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A Pilot Study: Practice of Breast Self-Examination and it's Relation to Knowledge and Attitude among Women Attending Out-Patient Clinic in Northern Penang

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Abstract
The main purpose of this study is to access the knowledge, attitude, and practice of breast self-examination (BSE) among women attending an out-patient clinic in northern Penang. The methods used in this study are cross-sectional survey of randomly sampled 71 female attendees of the out-patient clinic conducted on self-answer questionnaire. Decision on which sample to include were taken independently by the authors based on the methods of a study. Data were analysed by using Statistical Package for Social Sciences (SPSS) Version 23. Result showed 75% of selected respondents ever practice BSE but only 31.0% practiced it monthly as recommended. Women who practice BSE were mostly never married and at least a diploma holder compared to women who do not practice BSE. Total mean score for knowledge was 3.95 and their major sources of knowledge on BSE among the women was from doctors or nurses (60.6%). Total mean score for attitude among these women was 2.88 where majority of them did not take any action since the breast abnormalities did not show any sign. However, 77% have shown that they were taught on technique to perform BSE on their own. This study also revealed that there is a significant association between education level and knowledge regarding BSE ($p=0.001$). Result also shown a significant mean difference between education level and practice based on BSE ($p<0.001$). However, there is no significant association between education level and attitude ($p=0.271$). On determining the relationship between knowledge, attitude and practice, result has shown that there is no relationship between knowledge and attitude but there is a significant relationship between knowledge and practice regarding performing the BSE technique ($p=0.377$ and $p<0.05$ respectively). Moreover, there is no significant relationship between attitude and practice where p-value>0.05. As a conclusion, even if the respondents were high educated women, they normally did not take any action towards BSE compared to those who had lower education level.

Keywords: Practice, Knowledge, Attitude, Breast Self-Examination (BSE), Women, Out-Patient Clinic

Introduction

According to World Health Organization female breast cancer has become the most diagnosed cancer type in the world where about 2.3 million women were diagnosed with breast cancer in 2020 and 685 000 deaths globally. Breast cancer occurs in every country of the world in women at any age after puberty and it was the most common cause of cancer death in women and the fifth most common cause of cancer death overall (WHO, 2021). The World Cancer Report 2014 has reported that breast cancer has a higher incidence rate (43.3 per 100,000) than any other cancer. The second highest was colorectum (14.3 per 100,000), cervix (14.0), lung (13.6) corpus uteri (8.2) and stomach (7.5) (Bernard and Christopher, 2015). Meanwhile, in recent report by Globocan 2020, highest cancer cases reported in Malaysia for both sexes was breast cancer with 17.3%, followed by colorectal and lung cancer with 13.6% and 10.6% respectively (*GLOBOCAN 2020: New Global Cancer Data/ UICC*, 2020). Breast cancer treatment can be highly effective, especially when the disease is identified early. By doing breast self-examination (BSE) this disease can be detected as early as possible and mortality rate can be reduced. BSE is inexpensive, simple, and easy to apply with no specialized equipment required (Ahmed et al., 2018).

For past few years, researchers have stressed the important of BSE which to prevent for breast cancer, but the young females still did not perform the BSE regularly (Sambanje & Mafuvadze, 2012). Even worst, more than 50% of female medical students did not carry out the BSE even they had sufficient knowledge about it (Ibnawadh et al., 2017).

Therefore, the objectives of this study were to access the knowledge, attitude and practice of breast self-examination (BSE) among women attending an out-patient clinic in northern Penang.

Methodology

This study involved 71 female respondents, who was attending the Out-patient Clinic in Penang. By using a convenience sampling, all respondents were given a self-administered questionnaire on Breast-Self Examination (BSE). The questionnaire comprises three main domains: knowledge, attitude and practice to BSE. Each items have five-point Likert scale ranging from 1 (strongly not agree) to 5 (strongly agree). In this study, the knowledge on BSE was examined by 7 questions, attitude (7 questions) and practice (4 questions). Each question related to questions about breast cancer, breast cancer symptoms, early detection methods, and preventive measurement.

