



Keywords

Educational Program,
Knowledge,
Practices,
Breast Self-Examination

Received: August 14, 2015

Revised: August 24, 2015

Accepted: August 25, 2015

The Impact of Implementing Educational Program Regarding Breast Self-Examination on Knowledge and Practices of Female Students of Nursing Technical Institute of Menoufia University

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Citation

Sanaa Ibrahim Abd Elgaffar, Gehan Abd El-Fatah Atia. The Impact of Implementing Educational Program Regarding Breast Self-Examination on Knowledge and Practices of Female Students of Nursing Technical Institute of Menoufia University. *Journal of Nursing Science*. Vol. 1, No. 4, 2015, pp. 44-50.

Abstract

Aim: This study aimed to evaluate the impact of educational program regarding breast self-examination on knowledge and practices of female students of nursing technical institute. **Subject and Methods:** A quasi- experimental research design was utilized in this study, which was conducted in the Nursing Technical Institute at El-Menoufiya Governorate. A selected sample of 200 students were taken from the above mentioned setting and tested before and after giving the health program. The study tools were, an educational health program about early detection of breast cancer and breast self-examination was developed by researchers, through; (1) a self-administered questionnaire and (2) observational checklist. **Results:** The findings revealed that most of the studied sample had poor knowledge and practices (96%) regarding early detection of breast cancer and breast self-examination in pre-program, there is an improvement was detected in the knowledge and practices post program ($P < 0.001^*$). **Conclusion:** On the light of the current study results, it can be concluded that, the studied females students' knowledge and practices regarding early detection of breast cancer and breast self-examination are deficient, health educational programs can improve their knowledge and practices, so the researchers Recommended that great efforts should be done to increase the young females' awareness of prevention and early detection of breast cancer, this can be effectively done through continues health educational programs.

1. Introduction

Breast cancer (BC) is a common cause of cancer morbidity, mortality and third most frequent cancer among women in most part of the world⁽¹⁾ is a major life-threatening public health problem of great global concern.^(2, 3) It was estimated that breast cancer was the second leading cause of cancer death in women in the United States being surpassed only by lung cancer. Although breast cancer was not the leading cause of cancer death in women; it was the most common type of cancer diagnosed in women.⁽⁴⁾ It is the leading type of cancer in women⁽⁵⁾ and is the most common cancer. Among women in many parts of Africa⁽⁶⁾, the emergence of breast disease and the subsequent development of cancer tend to be more aggressive in young women compared with

breast cancer progression in the older population. Young age at diagnosis correlates with worse prognosis and defines a subset of breast cancers with shared patterns of gene expression. The high mortality rate among young women is mainly due to lack of breast cancer awareness⁽⁷⁾. It is the most common cancer among the women in Arab countries with the young age (8 Egypt the figure for people suffer from breast cancer is alarming it account for 35.1 %of the cases of cancer and is the most prevalent cancer among Egyptian women.⁽⁹⁾ The median age at diagnosis for breast cancer in Egypt is ten younger than in the United States, and Europe. In another study in Egypt among female the pattern in lower, middle, and Upper Egypt was dominated by the high frequency of breast cancer (33.8%, 26.8% and 38.7% respectively⁽¹⁰⁾). The number of cancer patients in Egypt is expected to expand in the future as the population and age continue to grow, in addition to the prevalence of known etiological factors increase^(11, 12). Although mortality from breast cancer could be decreased through early detection, surveys reported that only 20-25% of women routinely examined their breasts⁽¹³⁾. Stage of breast cancer at diagnosis had an impact on survival rates from breast cancer. Women, whose breast cancer was diagnosed at a more advanced stage, had a lower 5-years survival rate⁽¹⁴⁾. The 5-years survival rate for women whose breast cancer was detected before it had metastasized was 93% but that rate dropped to 18% for women with distant metastases⁽¹⁵⁾.

Breast self-examination (BSE);

The role of breast self-examination (BSE) in the early diagnosis of breast cancer has been reported. A significant number of women present with advanced stages of the disease due to lack of information, knowledge and awareness of early detection measure.⁽¹⁶⁾ The breast self-examination (BSE) is a way that enables a woman to check her breasts for changes (such as lumps or thickenings), early discovery of breast lumps through breast self-examination (BSE) is important for the prevention and early detection of this disease. Young women aged 20-29 years with breast cancer experienced mortality rate of 72.4% from the diseases⁽¹⁷⁾. Early detection of breast cancer plays an important role in decreasing its morbidity and mortality⁽¹⁸⁾. Though BSE is one of the inexpensive and easy screening methods for early detection of breast cancer⁽¹⁹⁾, however, women in developing countries do not perform BSE for various reasons⁽²⁰⁾. Most advanced techniques for early detection is not readily available to most of the women in Africa^(21, 22) BSE is appealing as a routine screening method because the examination has no financial cost (apart from the initial instruction sessions), and can be conducted in private.⁽²³⁾ Most studies on the effectiveness of BSE have been observational. These studies suggest that women are more likely to find their breast tumors themselves, the tumors tend to be smaller and that these women have an increased survival.⁽²⁴⁾ Because of many of Egyptian women fail to seek medical treatment or preventive screening, making it more difficult to treat cancer and by the time breast cancer is

