FACTORS ASSOCIATED WITH PRACTICE SELF BREAST EXAMINATION AND KNOWLEDGE OF THE RISK FACTORS REGARDING BREAST CANCER AMONG WOMEN IN AL-ANDALUS UNIVERSITY

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ABSTRACT:

Background: Breast cancer is the most common form cancer among women worldwide. The study was aimed at assessing the knowledge level of breast cancer and breast self-examination, describe the extent of practice of breast self examination among respondents and describe their perceptions on the signs, risk factors and methods of prevention of breast cancer.

Methods: A descriptive cross sectional study was carried out in Andalus University, Syria. The tool for data collection was a structured self administered questionnaire. The sample was 127 employees women who working in Al Andalus University. Frequencies and percentages were used in the answering of the research questions.

Results: One hundred and twenty seven women participated in the study. the age range was 20–50 years old, most of them were ≤ 40 (85)%. Level of knowledge was moderate (58.6%). The most frequent perceived signs of breast cancer was "Touch of a painless lump with the walled in the breast and Enlarged axillary lymph nodes" (75.6%), (62.2%). The risk factor most frequently indexed by respondents was "Cancer`s history in family and Excessive cigarette smoking" (66.9%), (62.2%) respectively. Only 26% reported that they were practicing BSE regularly. The major source of information for breast cancer and BSE among the respondents was the internet (39.4%).

Conclusion: This study concluded that there was moderate knowledge of BSE. Further study about effectiveness of educational program on improving practicing BSE is recommended .

Keywords: Breast cancer; breast Self- examination, knowledge, risk factors.

INTRODUCTION:

Breast cancer is a global health concern and a leading cause of morbidity and mortality among women.[1,2] It has been identified as a major public health problem in both developed and developing nations because of its high incidence-prevalence, over-burdened health system and added direct medical expenditure.[3,4] The most recent estimate by Forouzanfar et al. (2010) indicates that more than 1.6 million new cases of breast cancer occurred among women worldwide in 2010. The number of breast cancer cases has been steadily increasing. The global total number of deaths per year from breast cancer has increased from 250, 000 in 1980 to 425, 000 an annual rate of increase of 1.8%. [5]cancer has a drastic growth in Syria since 2002 as the incidences recorded 9978 cases and reached 13149 new cases in 2006 with the average ratio of 58.6 cases for 100.000 citizens, and for the age group of (20-59) breast cancer is the most frequent.[6] Early detection and effective treatment are important to

reduce morbidity and mortality due to breast cancer. Breast self-examination (BSE), mammography and clinical breast examination are believed to be appropriate and effective methods of ensuring early detection of breast cancer.[7,8] Breast self-examination is a simple, very low cost, noninvasive procedure with no special material/tool requirements; and it is an effective diagnostic method for breast cancer which only takes five minutes to apply.[9]There is 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 and to yield a better survival rate (American Cancer Society, 2000b). For example, in a randomized, controlled assessment of the effectiveness of international screening programs for breast cancer in Scandinavian countries, it was found that mortality had fallen by 31% after 7 years for women aged 40–74 at the beginning of the trial.[10] On the other hand, Socioeconomic status, level of education, referral from a physician, knowledge, health insurance coverage and family history of breast cancer have also been associated with the practice of BSE.[11,12] It has been estimated that more than 80% of breast cancer are associated with environmental factors that include exposure to contaminants, lifestyle, and diet.[13] Linsell et al, 2009 stressed the importance of awareness and knowledge of breast cancer symptoms and risk factors in promoting early presentation to treatment.[14] Lack of awareness about risk factors, initial symptoms, screening and treatment was one of the major findings of many research targeting the factors affecting delayed presentation of women to treatment.[15] Pineros et al, 2009 reported that approximately 40% of women delay in seeking help due to lack of knowledge about initial breast cancer symptoms and they do not consider symptoms to be important.[16]

Little is known concerning women's knowledge about breast cancer, their knowledge on BSE and their practice of BSE. Better documenting women's knowledge on breast cancer and BSE as well as their practice of BSE would be useful in the design of interventions aimed at preventing breast cancer through increased awareness and or improved screening. There are no studies conducted in Syria to explore knowledge and practices of breast self examination (BSE), and find out the knowledge about risk factors for breast cancer among Syrian women. Therefore, The objectives for this study were to: Assess women's knowledge of signs, risk factors and prevention methods of breast cancer, describe of their perceptions on breast self-examination (BSE) and identify the extent of practice of breast self examination, the factors associated in practice of BSE and most sources of information by respondents.