Statistical Analysis

Descriptive analysis was used to determine the frequency and percentage, meanwhile the mean and standard deviation was used for presenting the continuous data. Pearson correlation was used to analyse the relationship between two continuous data. For comparing between independent variable of group for more than three (age group and educational level) with average of knowledge, attitude and practice, One Way ANOVA was used. Post hoc multiple comparison was used to identify in detail which factor is significant. The reliability of items was determined using the Cronbach's alpha (CA) coefficient. The data were analyzed using SPSS Statistics 23.0 for Windows in accordance with the purpose of the study and the characteristics of the variables. The significant level was set at $P< 0.05$.

Results

Table 1

Demographic Data (n = 71)

	Frequency	**Percentage (%)**
Age (years)		
< 20 years	9	12.7
20-29 years	23	32.4
30-39 years	13	18.3
40-49 years	23	32.4
50-59 years	2	2.8
60-69 years	1	1.4
Age at first menstruation (**Mean (±SD)**)	12.94 (1.31)	
Ethnicity		
Malay	65	91.5
Chinese	1	1.4
Indian	3	4.2
Others	2	2.8
Religion		
Islam	65	91.5
Buddhist	1	1.4
Hindu	3	4.2
Christian	2	2.8
Education level		
Primary	5	7.0
Secondary	34	50.0
Certificate/Diploma	22	32.4
Degree/Higher degrees	7	10.3
Marital status		
Married	35	49.3
Divorced/Widowed	3	4.2
Single	33	46.5
Family members/relatives who has ever had breast cancer		
None	66	93.0
Mother	3	4.2
Aunty	1	1.4
Others	1	1.4
Do you have any breast abnormalities before this?		
Yes	3	4.2
No	68	95.8

***** Only 68 respondents responded on educational level

A total of 71 respondents has involved in this study with majority of them were age between 20-29 years and 40-49 years. Only one (1) patient age more than 60 years. Besides that, 12.94 years was the mean age of first menstruation. Malay respondents recorded of more than 90%.

Secondary school level was the highest education level recorded in the study with 50% of them, and 49.3% were married respondents. Single respondents recorded of 46.5%. Besides 44% has stated as sometimes on performing breast self-examination, only 31% has performed as regularly. However, 77% of them has been taught on the techniques of performing breast self-examination (Figure 1).

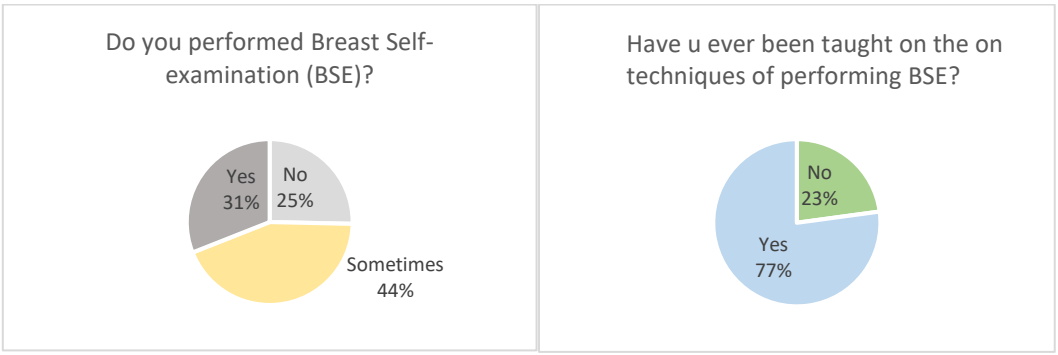

Figure 1: Distribution on performing and been taught on performing breast self-examination (n=71)

Main source of knowledge of breast self-examination was from doctors or nurses (60.6%). A total mean score for knowledge was 3.95, however for attitude a lower mean recorded with 2.88. For practice, mean average recorded was 3.02.

Reliability Analysis

The internal consistency for knowledge and practice were good, as the Cronbach's alpha (CA) value exceeded the acceptable value of 0.7 for all both factors (CA for knowledge, 0.90 and 0.87 for practice). However, for attitude, the CA only recorded 0.45.

Pearson Correlation

Meanwhile, result also indicate a significant correlation between patients' knowledge on BSE with practice (p-value<0.05) with 37.4% correlation. However, there is no correlation exists between knowledge and attitude, and also attitude and practice (p>0.05).

