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Healthcare

KNOWLEDGE AND PRACTICE OF BREAST SELF-EXAMINATION AMONG COLLEGE STUDENTS IN PRIVATE UNIVERSITY

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ABSTRACT Breast self-examination is a simple, very low cost /no cost, noninvasive with no special material/tool required and it is an effective diagnostic method for breast cancer, which only takes five minutes to apply. The main objective of the study to assess the level of Knowledge and Practice of Breast self-examination among nursing and physiotherapy students in selected Private University in Malaysia. A descriptive, cross-sectional survey design was adopted for this study and Simple random sampling method was used to select the 85 nursing students from nursing faculty and 85 Physiotherapy students from Allied Medical Science, total of 170 students were included. Validity and reliability were examined with ethical approval from both faculties. Results revealed that overall 81.2% of the respondents had good knowledge towards BSE, The major source of information about BSE (40.0 %) from mass media & classes and 21.2% practices BSE always every month. There was a significant difference between Knowledge & Practice and Academic on BSE. (P= 0.012, p=0.009) respectively. The highest level of BSE practice were from Nursing student and Highest level of knowledge on BSE were from Physiotherapy students. Study concluded that, the overall good knowledge on BSE were identified, but low Practice of BSE was recorded. Mass Media is an important source of information about BSE to improve awareness among students, it is highly recommended to include BSE in the curriculum and BSE Practice among the student must be emphasized.

BACKGROUND

Breast cancer is the most common cancer in women worldwide, with nearly 1.7 million new cases diagnosed in 2012, representing about 25 per cent of all cancers in women. Incidence rates vary widely across the world, from 27 per 100,000 in Middle Africa and Eastern Asia to 92 per 100,000 in Northern America. It is the fifth most common cause of death from cancer in women, with an estimated 522,000 deaths (6.4 per cent of the total). It is also the most frequent cause of cancer death in women from regions characterised by lower indices of development and/or income (14.3 per cent of deaths), and the second most frequent from regions characterized by higher indices of development and/or income (15.4 per cent of deaths), after lung cancer. There were over 2 million new cases in 2018 (World cancer research fund network,2018).The most important strategies for achieving early detection of breast cancer are mammography and physical examination of the breasts by a physician or qualified health workers or clinical breast examination (CBE) and breast self-examination (BSE). Breast self-examination allows women to discover if there is exist tumors as small as from 1cm. In most cases, Neglecting Breast self-examination makes women visit the doctor with tumors bigger than 5 cm, which unfortunately is Common and present in 85% of patients in specialized care (Velarde R., 2010).

As many studies indicated the practices of BSE are low among university students. According to (Amal, R., 2014) a Malaysia Journal of public health medicine explore the knowledge and practice about the Breast self-examination among students in one of the Private University in Malaysia. 95.5% of the students reported they had knowledge on BSE but only 19.5% had sufficient knowledge and practice on BSE (Chong, et al.,2002). Limited knowledge about the realities of breast cancer and lack of knowledge about the importance of self-examination and how it is performed are the main barriers for not practicing BSE. Therefore, this study aimed to assess the knowledge and practices of BSE among university students.

The general objective

To assess the level of Knowledge and Practice of Breast self-examination among Nursing and physiotherapy students in the selected Private University in Malaysia.

The specific objective

1. To determine the level of knowledge on breast self-examination among Nursing and physiotherapy students.
2. To evaluate the level of practice of breast self-examination among Nursing and physiotherapy students.
3. To compare the Level of knowledge and practice of BSE among Nursing and Physiotherapy Students.
4. To assess the association between social demographic data and Knowledge , Practice of breast self-examination among Nursing and physiotherapy students.

Literature Review

Habu H. et.al, (2017) conducted a study to assess the knowledge of BSE among university students at Maiduguri, Nigeria. Non-experimental, descriptive survey method was adopted to assess the knowledge and practice BSE. Random sampling was used to select the 109 students from university. Study findings shows that the majority of the students have knowledge and practice of Breast self-examination. There was a significant relationship between knowledge and practice of Breast self-examination.

