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The Effect of Breast Self-Examination Training Program on the Knowledge, Attitude and Practice among Female Nursing Students at Faculty of Nursing, Alexandria University, Egypt

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Abstract: *Breast cancer is a serious disease with potential high morbidity and mortality. It is the commonest malignancy in women. Approximately one million new cases of breast cancer are diagnosed each year worldwide. Breast cancer is the commonest cancer among women in Egypt. Late presentations of breast cancer cases have been consistent for three decades. The efficacy of breast self-examination in helping to reduce mortality from breast cancer has not been rigorously demonstrated. The study was designed to evaluate the effect of breast self-examination training program on the knowledge, attitude and practice of breast self-examination among female nursing students in Faculty of Nursing, Alexandria University, Egypt. The research hypothesis showed that, the knowledge, attitude and practice of female nursing students in Faculty of Nursing, Alexandria University, Egypt will be improved after implementation of the structured training program. Methods: A quasi experimental design was utilized in this study. A convenience sample of 115 adult female nursing students was chosen from first year students in the faculty of nursing. Data was collected through three tools: used for data collection 1) self-administrated questionnaire to assess bio-sociodemographic data 2) pre & post knowledge assessment sheet related to breast cancer and breast self-examination 3) observation checklist to assess the practice of the participants related to breast self-examination. Two constructive BSE training sessions were carried out, in the form of lectures, group discussions demonstration and re-demonstration. Each participant was given a self-administered questionnaire, which was designed to evaluate information such as bio-sociodemographic data, level of knowledge of breast cancer, the attitude of the participant toward BSE and its practice. A pre-test performance technique established. Followed by the developed manual discussion training about BSE knowledge and technique. Post-test was used to evaluate students' Knowledge, attitude and practice of BSE and done two months later. Results: The results revealed that the mean age was 20.41±4.94 years and the majority (93.9%) of them were single. In relation to the area of residence, 67.0% of them were from urban. Regarding the family history of breast cancer, the majority (90.4%) of them had not family history while (6.1%) of them had mother history. In relation to history of self-affection, 5.2% of them had a history of breast lump. (74.8%) of the participant did not perform BSE while most of respondent agreed that BSE was important (83.5%) because it helps early detection of breast cancer. Majority of respondents became aware due to the college curricula (17.9%). The attitude of respondents to breast self-examination was good, most of the respondents, 98.5% thought breast self-examination was necessary. Respondents' practice of breast self-examination was also good with 80.2% of the respondents claiming to carry out breast self-examination regularly. The level of awareness of breast cancer and breast self-examination was high among nursing students of the Faculty of Nursing, Alexandria University. The post-test results showed progress in overall knowledge, attitude and practice of breast self-examination. In conclusion, applying the planned manual for BSE to female nursing students was effective in improving their Knowledge, attitude and practice of breast self-examination which in turn improve their quality of life. Illustrated manual should be available as a reference for female nursing students is recommended [Heba Abdel Mowla Ahmed, Eman Abdel Aziz Ahmed, and Nadia Yasein Aljaber. Knowledge, attitude and practice of breast self-examination among Female Nursing Students in Faculty of Nursing, Alexandria University, Egypt].*

Keywords: *Knowledge, attitude, practice, breast self-examination (BSE).*

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I. Introduction

Breast cancer is by far the most frequent cancer of women (23% of all cancers), ranking second overall when both sexes are considered together. It is the leading cause of cancer mortality in women and constitutes 14% of female cancer deaths.[1] Incidence rates are increasing in most countries, and the changes are usually greatest where rates were previously low.[2] In Saudi Arabia, while it had once been presumed that the incidence of breast cancer was low; more recent data have indicated that it is a significant disease in this community, as elsewhere in the world.[3, 4]. The pattern of breast cancer in Arab countries is very disturbing. [3, 5, 6] For Egyptian females breast cancer had the highest incidence among Egyptian population (12 cases/100,000 populations), it increased by 3 folds (50 cases/100,000 populations) over the last 33 years.[7] The impression among Arab physicians dealing with breast cancer is that it presents at an earlier age and at a more advanced stage as compared to western countries. However, the statistical data to support this impression are remarkably scarce.[8] the risk of breast cancer increases with age. The primary factors that increase the risk of breast cancer in women include certain inherited genetic mutations, a personal or family history of breast cancer, and biopsy-confirmed hyperplasia.[9] Since breast

