

Breast Self-Examination (BSE): Knowledge and Practice among Female Faculty of Physical Education in Assuit, South Egypt

Hayah Abou El azayiem Bayumi

Lecturer of Medical –Surgical Nursing –South valley University-Egypt

* E-mail of the corresponding author: d.hayah@yahoo.com

Abstract

Background: The early detection of breast cancer is the most important and beneficial area of protection techniques and has Early detection and screening activities of breast cancer include breast self- examination (BSE), clinical breast examination (CBE), and mammography. Globally, breast cancer is the most common cancer among women. BSE makes women more "breast aware", which in turn may lead to an earlier diagnosis of breast cancer.

Objectives: The study aims to assess the knowledge of female Faculty of Physical Education college students In Assuit, South Egypt started from the first of Jan(2016) to the end of March (2016)about the risk factors and early symptoms for breast cancer , identify the students' knowledge about BSE and assess the practice of students for BSE.

Methodology: A descriptive study, conducted at the university in Assuit city (south Egypt) during Jan2015. The study sample included 240 students. Self-administered questionnaire was used to gather information about socio-demographic characteristics, knowledge of students about risk factors and symptoms of breast cancer, breast self-examination knowledge, and BSE practice.

Results: More than half of the students were a poor knowledge about breast cancer risk factors and presentations, only (20.8%) had a good knowledge. It was reported that (75%) of them she know that the exposure to radiation is a main risk factor.

University female students had insufficient knowledge about breast self-examination and the main source of information was the media as reported by (36.7%) of the students, mentioned that breast self-examination should be practiced monthly, (57.9%) of them knew the right way to carry out breast self-examination.. There was a significant relation between breast self-examination practice and knowledge about breast cancer and knowledge about breast self- examination.

CONCLUSIONS: - students have poor knowledge of breast cancer and its associated risk factors. Also Students were not also so familiar with practicing BSE.

Key Words: Female Faculty students, knowledge, practices, breast cancer, breast self-examination, Upper Egypt

1. Introduction

Cancer is a major public health problem both in our country and worldwide due to its disease burden, fatality and tendency for increased incidence (Ozdemir and Bilgili,2010; Ersin and Bahar, 2012; Acikgoz and Ergor, 2013; AkgunSahin et al., 2013).Breast self-examination has been widely recommended as a relatively simple, non-invasive, non-hazardous, and cost-free screening method when comparing to other kinds screening methods for detecting lumps or anything that appears unusual.

Since the incidence rate of breast cancer increases with age, all women aged 20 or above should perform breast self-examination regularly American Cancer Society (2015).One out of eight women may have chances to be diagnosed with breast cancer in the lifetimeShrivastava,(2013). Early detection and effective treatment are important factors to reduce the morbidity and mortality associated with breast cancer Steward BW, Wild CP (2014).

Breast cancer is "a broad term for a class of diseases characterized by abnormal cells that grow and invade healthy cells in the body. Breast cancer starts in the cells of the breast as a group of cancer cells that can then invade surrounding tissues or spread (metastazise) to other areas of the body" National Breast Cancer Foundation (2015).

Early diagnosis of breast cancer is of extreme significance in improving the survival rates and quality of life especially in low-income countries. Although awareness about breast cancer has long been advocated across the world, unfortunately studies have revealed that a major proportion of women are still not breast aware Kanaga, K.C., (2011). As discussed earlier, techniques such as breast self-examination (BSE), clinical breast examination (CBE) and mammography have been advocated for bringing about a marked reduction in breast cancer associated morbidity and mortality Ertem, G. \$Koçer A., (2009). As compared to CBE and mammography which require hospital visit and specialized equipment / technical expertise, BSE is helpful in the regard that it is cost-free, simple, non-invasive intervention carried out by women themselves.

