

AWARENESS, KNOWLEDGE AND BREAST CANCER SCREENING PRACTICES AMONG IIUM NON-ACADEMIC STAFF

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ABSTRACT

In Malaysia, breast cancer is the commonest cancer among women indicating that early diagnosis and screening practice is important to increase the survival rate. Breast self-examination (BSE), clinical breast examination (CBE) and mammography are the main screening practices for breast cancer. Knowledge and awareness of breast cancer can play an important role in aiding early detection of breast cancer. Little is known about the knowledge of breast cancer and screening practices among the non-academic staff in IIUM, Kuantan. As such this study aims to determine the knowledge and screening practices of breast cancer amongst the non-academic staff at the International Islamic University Malaysia (IIUM), Kuantan Campus. A cross-sectional study was conducted on 100 non-academic staff from ten different departments in IIUM, Kuantan from March to April 2017. Data were collected using a self-administered questionnaire on knowledge of breast cancer and screening practices. The relationship between socio-demographic characteristics and knowledge of breast cancer and breast cancer screening practices were carried out using chi-square. No significance difference was found between knowledge of breast cancer and socio-demographic factors. However significant relationships were found between the age of respondents and BSE as well as the level of education of respondents and CBE. Most non-academic staff possessed an average level of knowledge on breast cancer and screening practices due to possibly ease of access to information. Low performance of breast screening practices was indicated possibly due to lack of awareness, misconception of the need and benefits derived from such screening practices.

KEYWORDS: Breast cancer, breast self-examination, breast cancer screening, knowledge, mammography

INTRODUCTION

Globally, breast cancer is the commonest cancer among women, comprising 23% of all female cancer (Ogochukwu et al., 2018). In most developing countries such as Malaysia, the incidence rate of breast cancer is rapidly increasing due to increase life expectancy, growing urbanization and adoption of western lifestyle, particularly in younger women. Thus, early diagnosis of breast cancer is important in the management of breast cancer as early detection indicates a 5-year survival rate of 92% (Ogochukwu et al., 2018). Breast screening allows early detection of breast cancer that greatly reduces the mortality rate and offers a good chance of rapid recovery (Secginli and Nahcivan, 2016). Early detection of breast cancer is influenced by the level of breast cancer awareness. High level of awareness can aid in the early detection of breast cancer and thus early treatment which can improve the quality of life.

Adequate knowledge regarding breast cancer is very important as it can influence the women to partake in breast cancer screening program (Norlaili et al., 2013). Although the effectiveness of each practice is still questionable, rather a crucial issue lies in the fact that few women actually participated in any of the screening practices. Many studies have been conducted in academic institutions that involved tertiary students or teachers (Aluko et al., 2014; Samina et al., 2015) and mostly conducted in the United Arab Emirates (Elobaid et al., 2014) or in the African continent (Obajimi et al., 2013). Many barriers to breast cancer screening and underutilization of services have been studied worldwide, but in Malaysia a few studies (Norlaili et al., 2013) had been carried out on urban and rural communities. Little is known about knowledge of breast cancer and screening uptake amongst non-academic staff in IIUM, Kuantan. Hence, the aim of this study was to determine the awareness, knowledge and breast cancer screening practices for providing baseline information for cancer prevention and a management plan to be embarked on by relevant authorities in providing better medical care for this population.

MATERIALS AND METHOD

This cross-sectional study was conducted from March 2017 to April 2017 at the International Islamic University Malaysia, Kuantan Campus. One hundred clerical staffs working at ten different departments namely the Office of the Campus Director, One Stop Student Centre, Mahallah Fatimah Az-Zahra Mahallah Umi Khalsum and six other kulliyahs (faculties); Kulliyah of Allied Health Sciences, Kulliyah of Medicine, Kulliyah of Pharmacy, Kulliyah of Sciences, Kulliyah of Nursing and Kulliyah of Dentistry were recruited for the study. The inclusion criteria for the participants were that they are Malaysians aged between 35 years to 70 years of age. They must be non-academic staff and working in the departments or kulliyahs identified for the study. Data were collected using a self-administered questionnaire. The validated questionnaire was adopted from Nor Afiah et al., (2011). The total number of questions was 47. Each correct answer was awarded 1 point while "don't know" and wrong answer was given 0 point. The first section of the questionnaire was pertaining to socio-demographic factor while the second section was about knowledge on breast cancer screening followed by practices of breast cancer screening. The final section was concerning reasons and barriers of breast cancer screening practices. The study was approved by the Kulliyah Postgraduate and Research Committee, IIUM, Kuantan (KAHS 2016/11/07) and the Research Ethics Committee (IREC 698).