A cross sectional study was conducted by Amal, R., (2014) to assess the knowledge on BSE among university students at Management Science University Malaysia. Randomly 200 students between 18-22 years were selected and self- administer structured questionnaire was used for data collection. Results shows that , majority of the respondents (85%) heard and read about Breast Self-examination and their major sources of information was from newspapers which was 38% where as Television was 31.9% . However, overall good knowledge on BSE was 19.5% which was consider very low. It is recommended to play an important role of Mass Media to disseminate the information on BSE to the students in order to improve their knowledge in the community.

A observational cross-sectional study was conducted by Dalal, M. N., et, al.(2014) among female nursing and physiotherapy students in Saudi Arabia. Totally 378 sample were included and self-administered questionnaire was used to collect the data about knowledge and practice towards BSE. The result shows that only 17% of the participant reported that they practice BSE monthly, while 39% never perform it and lack of knowledge about steps of practicing BSE (20.8%). Overall, Low practice level was revealed and the authors mandated community- based awareness programs in the community to improve the practice of BSE.

Mohd, R. H., (2017) conducted a cross sectional study on practice of BSE among university students at UKM Malaysia. Randomly 364 samples were selected and self- administered questionnaire was used

to collect the information on practice and knowledge of breast self-examination. The results showed low practice on Breast self-examination among the student despite the claims that they have heard about breast self-examination. Only 37.1% able to performs BSE correctly and small number of students in this study who practiced BSE (39.5%) while the majority (60.5%) didnot. The Author suggested that student should be educated both theoretically and practically concerning practice of BSE and the correct technique.

Methods
Research Design
Quantitative Survey research design was adopted for this study.

Study Setting
This study was conducted in a private University in Klang Valley, Malaysia. This institution offers program in various levels, from foundation, diploma to degree and postgraduate programs in fields such as Business & Accounting, Engineering, the American Degree Transfer Program as well as Healthcare programmes such as Medicine, Dentistry, Pharmacy, Physiotherapy, Nursing, Biomedical Sciences, Radiography as well as Environmental Health. More than 5000 students are studying various programmes in the university.

Population
The target population includes all the Nursing and physiotherapy students in selected private university.

Sampling
The simple random sampling method was used to select the 170 respondents of Nursing and Physiotherapy Students in a selected private university in Malaysia. The inclusion criteria for this study were;
- The participants must be within the academic session (3 and 4) student studying in the private university.
- Must be able to read, understand and write in English language.
- Age range of 17 years and above.

Variables
In this study variables are Knowledge, practice of breast self-examination and sociodemographic variables are Age, ethnicity and family history of Breast related disease.

Instruments
A structured survey instrument was used for data collection. The instruments were adapted from Hazne Azira Romli and Kasmah Wati Padi, (2017) to determine the knowledge and practice of breasts self-examination examination. The questionnaire consists of three sections as follow;

Section A - Sociodemographic data consist of Age, ethnicity and family history of Breast related disease.

Section B - This section consist of 14 items to assess the knowledge about Breast self-examination using Likert scale with options 1=Strongly Disagree (SD) 2=Disagree (DA) 3=Neutral (N) 4=Agree (A) 5=Strongly Agree (SA) Respectively.

Section C - Consist of 14 items to determine the practice of practice of breast self-examination examination. The Likert scale with option 1=Strongly Disagree (SD) 2=Disagree (DA) 3=Neutral (N) 4=Agree(A) 5=Strongly Agree (SA) Respectively. The Cronbach's Alpha test was carried out to examine the reliability of the instrument (r = 0.783).