Breast cancer is the most commonly diagnosed cancer and worldwide it is considered the leading cause of cancer death in

females, accounting for 23% (1.38 million) of the total new cancer cases and 14% (458,400) of the total cancer deaths in 2008. Approximately half of the breast cancer cases and 60% of the deaths are estimated to take place in developing countries Ferlay et al.,(2008). According to the official statistics of the Egyptian National Cancer Institute, breast cancer represents 18.9% of total cancer cases (35.1% in women and 2.2% in men) Elatar.,(2001). In Egypt, the median age at diagnosis for breast cancer is ten years younger than in the United States and Europe Omar et al.,(2003). Cancer in young is generally more aggressive and results in lower survival rates, making early detection even more crucial and emphasizing the importance to raise breast cancer awareness among young females (Rosenberg & Levy- Schwartz, 2003; Sambanje & Mafuvadze.,(2012). Breast cancer mortality rates for African women are higher compared to women in Western countries Kamangar, Dores, & Anderson.,(2006). Since there is no sufficient evidence to disapprove BSE, it is still considered a simple, non-invasive, inexpensive, affordable and accessible method for younger and high risk women to discover early changes in their breasts Secginli,(2006). The early detection of breast cancer is the most important and beneficial area of protection techniques and has Early detection and screening activities of breast cancer include breast self- examination (BSE), clinical breast examination (CBE), and mammography. BSE is effective, cheap and less painful; however, it is dependent on knowledge, attitude towards BSE practice among women. Clinical breast examination is one of the primary modes of screening for breast cancer. Its effectiveness is dependent upon the skills of health care providers and available facilities. Mammography can reduce mortality rates for women aged 40 to 74 by 25% Mai et al,(2009). WHO (2011) reported that mammography is the most successful way of detecting breast cancer among women older than 50 years WHO(2011). Mortality rates from breast cancer have decreased by 25 to 30% with early detection, improving quality of screening activities, and enhanced treatment Mai et al, (2009). Many studies have shown that nurses have positive influence on women's breast cancer knowledge and BSE practice. Women who were advised about BSE by health care greater knowledge, confidence and were likely to practice it routinely Yousuf S .,(2010).The nurses can play an important role in educating women through specially designed educational program in the clinical setting, as well as through community outreach strategies Oza J et al(2011).

Methodology

The study was A descriptive study one involving female students in college in Assuit (South Egypt.) In Assuit who all agreed to participate in the study and filled in the questionnaires completely (n=240). The study was conducted during the first of Jan(2016) to the end of March. Each participant was given a self-administered questionnaire, The questionnaire included (36)questions ,(3) about of them the demographic characteristics of the respondents; (20) cover the aspect of risk factors and symptoms of breast cancer and (5) for cancer detection. In addition to(11)questions regarding BSE knowledge and practice.

The breast cancer knowledge index was calculated for each student by summing the Number of correct answers then dividing by the total scores of the related questions then multiplied by 100. The mean index for all students was calculated, and a cut-off point of 50%was chosen. Poor knowledge level was considered if the correct answers were below the cut -off point. Fair knowledge level was considered if the correct answers were from (50% - 69 %)and good knowledge level was considered if the correct answers were from 70% and over. Data were analyzed through the use of descriptive data analysis (frequency and percentage) and the inferential, mean, Standard deviation and Chi-squared test was used to examine the association between the groups and a probability of less than 0.05 was considered to be significant.

Results

Table 1 shows that age of the respondents in present study were ranged from (18 -20)) were 70.8% and from (21-24) were (29.1%), (83.7%) were single, (11.2%) have family history of breast cancer.

Table 2 presented the knowledge of students about risk factors for breast cancer there were shows that (75%) of them she know that the exposure to radiation is a main risk factor While (71.7%) of the sample agree that family history one of the reasons for breast cancer. In addition (62.9 %) of the sample did not agree that breast cancer can happen with Female who never breastfeeding a child

Table 3 shows that the main signs of breast cancer as reported by the students were Swelling in the underarm area (92.5%) and a change in size and shape of breast were (78%).then (60.4 %) were a swelling or thickening in or near the breast.

Table (4) shows that (65%) knew that breast cancer is more prevalence in our country, only (27.9%) thought breast cancer can affect males. Majority of the respondents (75%) were aware that breast cancer could be detected early. Only (48%) knew that mammography, ultrasound, clinical breast examination, and BSE used in early detection of breast cancer.

Table (5) Shows that more than half of the Female faculty students were a poor knowledge About breast cancer score level.

Table 6 revealed that (87.9%) of the students have heard about breast self-examination, the main source of their information

was mass media (36.7%), (25.4%) heard from health personnel and (22.9%) heard from the school. Breast self-examination should be carried out by both male and female were reported by (28%) of the students. (50.8%) of the faculty students believed that the BSE started at age of twenty, (36.7%) of the respondents mentioned that breast self-examination should be practiced monthly, (57.9%) of the students knew the right way to carry out breast self-examination

Table 7 shows that (15.8%) of the students doing BSE monthly, (55.8%) of them do in front of mirror. Regarding to students not do BSE the results revealed that (35.5%) did not know how to do it, (28.3%) said they have no symptom, (26%) afraid of being diagnosed with breast cancer with, and (10.2%) do think they should not touch their breasts.

