

# KNOWLEDGE AND ATTITUDE TOWARD BREAST SELF-EXAMINATION AMONG YOUNG ADULT NURSING STUDENTS IN A PUBLIC UNIVERSITY IN MALAYSIA

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## ABSTRACT

This study aims to identify the knowledge and attitude towards breast self-examination among undergraduate nursing students in the public university at Peninsular Malaysia. The method used in the study is a cross-sectional descriptive study that was conducted among 188 undergraduate students studied in a public university at Peninsular Malaysia. The level of knowledge and attitude of breast self-examination (BSE) measured using self-administered questionnaires. All data were analyzed using SPSS Statistics 23.0 for Windows. The result of the study showed 33% of respondents had experienced BSE. 79.3% of respondents have good knowledge of cancer breast and BSE. 86.7% of respondents know about BSE and 35.1% of respondents had a positive attitude towards BSE. 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 ( $p > 0.001$ ). In conclusion, nursing students had good knowledge of breast cancer but they had not experienced BSE and have a negative attitude in practising BSE. An intervention should be designed to enhance nursing students' proficiency in performing BSE.

**Keywords:** Knowledge; Attitude; Breast Self Examination (BSE); Nursing Students

## INTRODUCTION

Breast cancer is one of the top three cancers in terms of incidence, with many young women presented with the last stages. The World Health Organization reported that female breasts' cancer upheld its position as first cancer that becomes a killer among the women. In 2018, statistical data showed about 1.2 million breast cancer cases diagnosed, which represented 10% of all diagnosed cancers (WHO, 2013; Yip, Pathy, & Teo, 2014). Nevertheless, breast cancer survival rate may increase with early detection and early screening with breast self-examination (Yip, Pathy, & Teo, 2014; Azeem *et al.*, 2015; Segni *et al.*, 2016). Nonetheless, women's high incidences at a young age were presented with the last stages of breast cancer (Yip, Pathy, & Teo, 2014). There are several studies reported that young age

women had less knowledge about breast cancer. Therefore, they did not know that early detection is very crucial to detect early signs and symptoms of cancer breast. They did not aware that with early detection of breast cancer, the survival rate can be increased (Sambanje & Mafuvadze, 2012; Azeem *et al.*, 2015; Segni *et al.*, 2016).

For years, researchers have highlighted the importance of breast self-examination (BSE) as early prevention for breast cancer, but young women especially university students, did not perform BSE regularly (Sambanje & Mafuvadze, 2012; Ibnawadh *et al.*, 2017). The previous study showed 64.3% of a non-medical student does not practice BSE even though they were aware of the need for monthly breast self-examination (Ibnawadh *et al.*, 2017). This situation

worsened when more than 50% of the undergraduate medical students had not carried out BSE even though they had sufficient knowledge about it. Moreover, they even not aware of the early signs of breast cancer, such as the colour or shape of the nipple changes.

Simultaneously, many studies reported fewer nursing students performed BSE monthly, even though their knowledge on BSE is significantly sufficient. Even though they are aware of the need for monthly BSE (Ozkan *et al.*, 2010; Nimir *et al.*, 2014; Gençtürk, Demirezen & Ay, 2017). Moreover, it is very fearsome when the study found that they practice BSE when they only remember it. The previous studies pointed out that most female nursing students who did not perform BSE had poor knowledge about breast self-examination and early signs of breast cancer (Erbil, 2014; Karadag, Iseri & Etikan, 2014; Muhammed, 2014; Akhtari-Zavare *et al.*, 2015; Ahmed *et al.*, 2018). Besides that, the frequencies of BSE practice in young women are influenced by their educational background, age, and BSE perception and they think that BSE is not necessary and wastes time (Didarloo, Nabilou & Khalkhali, 2017;

Moreover, Despina *et al.*, found a significant positive correlation between self-confidence and frequency in performing BSE (Sapountzi-Krepia *et al.*, 2017). The previous study stated that the nursing student teaches how to perform breast self-examination to their next-of-kin, friends, and relatives (Ozkan *et al.*, 2011). Since they do not practice breast self-examinations, the quality of teaching they give to others can be debated. Alsarairoh and Darawad emphasized that a nursing student should be experienced in BSE for people to trust them and follow what they teach (Alsarairoh & Darawad, 2019). Consequently, nursing students play an essential role as a role model that the young-aged group towards practising the BSE. Thus, to enable nursing students to become role models, they must equip themselves with breast cancer and BSE knowledge. Even more, they should show a positive attitude in practising the BSE regularly. This study was conducted to describe the nursing student's knowledge of breast cancer, attitude, and the practising of BSE, and factors influencing in the one of the public university in the capital city in Malaysia.