MATERIALS AND METHODS:

A Cross-sectional descriptive study was adopted to find out the knowledge and practice of breast self examination among women in Al Andalus community in Tartous city, Syria. The sample was 127 employees women who working in Al Andalus University above the age of 20 yrs. A questionnaire was developed by the authors based on an extensive review of the literature. The questionnaire consisting of five main sections. Section one contains demographic information of the respondents, included their age, level of education, level income, marital status and menopausal status. Section two contains information on the knowledge of women of breast cancer that had 27 questions included: sings of breast cancer (9 Items), risk factors of breast cancer included (14 Items), prevention methods of breast cancer included (4 Items). Section Three contains information on the knowledge of women of breast self examination that had 13 questions included: meaning of BSE (3 Items), advantages of the BSE (3 Items) and time of BSE practice (4 Items), and (3 Item) for age should breast self examination be commenced . section four was about the extent of practice of breast self examination (2 Items). Section five contains information sources that used by women. The knowledge scores were classified as: Poor knowledge less than 30%, Fair knowledge 30-70%, Good knowledge 70% and above. Internal consistency among the questionnaire items was 0.85 Cronbach's alpha (α) and it was considered within the acceptable range. The questionnaire was revised and validated by panel of 5 experts in academic and health field; they agreed and no comments. A score of 1 was given for a correct answer and 2 for incorrect. The data were collected between Jun and July 2017 using self designed structured questionnaire. The questionnaire was distributed to all respondents, , 150 questionnaires were had distributed, only 127 retrieved from the respondents, 33 subjects uncompleted interviews.

RESEARCH ETHICS: Approval for the study was obtained from the administration of Al Andalus University, Also, a verbal informed consent was obtained from each respondent. In addition the questionnaire was placed anonymously and participants were assured that all information will be kept strictly confidential and used only for the research purposes. Statistical analysis was carried out using the statistical product and service solutions (SPSS) version 20 . Frequencies and percentages were used in answering the research questions.

RESUTS:

Table(1) showed general characteristics of the subjects. The total of 127 participants were included in the study with the age range of 20–50 years old, most of them were ≤ 40 (85%). Most of the participants were single 97(52%), 58 (45.7%) of them were married. The majority of the participants had good

health status 106 (83.5%). 59.8% of the respondents (n=76) had obtained college degree, 26.8% (n=34) were educated in the secondary level. Most of participants were in premenopause stage 126 (99.2), Only one were in menopause stage. Regarding the family history, only 4(3.1%) indicated that they had a personal history of breast disease, and only 6(4.7%) indicated that they had a family history of breast disease. One of the study objectives was to analyze the practice and frequency of BSE among women. From the above shown table it is seen that (74%) of the respondents (n=94) stated that they did not perform BSE, and only 26% of them (n=33) reported that they were practicing BSE regularly. It occurred that only 18 (14.2%)of them currently were performing BES monthly, 11 women (8.7%) practicing it every year. It was noticed from table 3,4 a pattern of answer given by the participants about the signs and risk factors of breast cancer. The majority of the participants 96(75.6%) and 79 (62.2%) known respectively that the touch of a painless lump with the walled in the breast and enlarged axillary lymph nodes are one of the signs of breast cancer. While 86 (67.7%), 82(64.6%) of them had no knowledge that the sinking on the part of the breast and bloody or watery discharge from the nipple respectively are one of the signs of breast cancer. Most of participants replied correctly that the cancer`s history in family and excessive cigarette smoking, alcohol consuming are risk factors 85(66.9%), 79