The rate of BSE practice was significantly higher among those who knew how to do it, and among those who had fair and good knowledge about breast cancer.

DISCUSSION

Breast cancer screening and breast self-awareness are important steps to early detection (Shieh et al., 2012;Bebis et al., 2013; Yilmaz et al., 2013). For that reason, some experts recommend that women over the age 20 perform a monthly breast self-examination to look for new lumps and other changes (Karayurt and Dramali, 2007; Oza et al., 2011; Bebis et al., 2013). BSE, although not having been shown to be effective in reducing mortality, is still recommended as a general approach to increasing breast health awareness and thus potentially allows for early detection of any anomalies (Habib et al., 2010; Suh et al., 2012).

However, several studies conducted in our country demonstrated that usually women do not perform BSE (Altuncan et al., 2008; AkkasGursoy et al., 2009; Kilic et al., 2009; Koc and Saglam, 2009; Alpteker and Avci, 2010; RizalarveAtalay, 2010; Bicen Yilmaz and Aksuyek, 2012; Ceber et al., (2013).Studies conducted in developing countries have established BSE as one of the most reasonable and feasible approach in early detection of breast cancer Parvani, Z , (2011).BSE not only familiarize women with the appearance/feel of their breast but also aids in early detection of breast cancer Karayurt, O., (2008).Some of the studies have reported that BSE is highly effective in increasing sense of ownership about health, healthcare seeking behavior, encouraging adoption of preventive health behaviors and creating awareness about breast cancer among women. Multiple studies have concluded that women, who regularly perform breast self-examination present with smaller neoplasm and rare involvement of axillary lymph nodes Gupta S.K., (2009). On the other hand, some researchers have seriously questioned the usefulness of BSE Kearney, A.J. and Murray, M, (2006)andShrivastava.,(2013).while others have revealed no added benefits of BSE in improvement of survival ratesNelson H.,(2013).

Regarding socio-demographic characteristics aspect of the of the respondents , their age ranged from 18 to 20 years were more than two third , most of them were single which was expected for faculty students in the university ,Positive family history of breast cancer was reported more than ten percent of the respondents but the other studies reported in studies on samples of nursing college students in Saudi Arabia (7%), Indonesia (3.9%), and Nigeria (12.1%) Alsaif A.,(2004)., Ns. Juanita et al.,(2013), Yousuf S A. (2010). In the aspect of breast cancer and BSE knowledge, the most widely known risk factors mentioned by the students were exposure to radiation and family history of breast cancer(75% ,71.7%) respectively. This increased awareness for these factors can be attributed to extensive coverage for these risk factors in Upper Egypt. In this study, the students knew little about lifestyle changes to correct breast cancer risk factors such as obesity, high fat diet ,and smoking. The idea that lifestyle changes may modify the risk of developing breast cancer is supported by several lines of evidence. The worldwide trends of increasing over weight, obesity and decreasing physical activity may lead to an increasing incidence of breast cancer unless other means of risk reduction counteract these effects. Thus, adoption of lifestyle changes by individuals and populations may have a large impact on the future incidence of this disease Alwan N et al (2012).These breast cancer risk factors can be changed with health education. Majority of the participants (92.5).Were aware that palpable swelling in underarm area is a signal of the possibility of breast cancer, and about nearly one third of the participants in this study mentioned that nipple retraction could be one of the breast cancer presentations. This is comparable to what was observed in a study from Saudi Arabia where 73% of the nursing student's participants were aware that palpable nodules are signal of the possibility of breast cancer and 64% of them did not know that a deviated nipple is one of the breast cancer presentations Yousuf S A., (2010).

Results showed that nearly two third were aware that breast cancer is the commonest malignancy among counter act in the Upper Egypt. Majority **84.1%** of the study population answered early detection can improve chances of survival, only 48% knew that mammography, ultrasound, clinical breast examination and BSE are used for early detection of breast cancer, these results were similar to what Alwan found in her study on a sample of the educated population in Bagdad Alwan NAS.et al., (2012). The etiology of breast cancer is uncertain and adequate primary prevention is not possible.