Statistical analysis

The data were analysed using the Statistical Package for Social Sciences (SPSS) version 18. Descriptive analysis was used to describe the social demographic characteristics of the respondents. Chi-square test was used to determine the significant relationship between breast cancer screening practices and socio-demographic characteristics. The level of statistical significance was set at $p < 0.05$.

RESULTS

Socio-demographic factors of the respondents

The socio-demographic factors of the respondent are as in Table 1. Most of the respondents were below 30 years old (46.4%). Approximately 40% of the respondents were between 30 to 39 years old while 13.1% were 40 to 49 years old. Most of the respondents were married (57.1%) while 38.1% have never been married. As for education level, 42.9% of the respondents had obtained the diploma while 27.4% of them had completed up to high school education.

Table 1: The association between level of knowledge and socio-demographic factor of the respondents

Socio-demographics factor	Low knowledge	Moderately low knowledge	Average knowledge	High knowledge	χ^2 <i>p</i>
	N (%)	N (%)	N (%)	N (%)	
1. Age					
a) < 30 years	7 (8.3)	14 (16.7)	15 (17.9)	3 (3.6)	9.843
b) 30-39 years	2 (2.4)	14 (16.7)	18 (21.4)	0 (0)	0.131
c) 40-49 years	1 (1.2)	1 (1.2)	8 (9.5)	1 (1.2)	
2. Marital status					
a) Single	4 (4.8)	15 (17.9)	10 (11.9)	3 (3.6)	10.792
b) Married	6 (7.1)	12 (14.3)	29 (34.5)	1 (1.2)	0.290
c) Divorcee	0 (0)	1 (1.2)	2 (2.4)	0 (0)	
d) Widow	0 (0)	1 (1.2)	0 (0)	0 (0)	
3. Level of education					
a) STPM and below (STPM, primary and secondary school)	4 (4.8)	6 (7.1)	13 (15.5)	0 (0)	7.440 0.282
b) Diploma					
c) University level (Degree and Master)	4 (4.8) 2 (2.4)	12 (14.3) 11 (13.1)	19 (22.6) 9 (10.7)	1 (1.2) 3 (3.6)	

*p<0.05

Level of Knowledge on Breast Cancer

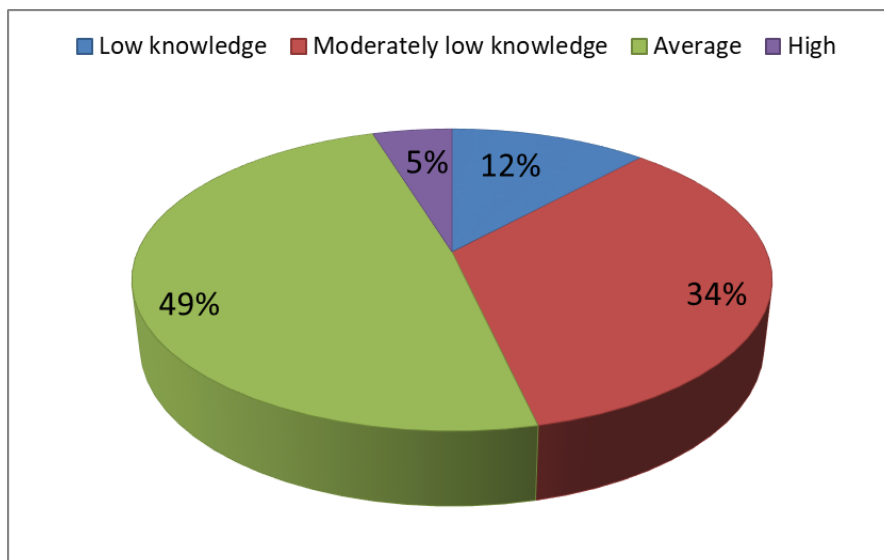


Figure 1: Knowledge on breast cancer and breast cancer screening among respondents

The maximum score for knowledge on breast cancer was 47. The highest score attained by the respondents was 40 and the lowest score was 4. The mean score and median score of the respondents' knowledge on breast cancer were 25.7 and 27.0 respectively. Knowledge on breast cancer and breast cancer screening methods is as shown in Figure 1.