detected in Egypt it is often advanced⁽²⁵⁾ it have a positive effect on the early detection of breast cancer⁽²⁶⁾ it is important screening tools for early detection of cancer in the developing countries, it is a simple, effective, and inexpensive, noninvasive method and not require any technical equipment for breast cancer⁽²⁷⁾ there is an evidence that women who correctly practice(BSE) monthly are more likely to detect a lump in the early stage of its development and early diagnosis has been reported to influence early treatment, to yield a better survival rate.^(28,29)

Aim of the study

The present study aimed to investigate the effect of an educational program about breast self-examination on nursing students' knowledge and practice.

Hypothesis

It was hypothesized that the application of breast self-examination educational program will positively change nursing students' knowledge and practice

Subjects and Methods;

Research design:

A quasi-experimental research design was utilized to conduct this study

Setting: The present study was carried out in the technical institute of nursing at Menoufiya University. *Subjects;* All students enrolled in the first grades of the mentioned institute were included in the study sample. Their total number was 200. The sample size was large enough to demonstrate an improvement in the knowledge and practice of nursing students.

Tools of data collection:

The researchers developed a self-administered questionnaire for data collection. It consisted of three parts. The first part: involved social data about student's age and marital status. It also included questions about history of breast problems, history of BSE, and sources of breast cancer information. The second part, contain questions to assess student's knowledge, it contain 25 items about breast cancer and BSE. Then, each correct response was scored one point and each wrong response was scored zero. The third part was related to the student's practices which was an observational checklist of breast self-examination technique to assess the student's performance of breast self-examination steps.

Pilot study: A pilot study was carried out to test the clarity and reliability of the tool and feasibility of the study. The internal consistency of the tool was done, and Chronbachs alpha coefficient was calculated to assess the reliability. Needed modifications were done in the form of re-phrasing of some items. The pilot subjects were not included in the main study sample.

Fieldwork: The researchers fulfilled the official steps required to get the approval for carrying out the study from the dean of the nursing faculty, the manager of the technical institute was asking for her permission to conduct the study., then explained the purpose and procedures of the study. Students were met then an explanation of the aim of the study, and informing them about their rights, those who

provided their verbal consent to participate were handed the data collection tool for filling it out.

The first phase was assessment regarding breast self-examination knowledge and practice. The second phase was planning and development training program was planned and designed by the researcher based on result of the assessment phase. A film and hand out of information it covered the following aspects; Definition of breast self-examination, factors affecting breast cancer, common symptom of breast cancer, importance of BSE, methods of BSE, best time for doing BSE, positions of Bethe third phase evaluation carried out 2 months after the implementation of the educational program to study the effect of the program on the students' knowledge, and assess BSE practice.

Ethical Considerations:

An official permission was obtained by submission of an official letter from the Faculty of Nursing to the responsible authority of the study setting to obtain the authorization for data collection. The aim of the study was explained to every student before voluntary participation was emphasized and an oral consent was obtained. Data collection was anonymous, and confidentiality of the data was secured. The procedures of the study could not entail any harmful effects on participants. Professional help and advice was provided to participants in case of need.

Technique for Data Analysis:

Data were analyzed using statistical science (SPSS). The P-value < 0.05 was used as the cut off value for statistical significance and the following statistical measures were used: Numbers and percentage are used as measures of central tendency and dispersion respectively for normally distributed quantities data. Qualitative categorical variables were compared using for McNamar test. Fisher Exact test was used to test the relation between knowledge and practice in post program. Third phase was implementation students nurse were divided into 20 groups and implementation of the program was done for each group separately. The students was divided into 20 groups, each groups contains 10 female students. The educational program was implemented for each group of students. It lasted for 12 weeks, two sessions per week (one to two groups each week). Each session was taken about 2-3 hours for each group according to their available times and place for attendance, the weekly session were conducted for each group along a period of three months, different teaching method and media such as lecture, discussion, demonstration, booklet, data show.

2. Results

Table (1) Presents both demographic and personal characteristics and family history of breast cancer of the studied students, students mean age was 19.8, All of them were unmarried, regarding their family history of breast cancer, the majority of students (92%) had no previous family history of breast cancer, and only 8% of them had a family history of breast cancer.