cancer is a progressive disease, small tumors are more likely to be at an early stage and their early detection is more likely to have more successful treatment and a better prognosis.[10] The three screening tests usually considered for early detection are clinical breast examination (CBE), X-ray mammography, and breast self-examination (BSE).[11,12] In industrial countries breast cancer mortality is declining where screening mammography is the standard for care.[13] BSE is appealing as a patient-centered, non-invasive screening procedure that allows women to become comfortable with their own bodies.[14] Regular performance of BSE does not mean that the breast cancer is necessarily self-detected. BSE increases body awareness, so that there is heightened awareness of changes that may be detected during BSE or at some other time.[1] Although, the American Cancer Society recommended in 2013 that women beginning in their 20s should be told about the benefits and limitations of BSE, this procedure is not considered the best method for early detection but the best option for interval screening among women of all ages.[15] The importance of knowledge of these risk factors and the need for every woman to be aware of the need for surveillance on her breasts and the various ways to do this cannot be over emphasized. Secondary prevention, the detection and treatment of early disease, is the only method currently available to reduce mortality from breast cancer [(1-8)]. Although mammography, with and without clinical breast examination by a physician or nurse, has been shown to be effective in reducing mortality from breast cancer in women who are older than 50 years [(1-3)], it requires considerable expenditure of funds; therefore, it is not practical for use in some populations. Breast self-examination (BSE) requires less monetary expense and is a procedure that can be performed by every woman on a regular basis. Theoretically, this procedure should be of value in detecting interval cancers that become palpable between annual mammographic screenings, and it may be more sensitive than a clinical breast examination because women may be able to detect subtle changes in their own breasts that might not be discernible on manual palpation by others.

`Most studies have shown that women who reported regular practice of BSE presented with smaller tumors [(9-16)] and neoplasms that had less frequently spread to the axillary lymph nodes [(9-15,17)] than women who did not practice BSE. More favorable survival rates have also been observed among women with breast cancer who reported having practiced BSE than among women who did not [(18)], but the extent to which this is due to lead time bias is unknown, and one U.S. study [(19)] showed that women who regularly practiced this procedure tended to have other characteristics associated with favorable disease outcome. One case–control study [(20)] showed that the poor knowledge and wrong beliefs about cancer breast prevention among women are responsible for a negative perception of the curability of a cancer detected early and of the efficacy of the screening tests.[16] Studies that detect the awareness of breast cancer and the practice of BSE among Arab women were few and pointed to a lack in breast cancer knowledge of females.[17–20] Since teachers play an effective role in communication and motivation of young students, assessment of their knowledge, attitudes and behaviors is essential to reduce the risk of breast cancer among future young generations. However, the practice of any of these screening methods is dependent on the awareness about breast cancer. If this knowledge is poor among those who should teach others, there will be difficulty in promoting these lifesaving methods. Therefore, this study was designed to evaluate the knowledge, attitude and practice of breast cancer screening among female nursing students. This study aimed to assess Knowledge, attitude and practice of breast self-examination, identify barriers and causes the affect the practice of breast self-examination and improve the Knowledge, attitude and practice of breast self-examination among female nursing students in Faculty of Nursing, Alexandria University, Egypt.The rising incidence of breast cancer and increasing mortality from this disease are major health concerns, all over the world. A primary reason for escalating mortality is lack awareness, lack of early detection program and late diagnosis of the disease (Osteen, 2011, Martin &, Weber, 2009).Some signs of breast cancer can be detected before testing. The most common of these symptoms is new lump or mass in the breast. When a lump has uneven edges, is painless, hard and immobile it is more likely to be cancerous. When a lump is tender, soft and round it is less likely to be cancerous. It is important to have any unusual lump checked out by a doctor. There are other symptoms of breast cancer may include: swelling of all or part of the breast, skin irritation or dimpling, breast pain, nipple pain or nipple turning inward, redness, scaliness, or thickening of the nipple or breast skin. A nipple discharge other than breast milk, a lump is the underarm area sometimes breast cancer can spread to the lymph nodes under the arm before a breast tumor is a large enough to be felt (Mayo Foundation for Medical Education and Research (MFMER), 2011)**.** The American Heritege. Dictionary of the English language, 2009). Early detection of breast cancer is one of the best ways to save a woman's life. Breast Self-exam comprises one portion of the triad of early detection of breast abnormalities, the other two being professional breast exams and screening mammography. This is appropriate, as most breast abnormalities are first discovered by the woman (Jemal et al., 2006, Seif &, Maziz, 2000). Breast self-examination (BSE) is a diagnostic technique regularly performed by a woman, independent from a physician, both by feeling for anything suspicious in her breasts and by observing any changes through the use of a mirror. BSE should be performed monthly in order to discover changes in breast tissue (Smith et al**.,** 2006**)** he best time for BSE is about a week after a woman's period ends when breasts are not tender or swollen. Women who do not have regular periods should do BSE on the same day every month. Women who are pregnant, breast-feeding, or have breast implants also need to regular breast self-examination (Seah & Tan, 2007).he Royal College of Nursing (RCN) emphasized that nurses play an important role in teaching BSE and they are in an appropriate position to teach breast cancer awareness with no extra cost (Vurur et al., 2005) Many studies have shown that nurses have positive influence on women's breast cancer knowledge and BSE practice (Soyer et al., 2007, Babu, et al., 2011).