Data Collection Procedure and Data Analysis
The written consent from concerned authority and participants were obtained. Briefing on aims, objectives, process and expected outcomes of research were explained to the participants. With the help of the HOD / Coordinator, the researcher was able to gather the students in a well arranged conducive environment. Finally, the researcher distributed the questionnaire to the students to enable them fill the questionnaire conveniently and data was collected. The data was analyzed using the SPSS version 25.0 and the frequency, percentage, graph, table, and charts were used to display the results.

Ethical Consideration
Ethical approval was secured from selected private university and Permission was obtained from participants. The participants were informed about the rights of participation and the right of withdrawal from the study any time. Confidentiality and Anonymity was maintained throughout the study.

Results and Discussion
Sociodemographic characteristic
A number of 170 (85 Nursing and 85 Physiotherapy students) participants enrolled in this study. Majority were between the Ages of 20-24 years old 77(45%) while minorities were between the ages of 25-30 years old 37(22%). Majority were year one students 67(40%), followed by year three 42 (24%), and year two 43(25%) while minority were in year four 18 (11%). On the other hand, in the survey 60(35%) Malays, 25 (15%) Chinese, 38 (22%) Indian and others 47 (28%) which were from African and some other countries across the globe. Based on Menstrual cycle 13 (66%) has a regular flow and 57 (34%) respondents experience irregular menstrual cycle. Majority of participants family members not having any history of breast cancer 125 (27%) and only 45(27%) has family history of breast cancer.

Knowledge of Breast Self-Examination among Female students
Table 1: Item wise analysis of Participants Knowledge on Breast self-Examination.

S/N	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Breast self-examination is a method which involves the woman herself looking at and feeling each breast for possible lumps, distortions or swelling	26(15.3)	26 (15.5)	29 (17.1)	40 (23.5)	49 (28.8)
2	I have heard about breast self- examination	8 (4.7)	24 (14.1)	20 (11.8)	54(31.48)	64 (37.6)
3	Knowledge on Breast self- examination can be acquired through various means eg TV,Newspaper, Classes etc	6 (3.5)	20 (11.8)	30 (17.6)	68 (40.0)	46 (27.1)
4	I have good Knowledge about breast self-examination	7 (4.1)	22 (12.9)	44 (25.9)	62 (36.5)	35 (20.6)
5	A woman should start breast self- examination from 15 years above	12(7.1)	21 (12.4)	32 (18.8)	67 (39.4)	38 (22.4)
6	Axillary examination is part of breast self-examination	9 (5.3)	20 (11.8)	30 (17.6)	55 (32.4)	56 (32.9)
7	Breast Self-Examination as a woman is a key tool to detect breast cancer early	5(2.9)	25(14.7)	31 (18.2)	60 (35.3)	49(28.8)
8	Early detection improves chances of survival from any breast abnormality eg cancer	8 (4.7)	19 (11.2)	28 (16.5)	50 (29.4)	65 (38.2)
9	A woman should examine her breasts while in the shower	10 (5.9)	19 (11.2)	39 (35.9)	61 (35.9)	41 (24.1)
10	Breast should be examined once monthly	13 (7.6)	9 (11.2)	38 (22.4)	58 (34.1)	42 (24.7)
11	Breast self-examination during shower make the lump more visible	9 (5.3)	26 (15.3)	40 (23.5)	67 (39.4)	26 (16.5)
12	The best time to examine the breast is 5 to 7days after menstruation	10 (5.9)	15(8.8)	35 (20.6)	55(32.4)	55 (32.4)
13	Need to press on the nipple to check for any unusual discharge	9 (5.3)	19(11.2)	28 (16.5)	75 (44.1)	39 (22.9)
14	Retraction of the nipple is warning sign that should be observed	24(14.1)	2 (12.4)	28 (16.5)	50 (29.4)	47(27.6)

Table 1 findings of the study revealed that, Majority of the participants agreed that they need to press on the nipple to check for any unusual discharge 75 (44.1%). 67 (38.4%) Said the Breast self-examination during shower make the lump more visible and woman should start breast self- examination practice from 15 year above. Majority of the participants gained Knowledge on Breast self- examination through TV, Newspaper and Classes etc 68 (40.0%). One third of the participants aware about the early detection improve chances of survival from any breast abnormality e.g. cancer 65 (38.2%). Most of the participant strongly agreed that, the Axillary examination is part of breast self-examination 56 (32.9%).

