

**ASSESSMENT OF FEMALE STUDENTS' KNOWLEDGE
CONCERNING BREAST CANCER IN THE COLLEGE OF NURSING/
UNIVERSITY OF SULAIMANI ⁺**

تقييم معارف طالبات كلية التمريض / جامعة السليمانية بخصوص سرطان الثدي

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Abstract:

Objectives: The objectives of the study are to assess female student's knowledge of the college of nursing/ University of Sulaimani about breast cancer, and to determine the relationship between female student's knowledge and their demographic characteristics such as (age, marital status, monthly income, and residential area).

Methodology: A descriptive study was carried out at the college of nursing / university of Sulaimani (Kurdistan region). The study started at the beginning of February up to the end of June 2009. To achieve the objectives of the study, non- probability (purposive) sample of (98) female students including all the female students of the college of nursing / university of sulaimani in all stages. Data were collected through the use of constructed questionnaire, which included of three parts, the first part consist of (6) items, which include the demographic information and the second part includes the family history of the students, while the third part consists of (54) items which include the knowledge of the students concerning breast cancer.

The content validity of instrument was established through penal of (10) experts.

Reliability of instrument was determined through the split-half approach, (r=87).

Data was collected by (self-Report) method, using the questionnaire formal and data was analyzed by the application of descriptive and inferential statistical method.

Results: The result of the study indicated that the high percent of the students was (30.6%) for age (18-19) in the first stage of the college and most of them was single (84.7%) and suffer from insufficient monthly income who live in urban area and there is significant relationship between (age, residential area) and the knowledge concerning cancer of Breast, and the majority of the study sample have no family history concerning breast cancer.

Recommendations: Based on the results of the study, it's recommended to give a chance to the student to get update information about breast cancer, and an education program for female in the rural areas in sulaimani city about breast cancer.

المستخلص:

الهدف: تهدف الدراسة الى تقييم معارف طالبات كلية التمريض / جامعة السليمانية بخصوص سرطان الثدي، كذلك لتحديد العلاقة بين معارف الطالبات وبعض الصفات الديموغرافية لهن والتي تشمل (العمر، الحالة الزوجية، الدخل الشهري ومكان السكن).

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منهجية البحث: دراسة وصفية اجريت في كلية التمريض/ جامعة السليمانية (اقليم كوردستان)، بدأت الدراسة في بداية شهر شباط ٢٠٠٩ وأنتهت في نهاية شهر حزيران ٢٠٠٩. ولانجاز اهداف الدراسة أختيرت عينة غير احتمالية (غرضية) مكونة من (٩٨ طالبة) شملت العينة جميع طالبات كلية التمريض في جامعة السليمانية بكل المراحل الدراسية. جمعت المعلومات من خلال استمارة استبائية صممت لهذا الغرض مكونة من ثلاثة أجزاء، خصص الجزء الاول والمتكون من (٦) فقرات للخصائص الديموغرافية للطالبات وخصص الجزء الثاني للتأريخ العائلي للطالبات، فيما خصص الجزء الثالث والمتكون من (٥٤) فقرة لمعارف الطالبات بخصوص سرطان الثدي. ولصدق الاداة عرضت الاستمارة الاستبائية على (١٠) خبراء في مجال الاختصاص ثم تم تحديد ثبات الاداة من خلال طريقة (split-half) باستعمال معامل بيرسون وكان ($r = ٨٧$). جمعت المعلومات من خلال استمارة استبائية ملئت من قبل الطالبات بطريقة المأ الشخصى للاستمارة، ثم تم تحليل البيانات باستخدام التحليل الوصفي والاستنتاجي.

النتائج: بينت الدراسة أن اعلى نسبة من الطالبات هي (٣٠,٦%) في عمر (١٨-١٩) سنة في المرحلة الاولى من الدراسة وان اغلب العينة من غير المتزوجات (٨٤,٧%) ذات الدخل المحدود واللاتي يسكن في مركز المدينة. هذا وقد اظهرت الدراسة ان هناك علاقة بين (عمر الطالبات ومحل سكناهم) مع معلوماتهم عن سرطان الثدي، كذلك بينت الدراسة ان غالبية الطالبات ليس لهن تاريخ عائلي بخصوص سرطان الثدي. التوصيات: استنادا الى نتائج الدراسة اوصى الباحث باعطاء الفرصة للطالبات للحصول على المعلومات الحديثة عن التطورات حول سرطان الثدي. كذلك العمل على برامج تثقيفية لمناطق الارياف في السليمانية بواسطة الفرق الصحية لتعريف النساء بمرض سرطان الثدي وكيفية اداء الفحص الذاتي للثدي.