1.1Significance of the study:

According to the National Cancer Institute in Cairo, many Egyptian women fail to seek medical treatment or preventive screening, making it more difficult to treat cancers. Worldwide, breast cancer accounts for 22.9% of all cancers excluding non-melanoma skin cancers in women (El-Saghir et al., 2007). In 2008, breast cancer caused 458,503 deaths worldwide and is more than 100 times more common in women than men (yousuf, 2010). According to official statistics of the National Cancer Institute (Cairo University), breast cancer accounts for 35.1% of the cases of cancer in Egypt and is the most prevalent cancer among Egyptian women. In Egypt, the median age at diagnosis for breast cancer is ten years younger than in the United States and Europe (El-Saghir et al., 2014)

II. Aim of the Study

Evaluate the effect of breast self-examination training program on the knowledge, attitude and practice of breast self-examination among female nursing students in Faculty of Nursing, Alexandria University, Egypt**.**

2.1 Research hypothesis:

The knowledge, attitude and practice of female nursing students in Faculty of Nursing, Alexandria University, Egypt will be improved after implementation of the structured training program and the mean the knowledge, attitude and practice of breast self-examination after training program will be higher.

III. Material and Methods

Research design:

Quasi experimental study without control group was used to carry out this study.

Setting:

The study was conducted in Faculty of nursing, Alexandria University, Egypt.

Subjects:

A convenient samples of 115 adult female nurse's students from first year of nursing faculty from the previously mentioned setting throughout a period of five months from October 2014 to February 2015.

Tools for data collection:

Based on review of literature the researchers developed a structure questionnaire sheet for data collection. It includes three tools.

Tools:

1-Self-administrated questionnaire which include the **Bio-sociodemographic** characteristics including: age, education, area of residence, family numbers and marital status. It includes also questions about the risk factors of breast cancer such as family history, personal history of breast lump and questions about barriers to practice breast self-examination.

2- Pre/Post knowledge test:

It includes 20 questions about the knowledge **o**f the participants related to breast cancer such as composition of the breast, definition of breast cancer, types, predisposing factors, women who most exposure to breast cancer, signs and symptoms……..etc.