One-Way ANOVA

Result using One-Way ANOVA has revealed a significant mean difference between education level and knowledge of BSE among respondents (p-value<0.001). Post-hoc test of analysis has indicated a significant mean difference between those respondents with primary level of education with secondary, Certificate/Diploma and Degree/Higher degrees (p-value<0.05). Practice has indicated a significant mean difference between respondents' marital status (p-value<0.05).

Table 2
Comparison of the Mean of knowledge, attitude and practice by education level (n=71)

	Education level	Mean	Std. Deviation	F-stat	p-value*
Knowledge	Primary	2.40	1.06	7.773	<0.001
	Secondary	4.14	0.75		
	Certificate/Diploma	4.04	0.59		
	Degree/Higher degrees	3.76	1.08		
Attitude	Primary	3.20	0.39	1.334	0.271
	Secondary	2.87	0.58		
	Certificate/Diploma	2.79	0.36		
	Degree/Higher degrees	3.10	0.55		
Practice	Primary	2.40	0.95	1.444	0.238
	Secondary	3.29	1.22		
	Certificate/Diploma	2.82	1.14		
	Degree/Higher degrees	2.79	0.65		

Table 3
Comparison of the Mean of knowledge, attitude and practice by marital status (n=71)

	Marital status	Mean	Std. Deviation	F-stat	p-value*
Knowledge	Married	4.02	0.84	0.189	0.828
	Divorced/Widowed	3.85	0.61		
	Single	3.89	0.93		
Attitude	Married	2.88	0.60	0.005	0.995
	Divorced/Widowed	2.90	0.33		
	Single	2.87	0.42		
Practice	Married	3.41	1.15	4.527	0.014
	Divorced/Widowed	2.92	0.76		
	Single	2.61	1.04		

Discussion

As summary, this study has concluded that education level and marital status were the only factors that contribute towards respondents' knowledge and practice. This study has revealed a significant outcome which Khalip *et al* (2021) in her study has mentioned that knowledge on BSE has significant relationship with educational level, which parallel with current study (p-value<0.05). Similar with Nimir *et al* (2014); Ibnawadh *et al* (2017) where their study has discovered that nursing students had good overall knowledge towards BSE (Nimir *et al.*, 2014; Ibnawadh *et al.*, 2017). The researcher also believed the higher the knowledge that the young person has, the more they intend to explore the benefit of breast self-examination as early breast cancer screening (Khalip et al., 2021)

Apparently, our study showed practicing on BSE does show a negative impact on attitude (R= -0.131). Wasting time, against cultural belief and not necessary for them to perform BSE were among the top excuses given by the respondents (Okolie, 2012; Haruna *et al.*, 2017). In Khalip *et al.,* 2021 the study also stated a negative outcome between attitude and practicing on BSE.

Besides that, current study has found that practice yet was another significant factor on marital status among respondents. Married respondents have a good intention towards practicing on BSE (p-value<0.05). However, some other studies showed respondents were prone not to practice on BSE due to lack of experience on how to performed (Okolie, 2012; Haruna *et al.*, 2017).

The educational level was found to have a significant relationship with an overall knowledge of breast cancer and BSE (p >0.001), and attitude towards BSE (p >0.001) and breast self-examination experienced (p >0.001).

However, this study also had its limitations. Small sample size, ability to share knowledge, attitude and practice on performing BSE was also part of the factors that author need to focus on the next study.

Conclusion

As a conclusion, providing public health education may increase women's awareness of the signs and symptoms of breast cancer, as well as their understanding of the importance of early detection and treatment. As a result, more women may consult medical practitioners when breast cancer is first suspected, and before any cancer present is advanced. This is possible even in the absence of mammographic screening, which is currently impractical in many countries.

Public education must be combined with health worker education about the signs and symptoms of early breast cancer so that women can be referred to diagnostic services when necessary. Rapid cancer diagnosis must be linked to effective cancer treatment, which in many settings necessitates some level of specialised cancer care. Treatment for breast cancer may be optimised while improving management of other cancers by establishing centralised services in a cancer facility or hospital using breast cancer as a model.

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