Introduction:

Breast cancer is a leading cause of morbidity and mortality for women. It is the second most common cause of cancer death among American women [1]. The number of death of women from breast cancer appears to be leveling off [2]. Each year in the US, approximately 184,000 cases of breast cancer occur in women and about 46,000 women die of the disease.[3]

Approximately 1 of every 8 women will develop breast cancer during her lifetime; the incidence of breast cancer in men is rare (less than 1%). [4]. Breast cancer is usually an adenocarcinoma, arising from the epithelium and evolving in the lactiferous duct, it infiltrates the parenchyma (the tissue of an organ other than the supporting or connective tissue). The cancer occurs most often in the upper outer quadrant of the breast of women who have not given birth or breastfed a child. A slow-growing breast cancer may take up to 8 or 9 years to become palpable or to have reached the size of a small pea. Metastasis is by lymphatic system and blood stream. The most common sites for metastasis are, in order: bones, lung, pleura, breast site, central nervous system, and liver.[5]

Although the etiology of breast cancer is not completely understood, a number of factors are thought to relate to the cause. Heredity, hormonal regulation of the breast is related to the development of breast cancer; Additional factors may contribute to breast cancer such as dietary fat intake, obesity, alcohol intake, smoking, and environmental factors such as chemical and pesticide exposure and radiation may also play role.[6]

Increasing age also increases the risk of developing breast cancer, after age 60 the incidence increases dramatically, furthermore positive family history is an important risk factor, especially if the involved member with breast cancer was premenopausal, had bilateral disease, and is a first-degree relative (i.e., mother,sister,daughter).[7]

Other risk factors include early menarche, a first pregnancy after age 30, natural menopause after age 55, and having one or more breast cancer genes .[8]

Most women who develop breast cancer do not have any risk factors for the disease. That is why it is so undergo screening exam .[9]

Breast tumors are usually small, solitary, irregularly shaped, firm, non tender, and non mobile. There may be change in skin color, feelings of tenderness, puckering or dimpling (appearance of an orange skin) of tissue, nipple discharge, and retraction of the nipple and axillary's tenderness. More than 90% of breast cancer is detected by patient. Breast self examination (BSE) should be performed at monthly intervals, preferably 1 week after menses.

BSE for postmenopausal women should be done on the same day each month.[10]

The essential factors in the early detection of breast cancer are the regular performance of BSE, regular clinical breast examination (CBE), and routine mammography. Surgery plays a vital role in the management of breast cancer, tissue biopsy, inspection and biopsy of the lymph nodes in the axillary's area, radiological examination and laboratory reports are aids in making the decision that surgery should be performed, no matter that type of surgery the patient has, pain management and wound care will be priorities.[11]

Material and Method:

Quantitative design (a descriptive study) was conducted at the College of Nursing/ University of Sulaimani (Kurdistan Region) to assess the female student's knowledge concerning breast cancer, and to determine the relationship between female student's knowledge and their demographic characteristics such as (age, marital status, monthly income, and residential area).

The study was carried out during the period of beginning of February up to the end of June 2009.

Non-probability (purposive) sample of (98) female students who were presents all stages of the college of nursing in the University of Sulaimani.

For the purpose of data collection, a questionnaire was designed and constructed; the content validity of the instrument was established through a penal of (10) experts.

Reliability was determined by split-half approach which was estimated as average ($r=87$).

Data was collected by (self-Report) method

Data was collected by organized, and coded into computer files by using the statistical package of social science (SPSS).