## METHODOLOGY

### Study Design

This descriptive study was conducted in the form of

a cross-sectional design to identify the knowledge, attitude, and practices on breast self-examination among 188 undergraduate students who are studied in a public university at Peninsular Malaysia. A simple random sampling was used in this study. With an accepted margin of error of 5% and a 95% confidence interval, the sample size required was 150 respondents, but the researcher only achieved a total respondent 202 parental within the time frame of study (93%). For a respondent that meets the criteria, an explanation was given on the study objectives. The respondent who agreed to participate in the research had to sign the provided consent form before filling in the questionnaire. The study was approved by the University Ethics Committee for Human Research (P/code: FF-2013-300). Throughout the planning, conduct, and reporting of the study, all efforts are made to ensure that research complied with ethical practices' highest standards.

### Instrument

In this study, the knowledge and attitude to BSE measured using the modified self-administered questionnaire developed by Okolie, 2012. The questionnaires have an excellent internal consistency by Cronbach's Alpha of 0.77. In this study, the knowledge on BSE was examined with 25 questions about breast cancer, breast cancer symptoms, early detection methods, and preventive measurement. The knowledge of students regarding cancer breast and BSE were classified into good and poor knowledge. Meanwhile, BSE's attitude was measured with six questions and categorized into a negative and positive attitude.

### Statistical Analyses

In this study, 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  $P < 0.05$ . The descriptive statistics such as frequency and percentage and inferential analyses such as chi-square were used. All data were presented in tables.

## RESULTS

### Characteristics of the Socio-Demographic Data

A total of 188 respondents is involved in this study (Table 1). Out of that, 63.8% of the respondents were aged 18 to 21 years and enrolled in a Bachelor of

Nursing program (52.1%).

**Table 1: Respondents' Data (n=188)**

Demographic Data	n (%)
<b>Age</b>	
- 18 - 21 years	120 (63.8)
- 22 and above	68 (36.2)
<b>Tertiary Education Level</b>	
- Student Diploma	90 (47.9)
- Student Degree	98 (52.1)
<b>BSE Experience</b>	
- Yes	62(33.0)
- No	126(67.0)
<b>If no, why?</b>	
- do not have time for it	17 (9.0)
- do not feel it's necessary	14 (7.4)
<b>Overall knowledge</b>	
- good knowledge	149 (79.3)
- poor knowledge	39 (20.7)
<b>Overall attitude</b>	
- Positive attitude	66 (35.1)
- Negative attitude	122 (64.9)

**Characteristics of nursing student's knowledge and attitude towards BSE**

In Table 2, the results showed 79.3% of respondents have good knowledge of overall cancer breast, 86.7% know about breast self-examination and 33% had experienced BSE. The respondents had good knowledge of early signs of breast cancer with a percentage of 72.9% and 76.1 %. The result reported 43.6% of respondents did not know the use of an oral contraceptive and the early onset of menses (38.2%) are related to risk factors of breast cancer. In this study, 89.9% of respondents aware of family history influenced the incidence of breast cancer, and 72.8% had knowledge of the preventive measures or early detection of cancer breast. The results of this study showed 64.9% of respondents had a negative attitude to BSE. Meanwhile, 32.4% stated the BSE was against their cultural beliefs and practices. 31.4% of respondents stated that BSE was not necessary, and the practice of BSE is strenuous and time-wasting (34.6%). The result also revealed 62.2% of respondents would advise their friends to practice BSE.