Overall, Majority of the participants has high level of knowledge on BSE 138 (81.2%), followed by moderate knowledge 20 (11.8%) and low knowledge 12 (7.1%).
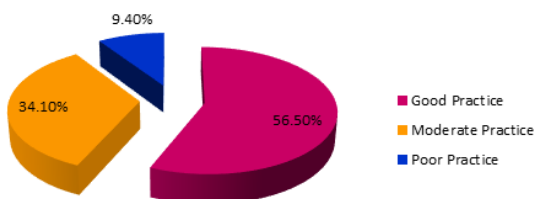
Figure 1: Percentage distribution of participants based on their overall knowledge score on BSE.

Practice of Breast Self-Examination among Female students
Table 2: Item wise analysis of Participants level of practice on Breast self examination.

S/N	Items	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I often practice Breast Self-examination monthly	32(18.8)	38 (22.4)	48 (27.1)	38 (21.1)	18 (10.6)
2	I perform breast self-examination 5-7 days after menstruation	22 (12.9)	42 (24.7)	32(18.8)	44 (25.9)	30 (17.6)
3	I was taught how to practice Breast self-examination in university	28 (15.3)	35 (20.6)	22 (12.9)	41 (24.1)	46 (27.1)
4	I perform breast self-examination last month.	30 (17.6)	46(27.1)	34 (20.0)	36 (21.2)	24 (14.1)
5	Best environment to perform Breast self-examination is at home	22 (12.9)	26 (15.3)	33 (19.4)	55(32.4)	34 (20.0)
6	Lump detection is easier to feel during shower	21 (12.4)	31 (18.2)	43 (25.3)	48(28.2)	27(15.9)
7	Woman should perform breast self-examination monthly	23 (13.5)	32 (18.8)	28 (15.3)	42 (24.7)	47 (27.6)
8	Woman should perform breast self-examination twice in a month	34 (20.0)	38 (22.4)	33 (19.4)	40 (23.5)	25 (14.7)
9	I practice breast self-examination following the 5 correct steps of Breast self-examination	17(10.0)	35(20.6)	43 (25.3)	33 (19.4)	42 (24.7)
	Steps to perform breast self-examination;					
10	Stand in front of a mirror inside your shower to observe both breasts for sizes	20 (11.8)	28 (16.5)	32 (18.8)	49(28.8)	41 (24.1)
11	Lie down on your back with a pillow under your right shoulder in lying position for breast examination	21 (12.4)	33 (19.4)	41 (24.1)	43 (25.3)	32 (18.8)
12	Raise both hands up in front of a mirror to observe for any changes during	20(11.8)	35(20.6)	31 (18.2)	50 (29.4)	34 (20.0)
13	Put my left hand under my head to examine left breast and vice versa to examine the right breast	22 (12.9)	34 (20.0)	28 (16.5)	43 (25.3)	43 (25.3)
14	Palpate my breast using 3 – 4 fingers from inner to outer part at least 3 rounds twice in circles, wedges or lines method.	25 (14.7)	33 (19.4)	21 (10.4)	39 (22.9)	52 (30.6)

Table 2 depicted that, the Most of the participants agreed the best environment to perform Breast self-examination is at home 55(32.4%). One fourth of the participants agreed that, the Lump detection is easier to feel during shower 48(28.2%) and Woman should perform breast self- examination monthly 47 (27.6%). 46 (27.1%) participants learned the practice of Breast self- examination in university and they perform breast self-examination 5-7 days after menstruation 44 (25.9%). Participants were strongly agreed of practicing breast self-examination following the 5 correct steps 42 (24.7%). The overall practice scores of the participants on BSE revealed that the majority of them have good practice 96 (56.5%), followed by moderate level of practice 58(34.1%) and minimal percentage has poor practice 16 (9.4%).