Observation checklist:

It was developed and filled by the researchers to assess the practice of the participants related to breast self-examination technique. The observation checklist includes 22 steps. The constructive training sessions were carried out, in the form of lectures, group discussions demonstration and re-demonstration.

IV. Methods

Official permission to carry out this study was obtained from the previously mentioned setting.

Pilot study

It was carried out after the development of the tool on 10 % of the sample size (9 nurses' students) and those not included in the final study. This study was formulated with the following objectives: test the clarity of the questions, test the validity and applicability of the study tool, accommodate the aims of the study to actual feasibility, identify the difficulties that may be faced during the application, as well as study all the procedures and activities of the administrative aspects. Also, the time of completing the questionnaire was estimated during this pilot study to be 10 minutes. The necessary modifications according to the results obtained were done, so some statements were reworded. Also, the structure of the questionnaire sheet was reformatted to facilitate data collection. Ata was collected through structured questioner sheet to fill information related to demographic data, awareness, knowledge and practice of BSE and barriers to practice breast self-examination**.** A pre-test using the structure questionnaire to identify the knowledge, attitude and practice toward breast self-examination; and data about barriers to practice breast self-examination. A two hours lecture with discussion was presented to the students about the developed manual contents. Post-test using the same structure questionnaire to measure the improvement in the knowledge, attitude and practice toward breast self-examination was done two months later. An Arabic version of the data collection sheet was used. The structured English form was first translated into Arabic by one of the researches. This version was revised and translated back to English by another researcher and compared with the original form to ascertain the precision of translation. The collected data were categorized, tabulated and made ready for analysis. A correct answer was assigned one point, whereas an incorrect answer was given zero. Percent score was calculated for the total score as ‘‘sum of score multiplied by 100/number of answered questions’’.

Ethical and administration consideration:

The Ethical Committee of the faculty of nursing approved the research. An official permission and official letter was obtained from the administrator of the pre-mentioned settings to get the permission for data collection and program implementation. The purpose and the nature of the study was explained to the participants. The participants were informed that they had the right to withdraw from participation and were assured that the results would be used only for the study. A written format explaining the purpose of the research was prepared to be signed by the nurses' students. In order to maintain confidentiality, questionnaires were made anonymous.

Field work:

After making the necessary modification to ensure the clarity of the study tools, the actual data collection was started from the first of October 2014 to the end of February 2015. According to each group of the working women was divided into subgroups, each group consisted of 3-4 participants, the theoretical part of the program presented in two days per week, the researcher did the interview with the participants the first day contains three sessions one session for assessing their knowledge (pre-test) and giving handout before start the sessions of the program. The second session for explaining the program and the third session for doing post - test. The second day include three session the first session for demonstration of breast self-examination. The second session for doing re-demonstration of the breast self-examination and the third session for doing post-test. Three teaching methods were used: lecture and discussion for theoretical part and demonstration for practical part.

Development of BSE Illustrated educational manual:

A handout in a form of an illustrated colored educational booklet**)** for BSE was developed in Arabic language by the investigator to suit the Egyptian students and to help them to know what would be expected.

It included clear, simple and brief explanation of the breast, risk factors of breast cancer and technique of BSE.

Evaluation of the program

Was completed by using the (pre and post-program). This evaluation based on scoring system as following: The participant knowledge was assessed by using scoring system, score of one grad was given for each correct answer and zero grad for each incorrect or don't answer. Scoring system: the state of participants knowledge in the pre and post tests were judged as following: poor = <50%, good 50%: 70% and very good = >70%. To assess the participant practice of breast self-examination by using the observation checklist the scoring system, score of one grad was given for each correct doing the steps and zero grad for each incorrect or don't do. Scoring system: the state of participants practice in the pre and post tests were judged as following: poor = <50%, good 50%: 70%, very good = >70% **(khalaf, 2009).**

Limitations of the study:

One of the limitations of the study, there was no control group to compare the effectiveness of the developed manual. - Some of students were busy for teaching and some of them not have a time so we were wait a lot of time to start a session and repeated the sessions many times.

