IMPACT OF DESIGNED NURSING PROTOCOL ON BREAST CANCER SCREENING PRACTICE: PILOT STUDY

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ABSTRACT

Breast cancer is one of the highest malignant tumours which affect females in both developed and developing countries, referring to the recent statistics of the WHO and Cancer Research UK Institute. The role of breast cancer nurse starts from the first level of risk assessment up to follow up care of survivors. Aim of the study: to evaluate suggested nursing protocol on breast cancer screening practice. Methods: Total number of 30 female subjects was recruited for the aim of piloting the tailored nursing protocol. Quasi experimental research design was utilized to achieve the aim of the study. Conclusion: The study concluded that implementing the designed nursing protocol enhance life style and breast cancer screening practices among the studied subjects.

KEYWORDS: Breast Cancer, Breast Self-Examination, Early Detection, Life Style, Nursing

INTRODUCTION

Breast cancer is a kind of cancer that develops from breast cells. Breast cancer usually begins off in the internal lining of milk ducts or the lobules that provide them with milk. A malignant tumor can extend to other parts of the body. A breast carcinoma which began off in the lobules is known as lobular carcinoma; on the other hand carcinoma that developed from the ducts is called ductal carcinoma. Breast cancer affects both sexes but the vast majority of the cases occur in women (Nordqvist, 2016).

Oeffinger, (2015) explained the reason behind the guidelines for breast cancer screening for women at average risk which recommends mammogram screening for the goal of detecting breast carcinoma early, because at the early stage of breast cancer the treatment is more likely to be successful. But mammograms still have adverse effects; sometimes mammograms detect something suspicious that revealed to be harmless later.

That's why it must be checked out through more tests which on the other hand carry risks including pain, anxiety, and other side effects. Clinicians should judge risk benefit ratio when making screening recommendations.

In all aspects of the battle against malignancy, nurses contribute dynamically as a member of the interdisciplinary management. A good prepared oncology nursing manpower includes general nurses who are educated at the first level to provide health promotion, risk assessment, and care for patients who receive cancer therapy; specialized nurses who mainly focus on the delivery of cancer care and who care in the most for subjects with or at risk for cancer; and advanced practice oncology nurses who give cancer care at the master's degree educational level or higher. Oncology nurses with

master's and doctoral education have a major contribution through advanced practice, patient education, and scientific research roles (Challinor, Galassi, Al-Ruzzieh, Bigirimana, Buswell, et. al, 2016).

Any change in a woman's breasts can be extremely distressing and cause uncertainty, with many females fearing they have developed breast carcinoma. However, many breast changes do not indicate carcinoma and are often normal changes that occur naturally as the breast ages. It is well-documented that females who are advised about breast awareness by a health care professional demonstrate a greater knowledge and confidence than those who receive information from other sources (Morrison, 2011).

Hamilton (2012) emphasized that nurses working in primary care are in the best position to use their everyday activities to educate and empower females to be breast aware in an informative and non-alarmist way. They have the potential to reduce females' anxieties by providing verbal and written information about what is normal and what changes in the breasts occur naturally. They can also offer support and encourage females to report concerns and - equally importantly - encourage them to accept routine breast screening when it is offered.

The role of breast cancer nurse starts from the first level of risk assessment up to follow up care of survivors. Their role include research, education and clinical practice, therefore this study aims at evaluate a designed nursing protocol especially tailored for target group with selected chronic health conditions to meet the ultimate goal of disease prevention.

METHODS

The study was conducted in Kasr Al-Aini outpatient clinics. Quasi experimental research design was utilized to achieve the aim of the study. Total number of 30 female subjects was recruited for the aim of testing the tailored nursing protocol. Each subject was informed about the purpose, procedure, benefits, and nature of the study. The researcher emphasized that participation in the study is voluntary, and the subject can withdraw at any time from the study without any reason. All subjects were notified that the obtained data is only used for research purpose. Confidentiality as well as anonymity of the subject is assured through coding of all data, and an informed consent was obtained from all study subjects.Data of this study were collected through physical examination, and structured interview utilizing the following tools to collect data pertinent to the study:

- Bio demographic data of the study subjects as: age, marital status and education….etc. designed by the investigator.

- Health assessment sheet designed by the investigator, consisting of two parts:

  - Part I: examination findings; Vital signs, present symptoms, mammography findings and Glucotest.

  - Part II: Health history includes diabetes, hypertension, and obesity symptoms and management profile.

- Breast cancer awareness assessment sheet designed by the investigator.

- Pre, post and follow-up test regarding the designed nursing protocol.