Association between the level of knowledge and socio-demographic factor of the respondents

The association between level of knowledge and socio-demographic factor are as in Table 1. There was no significant association between level of knowledge and age ($\chi^2=9.843$, $p= 0.131$), marital status ($\chi^2=10.792$, $p=0.290$) and level of education ($\chi^2= 7.440$, $p=0.282$).

Breast Cancer Screening Practices of the Respondents

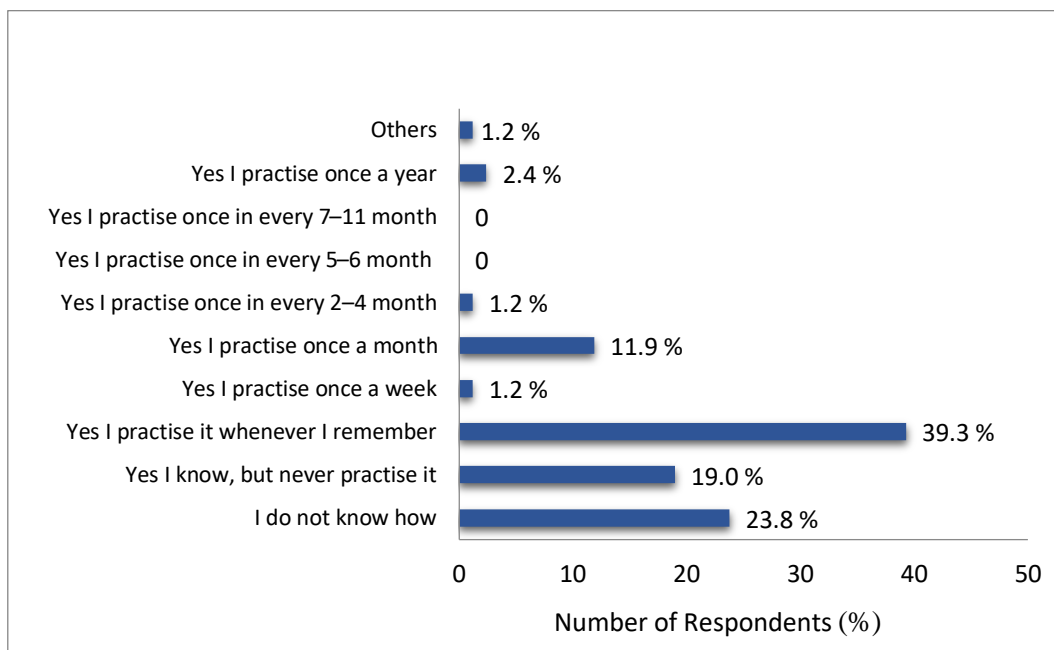


Figure 2: Frequency of breast self-examination among respondents

Figure 2 reflects the frequency of BSE carried out by respondents. 39.3% of the respondents practise BSE whenever they remember while 19% of the respondents knows how to perform BSE but never practise it. 11.9% of the respondents practise BSE once a month.