Statistical Analysis

After data collection, it was coded and transformed into a specially designed format so as to be suitable for computer feeding. Following data entry, checking and verification processes were carried out to avoid errors of data entry. All statistical tests were completed using the Statistical Package for Social Sciences (SPSS) version 20 for windows. A 5 % level of significance was chosen where $p \leq 0.05$ was considered significant.

V. Results

The findings clarified the biosocial-demographic characteristics of the Nursing students at Faculty of Nursing, Alexandria University in **table (1)** regarding students' age, the results revealed that the highest percentage was among the age group less than 20 years, it was 85.2 % , while the lowest percentages was among the age group of 20 to less than 30 years it was 5.2 % . The mean age was 20.41±4.94 years. Regarding the marital status, the majority (93.9%) of them are single. In relation to the area of residence, 67.0% of them from urban and 55.7% of them has 6-9 family members. Table (2) regarding the family history of breast cancer, the majority (90.4%) of them had not history while (6.1%) of them had mother history. In relation to history of self-affection, 5.2% of them had a history of breast lump. In the table (3), (74.8%) of the participant did not performing BSE while most of respondent agreed that BSE important (83.5%) because it help early detection of breast cancer. Majority of respondents became aware due to the college curricula (17.9%). However, they did not know the appropriate time performing BSE (83.5%) and frequency of it (80.9%) Majority of sample inferred that the barriers to practice of BSE were no source of information (43%). able (4), Illustrates the distribution of the participants according total score of knowledge and practice of breast self-examination. It was found that, the majority (91.3%) of students had poor score of knowledge in pre-test, while post-test (99.1%) had very good score. there are statistical significant differences between the pre-test and post-test. In relation to the total score of practice between the pre and post-test, there is improvement in their practice of breast self-examination. The statistical significant differences was p= 0.04. **Table (5)** displays the relation between bio- sociodemographic characteristics and total score of practice of BSE. It was observed that a statistically significant difference between the age group and total score of pre-test (P= 0.004) and on other hand there was a statistically significant difference between the history of self- affection and total score of post-test (P= 0.004).

Table-1: Distribution of the Study Participants according to their Bio-sociodemographic Characteristics**.**

Characteristics		NO.	%
Age (year)	**<20**	98	85.2
	20-<30	6	5.2
	30-<40	11	9.6
	>40	0	0
	Total	115	100
Mean±SD	**20.41±4.94**		
Marital status	**single**	108	93.9
	married	7	6.1
	Total	115	100
Area of residence	**urban**	77	67.0
	Rural	38	33.0
	Total	115	100

Characteristics		NO.	%
Family member	3-5	64	55.7
	6-9	46	40.0
	10>	5	4.3
	Total	115	100

Table-2: Distribution of the Study Participants according to their Exposure to Risk Factors of Breast Cancer.

Characteristics		NO.	(%)
Family history	**Mother**	7	6.1
	Sister	1	0.9
	Aunt	1	0.9
	Grandmother	2	1.7
	No affection	104	90.4
	Total	115	100
History of Self-affection	**Yes**	6	5.2
	No	109	94.8
	Total	115	100

Table-3: Distribution of the Study Participants according to their knowledge and Attitude about Breast Self-Examination**.**

Items for BSE knowledge	NO.	%
Did you perform BSE before		
Yes	10	8.7
No	86	74.8
Often	19	16.5
BSE important		
Yes	96	83.5
No	6	5.2
Do not know	13	11.3
Reason		
Help early detection of breast cancer	96	83.5
Do not know	13	11.3
Source of awareness #		
college curricula	34	17.9
T.V and radio	24	12.6
Family and Friends	9	4.7
Network and social media	33	17.4
the appropriate time performing BSE		
true answer	19	16.5
False answer	96	83.5
the frequency of performing BSE		
true answer	22	19.1
False answer	93	80.9
Barriers #		
Unawareness of importance	58	43
Postponing performance of BSE	17	12.6
Embarrassment	27	20
Fear of the results	33	24.4
Total	115	100