Thus, early detection measures remain the first priority for national health promotion programmers. Breast cancer risk

factors and its presentations knowledge among students are important, which may help them to provide high-risk female with useful information regarding screening recommendations. In this study, 20.8% of the students' participants had good knowledge about breast cancer. This observation was also reported in other studies in Iraq Alwan NAS.et al., (2012).

These measures include BSE, which is a screening behavior of relevance to women's health Alsaif A., (2004). Teaching BSE and issues about breast cancer as early as possible will go a long way to encourage positive behavior towards BSE, create a 'breast-awareness' consciousness and can lead to seeking regular professional breast self-examination/screenings later in life Isara A R et al., (2011).The main source of knowledge about breast cancer and BSE in our study was the media; similar findings reported in studies carried out in Yemen and Nigeria Ahmed B A., (2010).Bassey R et al., (2010) Emphasizing the potential effectiveness of the visual media in modifying health behavior and promoting education among the general population Alwan NAS et al., (2012).More than one-quarter of the participants in this study learned about BSE from health personnel. Ideally, physicians, health pamphlets, and other information sources should assist in clarifying the actual size of the benefits. Change in perception, however, will require directed efforts in health education Ravich and ran K, (2011). Although the majority of the participants in our study had source of heard of BSE, the percentage of the students who had appropriate knowledge about time for BSE, frequency and procedure of BSE were low (31.7% ,36.7%,57.9%) respectively. These findings were higher than the result of a study involving secondary-school female students in Jeddah, Saudi Arabia that showed only 14.4% and 7.1% respectively knew the correct frequency and timing. -Milaat WA., (2000).

But lower than the result of a study involving young women in Gordon, revealed that out of Karayurt O.,(2008).Nursing student, 67.7% knew the correct methodology of BSE. This indicates that students' Knowledge and practice of BSE should be increased during their undergraduate study Jaradeen NK (2010).

In current study most of sample heard about BSE this result comparable to a study of Yemeni university students in which seventy percent of participant heard about BSE Ahmed . (2010) Shows that more than half of the nursing students were a poor knowledge about breast cancer score level. Studies from Egypt have revealed that the percentage of older women performing BSE monthly ranged from 2.7% to 18.8 % Abdel Fattah et al., (2000),ElShamy & Shoma (2010).

It is anticipated that a higher percentage of women in older age groups perform BSE because they are at higher risk of breast cancer. However, studies from Egypt have shown low percentages of both young and older women performing BSE. This may be due to the fact that health education programs organized to increase breast health awareness are not satisfactory. Such education programs should start very early in the formative years. In study involving 200 secondary-school female students in Nigeria showed that only half of respondents had good knowledge about breast self-examination Irurhe (2012).Regarding the aspect of practicing BSE, the current study revealed that 15.8of the participants performed BSE regularly. In other studies, the percentages of monthly BSE have been found to be 32.1% among under graduated students in Nigeria Gwarzo U M D, (2009). 66% among nursing students in Saudi ArabiaAlsaif A A(2004)., 52% among Jordanian nurses, and 38.7% among Jordanian nursing students ,and 36.7% among selected female university students in Malaysia Al-Naggar R A .,(2011).More than half of the participants carried BSE out in front of mirror, similar finding was mentioned in other studies in Nigeria Bassey R .,(2010).In this study the students' lack of knowledge about how to do BSE and having no symptoms were regarded as the main causes of not practicing BSE, these findings are similar to findings among Malaysian, Women Al-Naggar R A .(2011).Lack of knowledge about how to perform BSE among Assuit women might have been due to insufficient education programs for breast health awareness. Breast health awareness provides women with some acknowledgement of the part they can play in being empowered to fight breast disease MilaatWA., (2000).There was a significant association between knowledge of BSE and practice. The respondents who had a good knowledge of BSE practice it more than those who did not. This was similar to other studies in Saudi Arabia and Nigeria Yousuf S A (2010), and Irurhe N K.,et al (2012).

CONCLUSIONS

The level of knowledge about breast self-examination was low among Assuit college female students, also Students were not so familiar with practicing BSE.

RECOMMENDATIONS

1- Incorporate breast cancer prevention issues (healthy lifestyles, preventive measures, early detection methods of breast cancer and importance of breast self-examination and how to perform) into all in university curriculum.