Figure 2: Percentage distribution of participants based on their overall level of practice score on BSE.
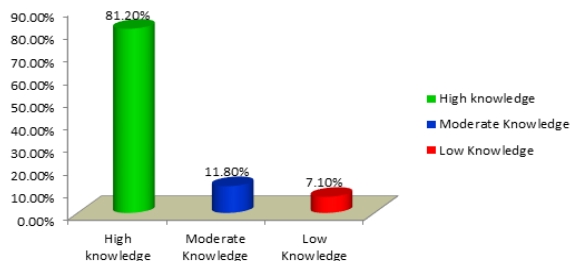

Comparison of level of knowledge and practice of BSE
There was differences in means score on level of Knowledge and practice between Nursing and Physiotherapy participants. Conclusively, nursing students has highest Practice level on BSE than Physiotherapy students while Physiotherapy student has highest Knowledge on BSE than nursing students.

The chi square values computed between knowledge of the participants on BSE and age, year of study was found to be statistically significant at p<0.05. Whereas, the association between the level of Practice of BSE and year of study was found to be statistically significant at p<0.05.

DISCUSSION
The survey shows 54% of the respondent agreed that they have heard about BSE, which indicated that, the respondents were aware about BSE, Similar findings reported in other studies where 97% and 92% of the respondents were aware of breast cancer (Nwagbo and Akpala, 1996). The study shows a high level of knowledge on BSE among the student (81.2%). Around 68 (40%) had received information about Breast self-examination social media e.g. TV, Paper and classes ,Similar observation was reported in Bassey et., al study (2011) where 58.6% of the respondents' first source of information was obtained from television/ radio, also supported by Irurhe et al. (2009). Media played a significant role as the main source of information about breast cancer; therefore, an important effort should be intensified in using these media to create breast cancer awareness within the Malaysia community. Only 27.1% where thought on how to do BSE in the university so it should be adopted in the student curricula from first year to last year of studies.

Regarding knowledge on how many time to perform BSE in a month, The percentage of students who are aware that BSE was to be performed monthly from the survey study was 44.1%, with 32.2% knowing that it was to be performed 5 – 7 days after menstruation this agrees with study by Mesfin T. S., et al., (2016) on 368 students at Adama Science and Technology University, Ethiopia which shows that Concerning their knowledge on the frequency BSE, 162 (44.1%) of the respondents correctly reported that BSE should be done monthly.

Based on practice of BSE, a low level of practice was noticed by the student (56.5%) .The similar study conducted by Fitsum D., et., al (2018) and results shows only 42 (21%) performing Breast self examination and only 21% agree on regular Practice of BSE monthly

5-7 days after menstruation . The current study shows 21.1% agrees that they perform BSE last month; in contrast to this, study by Suh M. et., al (2012) shows BSE performed monthly 45.8% with 21.1% knowing that it was to be performed after menstruation. This study result shows that respondent have low knowledge regarding practice of BSE, it might be due to lack of teaching on BSE Practice or may be because most of them are in year 1 and 2.

CONCLUSION AND RECOMMENDATION

The conclusions drawn from the present study are that the practice of BSE is poor among the respondents in spite of most of them had heard about BSE. The second major finding was that social media e.g newspaper, TV as well as lectures from classes where their most common ones use as source of information. These findings suggest the necessity of providing continuing educational programs to increase the standard of practice of BSE which in-turn will increase positive effect on both their knowledge and practice of BSE. The students should be educated - both in theory and practical on BSE performance .The wide gap between knowledge and practice could be reduced through a regular practice of BSE in the Skills laboratory of each faculty with well-defined strategies.

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