(62.2%), 76(59,8%) respectively. While starting menstruation < 12 years 109 (85.8%), first pregnancy < 30 years 108 (85%), women with any children 101 (79.5), inactivity and sedentary lifestyle 95 (74.8%) were considered incorrect answer as a risk factors for breast cancer mentioned by most of the participants. Table 5 showed that the majority of the participants answered that the BSE most important between the methods of preventing breast cancer 111(87.4%). However, 86(67.7%) of them stated that exercise is also considered as methods of preventing breast cancer, whereas 94 (74%) of them had knowledge that vocation is not method of preventing Breast cancer. One of the objectives of this study was to identify the knowledge level of breast cancer and breast self examination, our study showed that the knowledge level was 58% that means they had moderate knowledge. So more than half of participants 99(78%) were considered the BSE is using the fingers around the breasts to detect lump. On the other hand, 115(90.6%) of them reported that the most advantage of breast self examination is it helps to detect breast lump earlier. Recording the time of performing the BSE 95.5% of participant had knowledge that BSE cannot perform during menstruation, while 59.8% had no knowledge that the BSE can perform between 5 to 7 Day after menstruation. However, 68(53.5%) of them considered that the correct age for beginning BSE is Above 30 years table (6). A statistical test analysis conducted using Chi–Square showed that there is a

significant relationship between heard/read about breast cancer (χ^2 = 7.621, P= .003) heard/read about breast examination (χ^2 = 11.464, P= .001) and the performance of Breast Self-Examination. Family history of breast cancer, personal history of breast disease, marital status, menstruation status, age, education level, and perceived health status were not significantly related to performing BSE table (7). 39.4 % pointed internet as the most source of information on breast cancer and BSE, 28.3 % mentioned friends and family, 14.2% - Radio and TV, 9.4 % - book, 8.7 % got the information from doctors table (8).

DISCUSSION:

Breast cancer is the most common cancer in women worldwide that is why women's awareness of breast cancer is crucial, so the need to evaluate the knowledge and practice of BSE among female is necessary and recommended. The present study was conducted to determine knowledge, practice of self breast examination among women in Al Andalus university. The result of the current study revealed that our participants had moderate knowledge about breast cancer and BSE, and although 90% of the participants reported that they had heard about BSE, only 26% had ever performed BSE . Whereas in the study conducted by Ayed et al,2015 for assessment of Knowledge, Attitude, and Practice among Nursing Students of Arab American University in Jenin, participant had limited knowledge

about BSE and only 15.5% of the respondents had good overall knowledge, 4.1% practice BSE always every month.[17] Similarly, the rate of regular performance of BSE among female was reported to be 6% in the Islamic Republic of Iran. [18], 7% in Jordan.[19] and 11% in Egypt.[20] In a sample of Turkish Muslim women, only 4.3% of the participants reported that they practiced BSE regularly.[21] Consistent with this, Rashidi and Rajarm reported that 85% of women of Middle East origin had heard of breast cancer screening but 74% had never performed BSE.[22] Another cross-sectional study was conducted by Parsa, et al, 2011 for identified factors associated with breast self-examination among 425 female teachers in 20 randomly selected secondary schools in Malaysia.results showed that only 19% of the women performed BSE.[23] This is inconsistent with the study done by Yakout et al. (2013), Parajul and Mandal (2010) and Bassey et al. (2011) showed that most of the respondents were aware about BSE. [24,25,26]Comparatively, although that rate of regular performance of BSE among female in our study was decreased, but participant more perform BSE than other studies. Therefore, delineating the cognitive correlates of BSE is essential to the development of effective interventions. This highlights the importance of introducing educational programmes to increase confidence and identifying barriers to BSE for Syrian women. Intervention strategies should focus on teaching women how to make

BSE a monthly habit. In this study, the most common factors associated with performing breast self- examination were heard/read about breast cancer, heard/read about BES. In the study by farshbaf khalili, the most common factors influencing related to perceptual factors include: inadequate knowledge about breast self examination 53.2%, self- examination being unnecessary because of not suffering from breast malady 18.5%, unwilling to do self-examination 2.5%, the fear of the presence of tumor (mass) by self-examination 1.8%.[27] While in many studies, there was a significant relationship between participating in self- examination practice and education level.[28] Another study by farshbaf et al, soltan mohammadi indicated the significant relationship between self-examination practice and job.[29] Cross-sectional, correlational, descriptive study was to investigate factors and beliefs that may be related to practice of breast self- examination among a group of Jourdanian women by (Nustus, 2002), about 36% of the sample were university employees, the results showed that confidence, motivation, susceptibility, and fewer barriers were variables that showed a positive association with BSE practice.[30] The major source of information about breast cancer and BSE was internet in the study. Similar observation was reported in study conducted by Bassey et al 2011& Irurhe et al. 2009 where 58.6% of the respondents' first source of information was obtained from television/ radio,

.[25,31] Media played a significant role as the main source of information about breast cancer; therefore an important effort should be intensified in using these media to create breast cancer awareness within the Syrian community. This will emphasize the message of early detection which will reach large number of people in the community. The least reported source of information was the doctors (8.7%). This is one of the gaps existing in health education which care givers have no programs existing to discuss pertinent health issues with women.