Table (2) illustrates the progression of knowledge of the

students related to different items of early detection of breast cancer and breast self-examination through before and after intervention. Before program, results indicated that the majority of them had insufficient knowledge in most areas of it, where nearly about three quarter of them (74%) had poor knowledge about methods of decrease or prevent the risk of breast cancer, while 72% of students did not know the meaning of breast-self-examination and nearly two third of students (62%) did not identify dangerous signs and symptoms. One quarter of students (25%) did not know the importance of breast self-examination. In after program phase, it can be seen that there was a clearly improvement in some areas of knowledge, as definition, methods for prevention or decrease risk of breast cancer, knowing the dangerous signs and symptoms and importance of examination.

Table (1). Socio-demographic personal characteristics of the students and family history of breast cancer (no=200).

Age	No	200.	Percent %
Range	17-20		
Mean	19.8		
			Marital status
Married	0		0.00
Unmarried	200		100.0
Total	200		100.0
			Family history for breast cancer
No	184		92
Yes	16		8
Total	200		100
			"If yes "kind of relation
Mother	0		0
Sister	0		0
Aunt (for mother)	0		0
Aunt (for father)	12		6
Grand (mother/ father)	4		2

Table (2). Progression of knowledge of studied students sample related to early detection of breast cancer and breast self-examination during before and after intervention program.

Items	before- program		After Program	
	No.	%	No.	%
Methods for prevention or decrease risk of breast cancer				
Breast self-examination	24	24.0	98	98.0
Breast feeding	2	2.0	72	72.0
Not using contraceptive bills for a long time	2	2.0	2	2.0
Healthy food	4	3.8	72	72.0
Birthing	0	0.0	44	44.0
Do not know	74	74.0	2	2.0
definition of breast self-examination				
Correct	28	28.0	92	92.0
Incorrect	72	72.0	8	8.0
Importance of breast- self examination				
Detect any changes	42	58.4	88	89.7
Self-assuring	20	27.7	4	4.2
Early detection of tumor for early cure	18	25.0	76	77.5
Do not know	18	25.0	0	0.0
Dangerous signs and symptoms				
secretion	14	14.0	48	48.0
Pain	6	6.0	0	0.0
abscesses	4	4.0	0	0.0
tumor	38	38.0	90	90.0
Do not Know	62	62.0	10	10.0

Table (3). Progression of knowledge of Students related to early detection of Breast Cancer & Breast Self-examination through before & after intervention Program.

Items	Pre program		Post program	
	No.	%	No.	%
Self-examination of the breast				
Done correctly	36	18	84	58
Not done correctly	164	82	116	42
Total	200	100	200	100
Make breast self-examination every month				
Yes	48	24	120	60
No	152	76	80	40
Total	200	100	200	100
Action taken when found secretion from the nipple				
Correct	104	52	196	98
Incorrect	96	48	4	2
Total	200	100	200	100
Right time of breast self-examination				
Correct	68	34	168	34
Incorrect	132	66	32	66
Total	200	100	200	100
Action taken when there is pain in breast				
Correct	68	34	152	34
Incorrect	132	66	48	66
Total	200	100	200	100
Action taken when there is abscess in breast				
Correct	64	68	164	68
Incorrect	136	32	36	32
Total	200	100	200	100
Action taken when there is lump in breast				
Correct	144	72	188	94
Incorrect	56	28	12	6
Total	200	100	200	100

Table (4). Progression of Total knowledge and Practice Scores of the students regarding early 'detection of Breast Cancer and Breast Self-Examination.

Items	Knowledge				Practice			
	before program		after program		Before program		After program	
	No.	%	No.	%	No.	%	No.	%
Satisfactory	12	6	188	94	28	14	192	96
Unsatisfactory	188	94	12	6	172	86	8	4
Total	200	100	200	100	200	100	200	100
P	< 0.001				< 0.001			
Feel					0.048		0.118	

P.P: Value for McNamar

Test between pre and post program of Knowledge and Practice

FEB: P value for fisher Exact Test between Knowledge and Practice in ore and post program.

Statistically Significant at P<0.05.

Table (3) demonstrated the progression of the practices of the students regard to different items of breast self-examination and management of dangerous signs and symptoms through the before and after intervention. results revealed that there was a progress in students practices regarding doing self-examination of their breast correctly by themselves as it raises from 18% to reach 42% from before to after program, also a progression in the correct management of dangerous signs and symptoms were detected after program implementation, especially in management abscess it raises from 32% before program to 82% after program, in management of secretion from 52% to 98% and in management in the presence of lump from 72% to 94%.

