 5 H0 There is no significant relationship of religion and knowledge of breast screening and breast examination recommendations

A Chi-square test showed a statistically significant relationship between readiness of breast screening and marital status with p=0.009. The Muslim Malay women had better knowledge breast screening and breast examination recommendations the null hypothesis rejected that is no significant relationship of religion and knowledge of breast cancer.

Hypothesis 6 H0 There is no significant relationship of health insurance and knowledge of breast screening and breast examination recommendations.

A Chi-square test showed that there is borderline significance between knowledge of breast screening and breast examination recommendations and health insurance with p=0.053.

9. Discussion

This study showed that the university students were aware of the breast cancer as a disease. The awareness and knowledge regarding risk factors sign and symptoms of breast cancer among the university students was however low including the definition of mammogram. The lack of knowledge was predominantly noticed among Indian students. Similarly, Hadi, Hasali, shafie & Awaisu (2010) conducted a cross-sectional questionnaire-based survey to know the level of knowledge regarding breast cancer among female students at Universiti Sains Malaysia. The study concluded that the clear majority of the female university students had inadequate knowledge of breast cancer. The mean core knowledge of the disease was 60%. The study had also compared the awareness among races where Indian had significantly less knowledge as compared to Malay and Chinese populations.

The results of the survey revealed that the knowledge towards breast screening and breast examination was low among the respondents, only 38% of women were aware of BSE recommendations 24% women in the study population were aware of getting their breasts examined by a qualified medical practitioner on annual basis, among Malay women 40 % women were aware among Indian 40% and 33.3% of Chinese female students were aware of BSE recommendations. In present study, only 16% female students were aware of CBE recommendations correctly. A total of 68% of female students were aware of correct recommendation of breast cancer screening for high risk women. The possible cause of lack of knowledge of breast cancer screening and its methods was probably lack of communication. The mass communication doesn't take appropriate part in transferring the public service message.

In the present study, the readiness of female postgraduate students was assessed from their practice of BSE and BCE. Most of the students said they have never examined their breast. The results of the study also showed that young Malaysian women were not ready to undergo breast screening according to breast screening guidelines given by ministry of health Malaysia. The possible factors of less prevalence BCE and practice of BSE were due to less knowledge of the policy recommendations. The potential reason putting a barrier among the younger age group for breast cancer screening is the social taboos and psychological influences of the disease itself and the risks and complications related to the treatment. There are certain social factors related to treatment of breast cancer like; Surgery includes part or complete removal of the breast; thus women consider it as a potential risk to their womanhood. The chemotherapy is associated with hair loss which again gives disfigurement, although it is temporary, hair regrow as soon as the chemotherapy is completed. The other possible reason is the cost of treatment and social issue related with complications of treatment. The present study aimed to explore the health advancement concepts and associated factors that impede health promotion as well as the social barriers in the light of previous research scholarships, were also explored which might hinder women to go through mammogram. The results of present study conformed the previous

research scholarships that by exploring the health promotion concept in Universiti Sains Malaysia, by enhancement of the knowledge and understanding of breast cancer and behaviour change can improve the situation. Considering the results of this study, proactive strategies, interventions to promote health activities can be planned to approach the current situation more efficiently and better understanding.

The vast majority of female students were not ready for breast cancer screening; the possible factors were that women were not knowledgeable and motivated. The female students were not aware of breast screening and examination recommendations; the policy recommendations that; after the age of twenty women should undergo annual clinical breast examination is recommended for women aged 40 years or more; and women aged between 20 to 39 years must go through clinical breast examination after every three years and annual breast clinical examination is recommended for women above the age of forty. Similarly, the screening recommendation were not known to most of the respondents as mammography is being indicated to women in the 'high risk' group and the average risk women and women under 50 years of age breast screening is not recommended. The breast cancer screening for average risk women under the age of 50 it either recommended by medical practitioner or on the request of women in case of any breast related issue. The knowledge of disease plays an important role as the women who were informed and aware about breast cancer were more likely to perform breast examination and screening.

The findings of present study will be helpful to aware women to be knowledgeable about their own health and will also highlight importance of utilizing preventive health facilities. The findings will help policy maker to develop strategical plan to aware women about benefits and need of availing breast cancer screening and examination services to prevent breast cancer. Therefore, the gaps and deficiencies highlighted in the study could contribute to better health service planning which focuses on making women more knowledgeable and proactive to utilize preventive health services. The present study will highlight the importance of social programs to highlight importance of knowledge and awareness about disease and readiness and individual's engagement in preventive health activities.

The study was conducted as interview-based survey and all the interviews were conducted face to face make its the strength of the study however small sample size is the weakness of the study.

10. Conclusion and Recommendation

The present study concluded that insufficient knowledge and readiness for breast cancer screening was observed among study population. Knowledge of breast cancer and readiness for breast cancer screening more women lack accurate information on breast cancer screening and breast screening recommendations as media is the most reliable source of information for most of the respondents. Therefore, Radio and TV can play major role to make

women more knowledgeable and ready to detect breast cancer at early stage. The religious scholars can play role to address the issues. As in Egypt, religious leaders started to speak out in favour of breast cancer awareness and screening, making it clear to husbands that their wives must undergo examining and screening according to guidelines (Rosmawati, 2010). Additionally, the situation can also be improved by teaching the breast self-examination to women to empower them.

There is a pressing need to deliver quality information through these tools as the results of this study showed a gap between dissemination of information and knowledge about prevention and early detection. The present study aimed to explore the health advancement concepts and associated factors that impede health promotion as well as the social barriers in the light of previous research scholarships were also explored which might hinder women to go through mammogram. Considering the results of this study, proactive strategies, interventions to promote health activities can be planned to approach the current situation more efficiently and with better understanding. The rate of delayed presentation of breast cancer and mortality rate due to breast cancer is higher in Malaysia. Further research is needed to be done to know the level of readiness for breast cancer screening among Malaysian general population (women). So, if timely action will be taken to make women more ready to undergo breast screening which will lead to saved life of women due to delayed detection of breast cancer.

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