CONCLUSION:

Although there was lack of knowledge about BSE yet, the positive attitude towards BSE was encouraging. Most women emplyees in our sample did not perform BSE. This might be an obstacle to screening program and early diagnosis of breast cancer. Therefore, more intensified awareness programs among women in Syrian university are necessary to keep in view their current status of breast cancer and BSE knowledge. There is need to applying educational programe for increased the knowledge level of breast cancer and to motivate them for practice the BSE. More utilization of Media such as video, brochures as an important source of breast self exam is important to improve awareness among the community. In conclusion, programs that are easy for women to access and also recognize the role of them in breast cancer preventing, should be in the government plan. Such

programs encourage Syrian women to adhere to recommended breast cancer screening guidelines.

Recommendation:

Nurse practitioners as educators need to teach all females attending various health care settings about the importance of BSE in early detection of breast cancer. Based on the research conducted, it is recommended that there is a need to create awareness about the importance of SBE amongst female so as to improve the practice of it. Educational materials such as brochoures, poster and leaflets should be freely made available during such teachings so as to facilitate better learning. Furthermore, public awareness on the importance of SBE should be intensified using mass media and the health service personnel should promote SBE during their contact with female clients. In order to function as effective promoters of breast cancer control through early detection, nurses/nursing students should possess the accurate knowledge and the appropriate attitude and practice concerning the disease and its early detection. Nurses should adopt such preventive screening procedures and act as role models for the community. Further research studies should be undertaken on the Syrian women to study the effectiveness of educational program on improving knowledge of breast cancer and practicing BSE. Also, further researches are needed to identify causes of inadequate knowledge and practice of BSE among Syrian women.

Acknowledgement:

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TABLES:

Table (1): Distribution of the respondents according to their characteristics

Characteristics		Frequency (n)	Percentage(%)
Age (years)	≤ 40	108	85%
	> 40	19	15%
Marital status	Single	97	52%
	Married	58	45.7%
	Widowed	1	8%
	Divorced	1	8%
Educational level	Essential	11	8.7%
	Secondary	34	26.8%
	College	76	59.8%
	High education	6	4.7%
Income level	Low	22	17.3%
	Moderate	84	66.1%
	good	21	16.5%
perceived health status	good	106	83.5%
	satisfied	21	16.5%
Menopausal status	Premenopause	126	99.2%
	Postmenopause	1	8%
Personal history of breast cancer	Yes	4	3.1%
	No	123	96.9%
Family history of breast cancer	Yes	6	4.7%
	No	121	95.3%
Ever heard/read about breast cancer	Yes	97	76.4%
	No	30	23.6%
Ever heard/read about breast examination	Yes	72	56%
	No	54	43.3%

Table 2: Description of the respondents according to performing of breast self-examination (BSE)

Items		Frequency (n)	Percentage (%)
Have you examine your breast before?	yes	33	26%
	no	94	74%
How often do you examine your breast?	Weekly	10	7.9%
	Monthly	18	14.2%
	Yearly	11	8.7%
	Never	88	69.3%

Table (3): Knowledge of signs of breast cancer among participants

signs related to Breast Cancer	Correct		Incorrect	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Sinking on the part of the breast	41	32.3%	86	67.7%
Orange peel on the part of the breast	61	48%	66	52%
Breast deformity	48	37.8%	79	62.2%
Bloody or watery discharge from the nipple	45	35.4%	82	64.6%
A sinking of nipple in one breast	56	44.1%	71	55.9%
Enlarged axillary lymph nodes	79	62.2%	48	37.8%
Sinking and breast skin ulcers	55	43.3%	72	56.7%
Touch of a painless lump with the walled in the breast	96	75.6%	31	24.4%
Breast enlargement in both	55	43.3%	72	56.7%