**Table 2: Knowledge toward BSE (n=188)**

	No n (%)	Yes n (%)
1. Do you know that female is suffering more with breast cancer?	6(3.2)	182(96.8)
2. Do you know self-examination of breast?	25(13.5)	163(86.7)
<b>3. Symptoms of breast cancer</b>		
<b>i. Early sign of breast cancer</b>	49 (26.1)	139.0(73.9)
- breast become warmness	50(26.6)	138(73.4)
- flat or inverted nipple	45(23.9)	143(76.1)
- breast often itching	51(27.1)	137(72.9)
<b>ii. Late signs of breast cancer</b>	13 (6.9)	175 (93.1)
- swollen or increase in size	13(6.9)	175(93.1)
- discharge from nipple	14 (7.44)	174 (92.6)
- pain in the nipple	13(6.9)	175(93.1)
- lump that can be felt	10 (5.3)	178(94.7)
<b>4. Risk factor of breast cancer</b>	52 (27.6)	136 (72.3)
- being women	27(14.4)	161(85.6)
- early onset of menses (before 12 years of age)	72(38.3)	116(61.7)
- family history	11(5.9)	177(94.1)
- diet contains excess saturated fats	66(35.1)	122(64.9)
- late pregnancy or no pregnancy	56(29.8)	132(70.2)
- use of oral contraceptive	82(43.6)	106(56.4)
<b>5. Preventive measure/early detection methods</b>	51(27.1)	137 (72.8)
- physical activities	47(25)	141(75)
- be aware of family history	19(10.1)	169(89.9)
- avoid hormone replacement	70(37.2)	118(62.8)
- check your breast every month	9(4.8)	179(95.2)
- try to keep a low-fat diet	39(20.7)	149(79.3)
- don't forget mammography once in a year	62(33.0)	126(67.0)
- having children at an early age	109(53.7)	87(46.3)
<b>Nursing student's attitude</b>		
1. BSE is not necessary	59(31.4)	129(68.6)
2. The practice of BSE is strenuous and time-wasting	65(34.6)	123(65.4)
3. The practice of BSE should be encouraged	10(5.3)	178(94.7)
4. BSE is against my cultural belief and practice	72(38.4)	116(61.7)
5. It does not matter whether I practice it or not	121(64.4)	67(35.6)
6. I will advise my friends to practice BSE even though I may not be practicing	71(37.8)	117(62.2)

**Relationship between Socio-Demographic Data, Knowledge, and Attitude towards BSE**

Table 3 showed a significant relationship between the educational level with an overall knowledge of

cancer breast and BSE ( $p > 0.001$ ), and attitude towards BSE ( $p > 0.001$ ). The educational level also found to have a significant relationship with the experienced BSE ( $p > 0.001$ ).

**Table 3: Analysis of Nursing Students' Practice towards BSE (N=188)**

	Level of knowledge		X <sup>2</sup> Stat(df) P	Attitude		X <sup>2</sup> Stat(df) P	Practice		X <sup>2</sup> Stat(df) P
	Yes	No		Good	Poor		Good	Poor	
<b>Age</b>									
• Below 21	93 (96.7)	27 (3.3)	$\chi(1) = 0.622,$ $p = 0.43$  Phi Cramer's = $0.06(p = 0.43)$	48 (96.7)	72 (3.3)	$\chi(1) = 3.49,$ $p = 0.06$  Phi Cramer's = $0.26(p > 0.001)$	44 (21.7)	76 (78.3)	$\chi(1) = 2.04,$ $p = 0.15$  Phi Cramer's = $0.22(p = 0.002)$
• Above 21	56 (97.1)	12		18 (97.1)	50		18 (14.7)	50 (85.3)	
<b>Educational level</b>									
• diploma	61 (94.4)	29 (95.6)	$\chi(1) = 13.8,$ $p > 0.001$  Phi Cramer's = $0.27(p > 0.001)$	56 (65.3)	34 (88 (36.7))	$\chi(1) = 55.72,$ $p > 0.001$  Phi Cramer's = $0.48(p > 0.001)$	52 (26.7)	38 (73.3)	$\chi(1) = 48.04,$ $p > 0.001$
• degree	88 (2.0)	10 (98.0)		10 (63.3)			10 (12.2)	88 (12.2)	