To implement the nursing protocol three teaching sessions were carried out to each participant through 3 consecutive days and each session took about one to one and half hour. This time included discussion and patient's

questions; pretest was applied before starting the teaching session.

The first session introduction about breast cancer, early detection methods. Second session breast self examination demonstration and remonstration. Third session life style control of diabetes and hypertension, as well as obesity and other risk factors. Post test was done one week later because the investigator is seeking retention of information and change of behavior toward screening practices. During the follow up period: thought the three months of the follow up period there was an open channel of communication between the researcher and the patients for consultation, feedback, and follow up for any queries by the subjects. After six months follow-up test was done.

RESULTS AND DISCUSSIONS

The data collected were analyzed statistically and the results are represented as the following:

Table 1 reveals that the study subjects consist of 30 female adult patients, their mean age 44.1 + 2.8. From the researcher point of view this age may be the age when women start to pay some attention to their health status because at that age health issues such as diabetes and hypertension may be evident as a new diagnosis for them. It also could be the common age for diagnosis of breast cancer. As for marital status 93.3% of the study subjects were married, while 6.7% were single. The majority of the sample has no health insurance (70%) while (30%) were insured. In relation to work status (43.3%) of the subjects were not working, (20%) had manual work, (23.3%) had professional work, while only (13%) were employees.

The researcher relates this to low socioeconomic level and duties of these women as mothers and care givers of their families. Consequently, the majority of both samples have no health insurance that is because most of them are not working. In relation to educational status (20%) of the subjects were illiterate, (30%) can read and write, (13.3%) had primary education, (20%) had secondary education, (10%) had preparatory education, and (6.7%) had a higher education.

Table 1: Illustrates Frequency and Percentage Distribution of Bio-Demographic Characteristics among the Program Study Subjects

Variable	No	%
Age 40 - 50 - 60 -	26 3 1	86% 10% 3.3% $\overline{X} + SD\ 44.1 + 2.8$
Marital Status		
Single	2	6.7%
Married	28	93.3%
Insurance		
No insurance	21	70%
Insurance	9	30%
Job		
Not working	13	43.3%
Manual working	6	20%
Employee	4	13%
Academic/professional	7	23.3%
Educational status		
Illiterate	6	20%
Read and write	9	30%

Table 1: Contd.,		
Primary	4	13.3%
Preparatory	3	10%
Secondary	6	20%
Highly educated	2	6.7%

Table 2 clarifies that (33.3%) of the sample was hypertensive, (76.7%) had diabetes mellitus. As for obesity half of the study subjects were obese (50%), (23.3%) were overweight, while (23.3%) suffered from morbid obesity, and only (3.3%) were within normal body weight. Obesity is a major health issue among Egyptians, regarding current study the researcher thinks that it could be related to two things; first is the sedentary life style, second is the low economic status of the majority of the sample which made them depend on carbohydrates and the main component of their food as it is the cheaper one.

Table 2: Frequency and Percentage Distribution of Medical Background among Study Subjects

Variable	No	%
Hypertension	10	33.3%
Diabetes mellitus	23	76.7%
Obesity		
No	1	3.3%
Overweight	7	23.3%
Obese	15	50%
Morbid obesity	7	23.3%

As regard life style the results of the current study showed great shift to healthy practices of food composition, frequency and quantity as well as activity and avoidance of sedentary life style in both post, and follow up nursing protocol. Nevertheless the improvement declined a little in the follow-up. Table 3 illustrates Frequency distribution of pre – post and follows up test of life style. It shows that 30% eat one meal daily that is dropped to 0% post-test, and then elevated to 20% in the follow-up test. 36.7% eat two meals, dropped also to 0% post test, then elevated to 10% in the follow-up test. As for three meals daily 30% of the sample eat it pretest, elevated to 90% post test, then dropped to 63.3% in the follow-up test. As for eating four meals or more only 3% did that pretest, 10% post-test, declined to 6.7% in the follow-up test. Regarding most food type eaten the majority of the sample depended on carbohydrate (73.3%), shifted to dependence on fruit and vegetables to 100% in the post test, in the follow-up test food types become 33.3% carbohydrateds, and 66.6% fruits and vegetables.