Table (4): Knowledge of risk factors of breast cancer among participants

Risk Factors Related to Breast Cancer	Correct		Incorrect	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
History of B.C. in another breast	66	52%	61	48%
Low-fat diet	10	7.9%	117	92.1%
Starting menstruation < 12 years	18	14.2%	109	85.8%
women with any children	26	20.5%	101	79.5%
First pregnancy < 30 years	19	15%	108	85%
Obesity	56	44.1%	71	55.9%
Cancer`s history in family	85	66.9%	42	33.1%
Menopause < 50 years	39	30.7%	88	69.3%
Excessive alcohol consumption	76	59.8%	51	40.2%
Excessive cigarette smoking	79	62.2%	48	37.8
Inactivity and sedentary lifestyle	32	25.2%	95	74.8%
Prolonged and early use of oral contraceptives	73	57.5%	54	42.5%
Exposure to x-rays before 30 years of age	72	56.7%	55	43.3%
Exposure to sun shine	32	25.2%	95	74%

Table (5):Perceived methods of preventing Breast cancer

methods	Correct		Incorrect	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Dieting	74	58.3%	53	41.7%
Exercise	86	67.7%	41	32.3%
Vocation	33	26%	94	74%
Breast examination	111	87.4%	16	12.6%

Table(6):knowledge of breast self examination:

What the meaning of breast self examination?	Correct		Incorrect	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
BSE is to detect lump in the breast.	83	65.4%	44	34.6%
BSE is using your fingers around your breasts to detect lump.	99	78%	28	22%
It is an assessment do by doctors and nurses check for lump.	56	44.1%	71	55.9%
What the advantage(s) of breast self examination?				
It helps to know the shape and size of the breast.	33	26%	94	74%
It is done to make it more firm.	13	10.2%	114	89.8%
It helps to detect breast lump earlier.	115	90.6%	12	9.4%
When did you perform BSE?				
Immediately before menstruation	7	5.5%	120	94.5%
During menstruation	6	4.7%	121	95.3%
Day 5 to 7 after menstruation	51	40.2%	76	59.8%
At any time	59	46%	68	53.5%
At what age should breast self examination be commenced?				
From 15 years	13	10.2%	114	89%
From 20 years	57	44.9%	70	55.1%
Above 30 years	68	53.5%	59	46.5%

Table 7: Factors associated with performing breast self-examination (BSE) among woman (n =127)

Characteristics		Performing BSE (n=)		Not performing BSE(n=)		χ2 –test	P-value
		(n)	(%)	(n)	(%)		
Age (years)	≤ 40	27	25%	81	75%	.364	.364
	> 40	6	31.6%	13	68.4%		
Marital status	Single	17	25%	50	74.6%	3.213	.360
	Married	15	25.9%	43	74.1%		
	Widowed	1	100%	0	0%		
	Divorced	0	0	1	100%		
Educational level	Essential	2	18.2%	9	81.8%	.525	.913
	Secondary	9	26.5%	25	73.5%		
	College	20	26.3%	56	73.7%		
	High education	2	33.3%	4	66.7%		
Income level	Low	9	40.9%	13	59.1%	3.094	.213
	Moderate	19	22.6%	65	77.4%		
	good	5	23.8%	16	76.2%		
	High	2	33.3%	4	66.7%		
perceived health status	good	28	26.4%	78	73.6%	.026	.521
	satisfied	5	23.8%	16	76.2%		
Menstruation status	Premenopause	33	26.2%	93	73.8%	.354	.740
	Postmenopause	0	0	1	100%		
Personal history of breast cancer	yes	2	50%	2	50	1.239	.277
	no	31	25.2%	92	74.8%		
Family history of breast cancer	yes	2	33.3%	4	66.7%	.177	.492
	no	31	25.6%	90	74.4%		
Ever heard/read about breast cancer	yes	31	32%	66	68%	7.621	.003*
	no	2	6.7%	28	93.3%		
Ever heard/read about breast examination	yes	27	37.5%	45	62.5%	11.464	.001*
	no	6	10.9%	49	89.1%		

Table (8): sources of information about breast cancer

Sources of information	Frequency (n)	Percentage (%)
Radio	18	14.2
Television	18	14.2
Book	12	9.4
Doctors	11	8.7
Friends	36	28.3
Family	36	28.3
Internet	50	39.4
	127	100%