 # More than one answer might be given

Table 4: Distribution of the Participants according Total Score of Knowledge and Practice of Breast Self-Examination**.**

Items		Pre-test		Post-test		Test P.value
		No	%	No	%	
Total score of knowledge	Poor	105	91.3	0	0.0	T= -55.24
	Good	10	8.7	1	9.0	P= 0.000*
	Very good	0	0.0	114	99.1	
	Mean±SD	17.75±15.25		97.61±4.88		
Total score of practice	Poor	80	69.6	2	1.7	T= -0.188
	Good	32	27.8	0	0.0	P= 0.04*
	Very good	33	2.6	113	98.3	
	Mean±SD	48.14±13.62		97.47±10.04		

Table 5: Relation between the Bio-Sociodemographic Characteristics and Total Score of Practice of Breast Self-Examination

Bio-sociodemographic characteristics		Total score of pre-test						Total score of post-test					
		Poor		Good		Very Good		Poor		Good		Very Good	
		No	%	No	%	No	%	No	%	No	%	No	%
Age category	**15-<20**	70	71.4	28	28.6	0	0.0	2	2.0	0.0	0.0	96	98.0
	20-<30	4	66.7	2	33.3	0	0.0	0	0.0	0.0	0.0	6	100.0
	30-<40	6	54.5	2	18.2	3	27.3	0	0.0	0.0	0.0	11	100.0
	Total	80	69.6	32	27.8	3	2.6	2	1.7	0.0	0.0	113	98.3
	statistical test	E = 14.326 P= 0.004*						E= 1.076 P= 1.000					
Self- affection history	**Yes**	3	50.0	2	33.3	1	16.7	1	16.6	0.0	0.0	5	83.4

Bio-sociodemographic characteristics		Total score of pre-test						Total score of post-test					
		Poor		Good		Very Good		Poor		Good		Very Good	
	No	77	70.6	30	27.5	2	1.8	1	0.9	0.0	0.0	108	99.1
	Total	80	69.6	32	27.8	3	2.6	2	1.7	0.0	0.0	113	98.3
	statistical test	E = 4.409 P= 0.142						χ = 8.254 P= 0.004*					