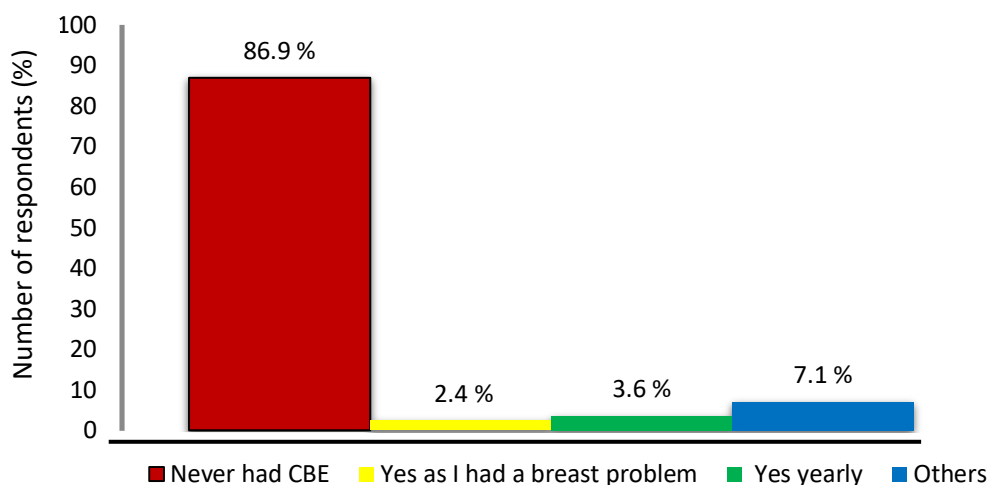


Figure 3: Frequency of clinical breast examination among respondents

Figure 3 denotes the frequency of CBE performed on the respondents. The majority of the respondents (86.9%) had never undergone CBE.

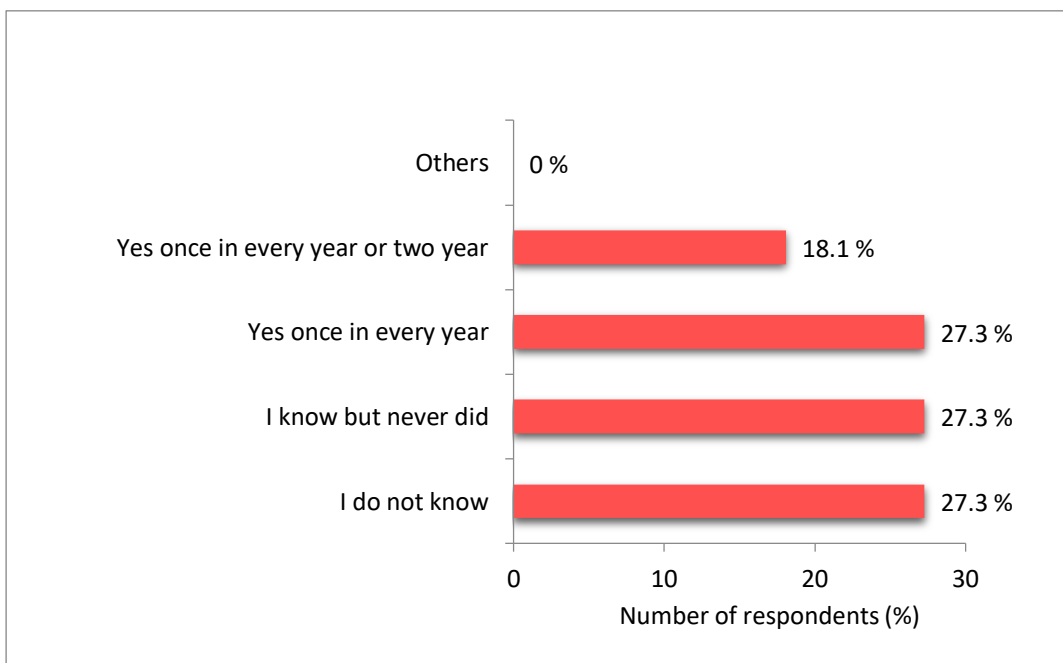


Figure 4: Frequency of mammography screening among respondents

Figure 4 reflects the regularity of mammography practiced by the respondents. The findings indicated that 27.3% of the respondents know about mammography but have never undergone the procedure.

Another 27.3% of the respondents had mammography carried out once a year while another 27.3% of the respondents do not know about mammography as a screening tool for breast cancer.

Association between Breast Cancer Screening Practice and Socio-demographic factors

Table 2 shows the association between breast cancer screening practice and socio-demographic characteristics. There was a significant association between BSE practice and age ($\chi^2=27.666$, $p=0.016$), CBE practice and level of education ($\chi^2=17.760$, $p=0.007$). Regarding mammographic practice, there was no significant association between mammographic practice and age, marital status and level of education.