**DISCUSSION**

On overall findings, most of the respondents showed good knowledge of breast self-examination, breast cancer and aware of late signs of breast cancer. While only a few of the participants unaware of the risk factors of breast cancer and have insufficient knowledge of the early signs of breast cancer such as breasts become warm, flat or inverted nipple or breast itchiness. In this study, most of the respondents that had experienced performing BSE are among the respondent aged below 21 with degree level of education. Moreover, the educational levels were significantly associated with the level of knowledge, attitude and experienced BSE. This finding is similar to several previous studies in which they reported that the nursing students had good overall knowledge towards BSE (Nimir *et al.*, 2014; Ibnawadh *et al.*, 2017). However, lacking knowledge in the early signs of breast cancer and risk-factor in undergraduate nursing students is suggestive of an insufficient emphasis on the importance of primary prevention in the nursing curriculum (Muhammed, 2014). Thus, the researcher had recommended the need to re-inform on the warning signs of breast cancer and more emphasis should be given on the early signs as it will help to make early detection of breast cancer.

In this study, the nursing students were inexperienced in practising BSE even though they are knowledgeable about breast cancer and BSE. Indeed, the experienced in practising BSE was significantly associated with the level of education ( $P < 0.001$ ). Similarly, the previous study conducted in the Eastern Region of Saudi Arabia in which they found the practice of BSE was significantly associated with the participants' educational level

(Didarloo, Nabilou & Khalkhali, 2017). The researcher 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. As a result, they recognize the importance of regular breast examinations, and they might practice it. It is reasonable when past research found the majority of nursing students that practice BSE regularly had high knowledge of breast cancer and BSE (Erbil, 2014; Muhammed, 2014; Akhtari-Zavare *et al.*, 2015; Gençtürk, Demirezen & Ay, 2017; Ahmed *et al.*, 2018).

In response to attitude to BSE, most of the respondents in this study had a negative attitude toward practising BSE and only 33% reported examining their breast. They believed breast self-examination was wasting time, against their cultural beliefs and not necessary for them to do. The results of this study are supported by the results of previous studies in which the young women that did not practice BSE regularly are among who believed unnecessarily to practice BSE and forgetfulness (Okolie, 2012; Haruna *et al.*, 2017). Surprisingly, several studies reported the nursing students did not know how to perform BSE correctly. In contrast, three-quarters of nursing students in Ayed *et al.* (2015) study had a positive attitude to BSE and practice BSE monthly. The perceived seriousness of breast cancer and knowledge about breast cancer affects the ability of individuals to perform BSE as early breast cancer prevention.

Apart from that, nursing students with a low perception of cancer barriers but a high perception of benefit are the ones that performed BSE regularly (Okolie, 2012; Erbil, 2014; Akhtari-Zavare *et al.*, 2015)

Therefore, many researchers highlighted the importance of education programs that can enhance the university students' proficiency in performing breast self-examination (Mohammad, Bayoumi & Megahed, 2013; Alsarairh & Darawad, 2019). As future health workers, these nursing students should continuously update their knowledge on the risk factors, especially the highly critical criteria for early detection rather than other factors.

This study also had its limitations. Firstly, due to the self-administered nature of the questionnaires; therefore, it had limited in its ability to confirm by other data sources and reporting bias may have been introduced. Secondly, a small sample size due to only one faculty was selected as a sample study because of the time constraint and mode of study. Small sample size may lead to bias and can produce false-positive results. However, an obvious strength of small sample sizes is that the research question can be addressed within a relatively short span of time.

## CONCLUSION

Majority of the respondents in this study have heard about breast cancer and BSE as well as they have good knowledge about it. Somehow, the respondents have a poor attitude toward practising BSE but showed a positive attitude toward encouraging breast self-examination to

others even though they are not practising it.

For recommendations, more studies on young women within the environment of local universities to predict the reasons for not practising BSE and the impact on using varieties of educational strategies related to breast cancer and BSE practice. Moreover, a qualitative study was suggested as being used in the future to explore factors influencing BSE practising among undergraduate nursing students. The implication of this study is very beneficial to the nursing professions and it also improves health awareness and BSE practice among future health professionals, especially nurses. Thus, an idea can be created on how to enhance their clinical skills in performing BSE efficiently. Furthermore, to sustain their engagement of practising it so that they can motivate themselves and others as well.

## Conflict of interest

The authors declare no conflict of interest for the study.

## ACKNOWLEDGMENT

The authors are thankful to the institutional authority for completion of the work.

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