VI. Discussion

The Breast Health Global Initiative 2007 emphasized education and cultural values for promoting breast cancer screening in developing countries (Rasu et al., 2011). To day, the etiology of breast cancer is uncertain and adequate primary prevention is not possible. Thus, early detection measures remain the first priority. More than 50% of the total breast cancer diagnosed annually is found in premenopausal patients, creating the need to initiate breast cancer screening programs in this population. These measures include BSE, which is inexpensive, noninvasive, involves little time and physical energy, is simple and does not depend on professional help. Regarding breast self-examination awareness, the majority of the study sample had aware about important of BSE which helped early detection of breast cancer and had aware about different methods of screening for breast cancer. This is consistent with the study done by Oluwole and Al-Dubais et al (2008, 2012) showed that most of the respondents were aware about BSE. While, knowledge about the different methods of screening of breast cancer was generally poor24, 25. In relation to source of awareness, about one quarter of the sample of the nursing students had previous knowledge regarding BSE from their college curricula. This finding was consistent with study done on female health workers in A Nigerian community revealed that majority of respondents became aware about BSE through lectures24. On the other hand, the study done among young Malaysian women revealed that electronic media such as radio and TV was the most common source of information of BSE26.Our study revealed that about three quarters of the study sample had not performed BSE before, not knew appropriate time and frequency of performed BSE. This is agreeing with the study done among Jordanian nurses revealed that few nurses practiced BSE monthly , this results was related to limited knowledge about breast cancer and methods of early detection .27 While, the study done by Al-Naggar et al (2011) reported that 55% of respondents had performed BSE before , only 28.5% of them practice BSE once a month26.Regarding to barriers to practice BSE, the result revealed that about two third of the study sample had no source of information about BSE, This is congruent with Oluwole and Al-Naggar et al (2008, 2011) found that the main identified barriers to practice of BSE were lack of information and forgetfulness. Also, they recommended that lack of knowledge is one of the reasons that hinder women to practice BSE24, 26. After two month of the conducted workshop the participants were able to demonstrate BSE correctly on the modules which indicate the maintenance of the positive effect of the workshop. This finding is consistent with the study done by Yousuf (2010) found that participants knowledge significant improvement in the post-test due to the immediate influence of workshop28. Compared to three month post-test results showed decline in the performance of the participants. The researchers believed that the reason for decline the performance was related to 74% of the studied sample were single, 78% had negative family history of breast cancer, 42% had no source of information and 28% forgetfulness. This is consistent with the research done by Khatun et al (2010) reported that the most important identified factors for not practicing BSE among nurses were married state, no source of information, negative family history and don't know how to do BSE. Thus, it is essential to provide an educational program for breast cancer and BSE to nurses in order to enhance nurses' performance rate of BSE29. The nurse should be well versed in teaching BSE in a variety of setting. BSE is usually taught initially at an adolescent health examination and should be reviewed and reinforced every 2 to years. The nurse can encourage BSE practice by reviewing examination technique, using a well-designed, printed and illustrated booklet and reinforcing the women's confidence in her BSE ability30.s regards participants level of knowledge the majority of the students had poor knowledge about BSE before the program this due to poor awareness related to the value of the health and the importance of BSE, after the educational training program their knowledge markedly improved more than half of the students had very good score. There were statistically significant differences between pre and post- test regarding their knowledge and practice about breast cancer ($p < 0.001$). This due to the participant's redness to promoting and maintaining their health states is agree with the result of Alkhasawneh et al., (2009) who revealed that statistically improvements in women knowledge about breast cancer and early detection methods after implementation of the program. Also agree with Yusuf, (2010) who reported that participants felt that their knowledge improved significantly, and the researcher believes that the participants, knowledge significant improvement in post-test may enhance their actual confidence. Also, the present study showed an improvement in BSE performance, 98% had very good score and there was a statistically significant difference between pre and post test for performance of the sample in relation to age ($p <0.001$). his results was consistent with Alkhasawneh et al., (2009) who found a significant relation between practice and women's age, education level agree with the present study and agree with Haji-Mohamoodi et al., (2002) and his collegues which their study showed a significant association between BSE practice and the age, level of education. Oezaras et al., (2010) reported that the difference being significant ($z=-7.75$, $p<0.001$) the training given to the women had a very important effect on increasing information of women about BSE.

Therefore, the teaching training program was effective for improving markedly the knowledge needed for accurate performance

VII. Conclusion

The study points to the insufficient knowledge of nurses' students about breast cancer and identified the negative influence of low knowledge on the practice of BSE. Accordingly, relevant educational programs, based on a national base, to improve the knowledge level of women regarding breast cancer are needed. There is very urgent need for regular update courses for health workers concerning breast cancer education including screening methods. So, there is an urgent need to

update the curriculum, and for regular update of courses for student nurses and nurses on health maintenance practices are also recommended. Researches about effect of environmental, social and cultural factors on concept of self-breast examination and all preventive measures related to breast cancer. The results of this study concluded that Knowledge and performance about breast cancer and BSE was poor among nursing students in pre-test. The developed training program of BSE showed improvement with significant impact in the form of a remarkable increase in the participants' level of knowledge, and BSE performance.

VIII. Recommendations

This study recommended that teenagers in their 20s and 30s should have a clinical breast exam (CBE) as part of a periodic (regular) health exam by a health professional at least every 3 years. School health education is an ideal approach, which should be properly utilized to enhance the adolescent awareness regarding breast self-examination. Educational programs and mass media should provide more information based on scientific knowledge about breast self-examination to adolescent. Further studies are needed to identify reasons for not practicing breast self-examination.

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