Table (4) show the progression of the knowledge and

practices scores of the studied students & relation between them regarding early detection of breast cancer and breast self-examination through before and after intervention. The results showed that there was a defect in the total knowledge and practices of the most of the studied students as it estimated to be 94% and 86% respectively in the preprogram, after implementation of the health educational program there was a statistically significant highly improvement((P <0.001*) in their both knowledge and practices reaching 94%,96% respectively

Also the same table indicates a statistically significant relation was detected between knowledge and practices, p; 0.048

3. Discussion

The finding of the study in preprogram phase indicated that the majority of the studied sample had insufficient knowledge regarding most of the items of breast cancer and breast self-examination as definition, methods for prevention, important of examination and dangerous signs and symptoms this is before implementation of the program. This may be due to the fact that there was a lack of information provided to those young females, as the mass media and other health care services did not provide such information to them. The finding is in agreement with Champion⁽³⁰⁾, who found that only 56.1% of his studied sample had sufficient knowledge of breast cancer. Our findings are in contrast with Trask et al.,⁽³¹⁾ who reported that 72.1% of the participants reported having knowledge of BSE. As regard practicing of self-examination of the breast, the finding revealed that most of the studied students did not practice breast self-examination correctly and did not make it regularly. And also with Radi⁽³²⁾ findings indicated that Saudi females (200 students) level of awareness of breast cancer is very inadequate (50.5%) of them were aware of warning signs of breast cancer. This finding is contrast with what was reported by Habib, et al.⁽³³⁾ in their study of awareness and knowledge of breast cancer among 247 university students in Al Medina Al Unaware region, which revealed that students were aware of painless lump in the breast, bloody or any discharge from the nipple and changes in the skin of the breast as the most common warning signs of breast cancer. And this also disagree with another study was designed to investigate about female knowledge of breast cancer and self-reported practice of breast self-examination in Iran. The findings revealed that the women awareness of breast cancer warning signs (painless lump, retraction of nipple, and bloody discharge) and effective screening methods i.e. clinical examination, and mammography were very inadequate, Monterey et al.,⁽³⁴⁾, This in agreement with Aerobe and, Kassal⁽³⁵⁾ during his study which carried out in 126 female medical students from first year to internship of their medical study found that 77% of the study participants have never done. BSE, the main reasons behind this were, I don't have any problem (28.8%), forgetfulness (17.5%), and due to fear of detecting abnormality (16.4%).

Our findings are in concordance to those of other studies reported from Africa^(36–39). In a similar study Parse, et al.^[40], reported that 90% of the Malaysian women heard about BSE, however, only 19% stated that they performed BSE on a regular monthly basis. Similar results were also reported among adolescent girls in Colombo, Ransinghe, et al^[41]

The foregoing findings may be due to lack of access of the students to services teaching them how to make examination correctly, its importance and right time to do it. In this regards, the American Cancer Society (ACS) recommends that all women 20 years of age or older should perform monthly breast self-examinations (BSE). The best time to perform BSE is the day after your monthly period ends. Becoming familiar with the look and feel of their breasts offers the best chance for a young woman to notice any

change. In addition to monthly BSE, annual clinical breast exams are recommended for all women beginning at age 20. National Cancer Institute⁽⁴²⁾. The finding of the present study is goes in the same line with Sribanditmongkol⁽⁴³⁾ who reported only 40.9% of the women in the practiced group ever indicated having practiced BSE in the previous 12 months. In this BSE practice group, while 29.5% stated they examined themselves irregularly, only 10.2% stated that they performed BSE on a regular monthly basis. A total of 59.1% of the participants indicated they had never performed BSE. American cancer society⁽⁴⁴⁾; found that women performing BSE once a month constituted 5.5% of the population in Istanbul. Champion⁽³⁰⁾ added that from a review of the literature on studies on breast self-examination (BSE), only 19% to 40% of women practice BSE on a monthly basis, and there is no strong evidence that women who practice monthly BSE perform the procedure correctly. In addition ACS⁽⁴⁴⁾, in their study about factors associated with breast cancer screening behaviors of Turkish women: found that the reasons why women did not do breast cancer screening methods were determined to be: not having any symptoms, neglect, not sensing the need, and not knowing how BSE is done. The foregoing findings also indicated that the studied students had inappropriate practices regarding management of dangerous signs and symptoms especially in areas of managing abscess, secretions and pain. According to American Cancer Society (ACS): younger women generally do not consider themselves to be at risk for breast cancer. Only 5 percent of all breast cancer cases occur in women under 40 years old. However, breast cancer can strike at any age, and all women should be aware of their personal risk factors for breast cancer. (A risk factor is a condition or behavior that puts a person at risk for developing a disease).

4. Conclusion

The study concluded to the fact that the studied females' students' knowledge and practices regarding early detection of breast cancer and breast self-examination are deficient, health educational programs can improve their knowledge and practices.

Recommendation

There is a need for interventions to implement and reinforce BSE in the existing cancer awareness and screening program especially among the young age or that great efforts should be done to increase the young females' awareness of prevention and early detection of breast cancer, this can be effectively done through continues health educational programs

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