Table 2: Association between Breast Cancer Screening Practice and Socio-demographic factors

Socio-demographics factor	BSE	CBE	Mammography
	χ^2 p	χ^2 p	χ^2 p
1. Age			
a) < 30 years	27.666	12.454	15.984
b) 30-39 years	0.016*	0.053	0.067
c) 40-49 years			
d) 50-59 years			
e) 60-69 years			
2. Marital status			
a) Single	16.376	15.984	14.495
b) Married	0.748	0.067	0.270
c) Divorcee			
d) Widow			
3. Level of education			
d) STPM and below (STPM, primary and secondary school)	13.638 0.477	17.760 0.007*	12.311 0.138
e) Diploma			
f) University level (Degree and Master)			

*($p<0.05$)

DISCUSSION

Knowledge of Breast Cancer and Breast Cancer Screening

The majority of respondents possessed an average level of knowledge. The possible reason may be due to the university environment in IIUM, Kuantan that conducts programs in medical and health sciences. This finding is similar to a previous study (Kotepui et al., 2014) that showed female personnel in the medical and health science environment acquired adequate knowledge on breast cancer due to the daily interactions between non-academic staff with the academic staff (Nor Afiah et al., 2011). There was no significant association between the level of knowledge on breast cancer and breast cancer screening on age, marital status and level of education in this study. These findings were inconsistent with previous studies that found the level of knowledge on breast cancer screening was significantly associated with level of education (Nor Afiah et al., 2011) where women with higher education were found to have higher knowledge of breast cancer as they tend to engage with health promotional activities (Nor Afiah et al., 2011; Sani et al., 2016).

Breast Self-Examination

Most respondents practiced BSE whenever they remembered to perform it. This finding was consistent with other previous studies (Dahlui et al., 2013; Sani et al., 2014). This may be because the respondents lacked the awareness on the importance and benefits of regular practice of BSE. This finding correlated to the finding of a study carried out on female primary health care workers in Turkey which found most of them did not practice BSE regularly because they were not aware of the advantages of regular BSE (Erdem and Toktas, 2016). The current study showed that BSE practice was significantly associated with age. A possible reason may be because BSE is the simplest and practical procedure for breast cancer screening among young women to detect abnormal changes in their breast. The group that has the least practice BSE regularly for this study were 40 years old and above. This finding is inconsistent with previous studies that found women who are older were more likely to perform BSE compared to young women as they have more life experience and are aware of the risk of getting breast cancer (Alwan et al., 2012; Al-Azmy et al., 2013).

Clinical Breast Examination

The majority of respondents have never undergone CBE possibly because they perceived that CBE is unimportant as they do not have a problem with their breast (Hajian-Tilaki et al., 2015). Another possible reason may be because they perceived that CBE is only for older women (Birhane et al., 2015). Fear of diagnosis, lack of free time due to busy work schedule and reluctance to CBE screening were some of the possible reasons that prevented women from performing CBE (Amin et al., 2009). A significant association between CBE practice and level of education was found in this study in which most of the respondents who performed CBE regularly had tertiary education. This finding was inconsistent with previous studies (Kotepui et al., 2014) which found women with tertiary education practiced CBE regularly compared to those with a lower level of education. This is possibly because women with tertiary education can acquire more information on CBE screening and are more engaged in health promotional activities (Sani et al., 2016).

Mammography Screening

The findings from this study showed that some of the respondents have not heard about mammography or ever never practiced it. This could be due to lack of knowledge about mammography screening and the derived benefits from the procedure (Redhwan et al., 2012; Farooqui et al., 2013). Thus, health education on breast cancer screening should emphasize the importance of mammography screening by explaining the benefits of the procedure to elevate women's understanding and awareness. Pre-mammography counselling should be provided to reduce the fear or anxiety on the procedure as well as to increase women's confidence in handling the disease (Redhwan et al., 2012). This study found no significant association between mammography practice and age, marital status, level of education and menarche age. This finding was inconsistent with the finding of the study carried out by Redhwan et al. (2012) which found that women aged above 40 years performed mammography screening regularly compared to younger women. This could be due to the screening age recommended to partake in mammography practice (American Cancer Society, 2017). Moreover, the present study did not find a significant association between mammography practice and level of education possibly because the majority of respondents were not keen to know or acquire information related to mammography screening.

CONCLUSION

In conclusion, this study found that most of the non-academic staff possessed an average level of knowledge on breast cancer and breast cancer screening practices due to possibly easy accessibility to information from health-related programs. The study also found that most of the respondents do not practice or carry out breast cancer screening due to lack of awareness, misconception of the need or the benefits derived from them. The current study indicated that BSE practice was significantly associated with age due to possibly BSE being the simplest and practical procedure to perform for women aged 30 years and below to detect an abnormality in their breast. Clinical breast examination is significantly associated with the level of education in which respondents that possessed high school education practiced CBE more regularly compared to their counterparts who had tertiary education.

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