Table 3: Frequency Distribution of Pre – Post and Follow up Test of Life Style

Variable	Pretest		Post-Test		Follow-Up Test	
	No	%	No	%	No	%
Numbers of Daily Meals						
One meal	9	30%	0	0%	6	20%
Two meals	11	36.7%	0	0%	3	10%
Three meals	9	30%	27	90%	19	63.3%
Four meals or more	1	3%	3	10%	2	6.7%
Most Food Type Eaten						
Fat	3	10%	0	0%	0	0%
Carbohydrates	22	73.3%	0	0%	10	33.3%
Protein	3	10%	0	0%	0	0%
Fruits and vegetables	2	6.7%	30	100%	20	66.7%

Table 3: Contd.,					
Number of Water Glasses Per Day (glass 250ml)					
Less than 4	13	43.3%	0	0%	0	0%
4 to 5 glasses	14	46.7%	0	0%	5	16.7%
6 to 7 glasses	0	0%	4	13.3%	7	23.3%
8 or more glasses	3	10%	26	86.7%	18	60%
Frequency of Weekly Physical Exercise					
None	19	63.3%	0	0%	9	30%
Once	11	36.7%	0	0%	3	10%
2 – 3 times/week	0	0%	5	16.7%	5	16.7%
4 times or more/week	0	0%	25	83.3%	13	43.3%
Reading Food Labels to Know Nutrient Distribution					
No	30	30%	0	0%	9	30%
yes	0	0%	30	100%	21	70%
Reading Food Labels to Know Expiry Date					
No	15	50%	2	6.7%	2	6.7%
yes	15	50%	28	93.3%	28	93.3%
Having Breakfast Daily					
No	12	40%	0	0%	0	0%
Not always	11	36.7%	0	0%	14	46.7%
yes	7	23.3%	30	30%	16	53.3%
Visiting Physician Regularly for Chronic Illness(diabetes/hypertension)Check-Up					
No	8	26.7%	0	0%	0	0%
Only in emergencies	17	56.7%	2	6.7%	12	40%
Yes regularly	5	60.7%	28	93.3%	18	60%
Diabetes/hypertension Medication Compliance on Time					
No	5	16.7%	0	0%	0	0%
Not always	16	53.3%	0	0%	5	16.7%
yes	9	30%	30	100%	25	83.3%
Main Daily Drink:					
Coffee	1	3.3%	0	0%	0	0%
Tea	17	56.7%	0	0%	8	26.7%
Carbonated drinks (soda)	8	26.7%	0	0%	0	0%
Fresh juice	0	0%	4	13.3%	3	10%
water	4	13.3%	26	86.7%	19	63.3%
Snacks Type:					
Potato chips	19	63.3%	0	0%	9	30%
Chocolates and sweets	5	16.7%	0	0%	0	0%
Fruit and vegetables	6	20%	30	100%	21	70%
Daily Time Spent on Sitting in-Front of Computer and/or Television:					
More than 3 hours	25	83.3%	0	0%	14%	46.7%
3 hours	2	6.7%	0	0%	9%	30%
2 hours	3	10%	9	30%	6%	20%
1 hour	0	0%	21	70	1%	3.3%

The current study revealed that the tailored nursing protocol was highly effective in increasing breast cancer awareness as well as the level of reported confidence in performing BSE among the study participants. The researcher believes that tailoring nursing protocol according to characteristics of the target group lead to great impact in subjects' behavior and compliance. Correlation between life style, information, breast self-examination scores preprogram, post program and follow-up revealed that post-test improvement. As for the follow up the results declined than post test, but it still higher than pre-test demonstrating significant difference than preprogram.

Table 4 illustrates significance of life style, information, breast self examination scores preprogram, post program and follow-up. One tailed paired sample t-test of life style revealed that post-test improvement (X=33.233, SD=1.13) compared to pre-test (X=15.166, SD=2.91), df (29) =35.938 p=0.000 highly significant. As for the follow up the results declined than post test (X=25.966, SD=4.68) but it still higher than pre-test demonstrating significant difference than preprogram df (29) =10.648 p=0.000 highly significant.

**Table 4: Correlation between Life Style, Information, Breast Self Examination
Scores Preprogram, Post Program and Follow-Up**

Variable	X	SD	t	df	Sig
Pretest	15.166	2.91			
Life Style Post	33.233	1.13	35.938	29	.000
Follow-Up	25.966	4.68	10.648	29	.000
Pretest	11.2	3.2			
Information Post	17.6	0.55	10.331	29	.000
Follow-Up	15.6	1.86	6.593	29	.000
Pretest	6.9	1.7			
BSE Post	12.8	0.4	17.517	29	.000
Follow-Up	8.3	2.1	2.595	29	.000

CONCLUSIONS

Based on the results of the current study it can be concluded that, Lack of awareness was identified as a major barrier toward seeking screening services, therefore a nursing protocol was tailored to raise awareness and it was tested on 30 females, results showed a significant improvement of subjects' information regarding breast cancer and screening practices such as breast self examination. Nevertheless it showed less improvement in seeking screening services such as mammogram that was mostly due to social factors.

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