2-Held educational program about importance of BSE and its practices to female students in schools, and universities to increase awareness about breast cancer and methods of its early detection, and empowering students with information about early detection methods of breast cancer as BSE and expanding their role as client educators to disseminate this information to others (family, relatives and community) in a correct and good model, because most of the cases detected by women themselves

3- Coordination and communication with the media to provide BSE programs on TV, and radio.

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Table 1: Socio- demographic characteristics of the participants

Variable		No	%
Age	18-20 year	170	70.9
	21-24year	70	29.1
Marital status	single	201	83.8
	married	39	16.2
Family history of cancer	no	213	88.8
	yes	27	11.2
Total		240	100

Table 2: Respondent Knowledge about Risk Factors for Breast Cancer

Risk Factors for Breast Cancer	No	%
Exposure radiation	180	75
Family history of breast cancer	172	71.7
Never breastfeeding a child	151	62.9
Aging	148	61.7
Tobacco smoking	144	60
Recent oral contraceptive use	132	55
Obesity	123	51.2
Hormone therapy for menopause	119	49.6
Lack of physical activity	107	44.6
High fat diet	68	28.3
Late menopause(> 55 years)	64	26.7
Early menarche (< 12 years)	59	24.6
Null parity	55	23

Table 3: Respondent Knowledge about Symptoms

Symptoms	No	%
A palpable swelling in underarm area	222	92.5
A change in the size or shape of the breast	187	78
A swelling or thickening in or near the breast	145	60.4
Nipples look swollen, red or scaly	128	53.3
Bloody discharge from the nipple	110	45.9
The skin of the breast look like the skin of an orange	96	40
Nipple retraction	76	31.7

Table 4: Participant Knowledge about Incident and Detection of Breast Cancer

Variables		No	%
Is it common in our country?	yes	156	65
	No	35	14.5
	Don't know	49	20.5
Can it affect males also?	yes	67	27.9
	NO	173	72.0
Can it be detected early?	Yes	180	75
	No	32	13.3
	Don't know	28	11.7
Can early detection improve survival chance?	Yes	202	84.1
	No	20	8.3
	Don't know	18	7.5
Are mammography, ultra sound, clinical breast examination, and BSE used for early detection of breast Cancer?	Yes	115	48
	No	63	26.2
	Don't know	62	25.8

Table (5) Respondents knowledge about Breast Cancer Score Level

Score level	No	%
Poor (<50%)	127	53
Fair (50-69%)	63	26.2
Good (70% and over)	50	20.8
Total	240	100

Table (6) Respondents knowledge about breast self- examination

Question		No	%
Have you heard of BSE	Yes	211	87.9
	No	29	12.1
From which source did you heard about it?	Media	88	36.7
	Health Personnel	61	25.4
	School	55	22.9
	More than source	36	15
Who should practice BSE	Female only	173	72.1
	Both male and female	67	28
At what age should BSE started	< 20 years	37	15.4
	20 more	122	50.8
	Unknown	81	33.7
How frequent BSE time for practiced	Daily	24	10
	Weekly	85	35.4
	Monthly	88	36.7
	Yearly	31	12.9
	Unknown	12	5
What is the proper time for practicing BSE?	Examining breast at end of the menstrual period	76	31.7
	any other time	164	68.3
How is BSE performed?	Palpate with palm and minimum of three fingers	139	57.9
	Any how	101	42.1
Total		240	

Table (7) Practices of the sample of the study for BSE

	Practice of BSE	No	%
Do you practice BSE?	No	149	62.1
	Irregular	53	22.1
	Regular every month	38	15.8
	Total	240	100%
Where do you practice BSE?	In front of mirror	53	55.8
	In the bathroom	33	34.8
	Lying on the bed	9	9.4
	Total	95	100
What are the reasons of not doing BSE?	I did not know how to do it	59	35.5
	I have no symptom	47	28.3
	I am afraid of being diagnosed with breast cancer.	43	26
	I think I should not touch my breast	17	10.2
	Total	166	100

Table 8: Relationship between knowledge variables and BSE Practices

Variables		yes		No		X ²	P value
		No	%	No	%		
Practice						1.65	0.00
	Irregular	42	57.5%	56	43.4		
	Regular	31	42.5%	99	89.2%		
knowledge score for correct answers about breast cancer	Poor knowledge	36	49.3%	89	65.9%	8.90	0.00
	Fair knowledge	21	28.8%	34	52.3%		
	Good knowledge	16	21.9%	24	60%		