The appropriate statistical means is used in the data analysis which includes the following:

1-Descriptive data analysis: this approach is performed through the determination of:

-Frequencies (f)

-Percentage (%)

2-Inferential data analysis: this approach is performed through the determination of:

-Mean of scores (M.S)

-Severity

-Pearson correlation coefficient

The level of severity of knowledge items are divided into three levels (Know=3), (Uncertain=2), and (Don't know=1)

A mean of score of less than 1.66 was considered low significant

More than 1.66 and less than 2.32 was considered moderate significant

More than 2.32 – 3 was considered high significant

Results:

Table (1): Distribution of demographic characteristics which include (age, marital status, monthly income, stage of the study, and residential area) of (98) female students who were considered as a sample of the study

No.	Variables	F	%	Cumulative %
	Age			
1.	18-19	30	30.6	30.6
2.	20-21	26	26.5	57.1
3.	22-23	21	21.4	78.5
4.	24-25	11	11.3	89.8
5.	26 years & older	10	10.2	100
	Total	98	100	
	Marital status	F	%	Cumulative %
1.	Single	83	84.7	84.7
2.	Married	15	15.3	100
	Total	98	100	
	Monthly income	F	%	Cumulative %
1.	Sufficient	26	26.5	26.5
2.	Barely sufficient	24	24.5	51.
3.	Insufficient	48	49	100
	Total	98	100	
	Stage of the study	F	%	Cumulative %
1.	1 st stage	41	41.8	41.8
2.	2 nd stage	22	22.5	64.3
3.	3 rd stage	17	17.3	81.6
4.	4 th stage	18	18.4	100
	Total	98	100	
	Residential area	F	%	Cumulative %
1.	Urban	62	63.3	63.3
2.	Rural	36	36.7	100
	Total	98	100	

This table shows that the distribution of age indicated that the majority of female student's age was (18-19) years old who were accounted for (30.6 %), most of them (84.7 %) were single. The monthly income represents that about half of them (49%) were insufficient, and the majority of them (41.8%) were in the first stage of the college, and most of them (63.3%) were living in urban area.

Table (2): Family history of breast cancer, and type of relation with the sample of the study.

No.	Items	Yes		No		Total	
		F	%	F	%	F	%
1.	Do you have breast cancer in one of your family member?	3	3.06	95	96.94	98	100
	Type of relation	Mother	Sister	Aunt	Grand mother		
		2	1	0	0		

This table shows that the majority of the student (96.94%) has no family history of breast cancer and (3.06%) of them has history of breast cancer with first degree (mother and sister).

Table (3): Female student knowledge regarding information about Breast cancer.

No.	General information	Know	Uncertain	Don't know	M.S	Severity
1.	The breast is a fatty tissue contains a milk ducts and lymph vessels	61	23	14	2.47	H
2.	Breast cancer is the most malignancy affected women over all the world	18	42	38	1.79	M
3.	Breast cancer is a malignant tumor affect breast cells and may transfers to another organs in the body.	52	30	16	2.36	H
4.	Breast cancer is abnormal cell are derived from normal body cells by unknown mechanism or change	32	21	45	1.86	M
	Clinical manifestation of breast cancer	Know	Uncertain	Don't know	M.S	Severity
1.	Lump usually painless.	63	26	9	2.55	H
2.	Bloody nipple discharge.	31	34	33	1.97	M
3.	Sensation of elevated local temperature in the breast	26	31	41	1.84	M
4.	Retraction of the nipple.	53	9	36	2.17	M
5.	The color of the breast may change to orange in the late stage.	60	11	27	2.33	H
6.	Change in size and shape of the nipple and breast.	57	15	26	2.31	M
7.	Some times dimpling the skin.	65	20	13	2.53	H
8.	Mobile axially lump.	13	61	24	1.88	M
	Risk factors of breast cancer	Know	Uncertain	Don't know	M.S	Severity
1-	Past history of breast cancer.	70	5	23	2.47	H
2-	Family history of breast cancer(sister and mother)	73	10	15	2.59	H
3-	Early menorah, (before age 12 years).	20	15	63	1.56	L
4-	Late menopause (after age 50 years).	22	13	63	1.58	L
5-	History of benign breast disease.	42	19	37	2.05	M
6-	Obesity	20	12	66	1.53	L
7-	Hormonal contraceptive (control pills).	54	16	28	2.26	M
8-	Infer tiled women.	34	30	34	2.0	M
9-	Hormonal treatment without physician consultant.	16	11	71	1.43	L
10-	Drinking alcohol.	18	8	72	1.44	L
11-	Hormonal disturbance.	41	19	38	2.03	M
12-	First delivery after age 35 years.	38	21	39	1.98	M
13-	Smoking	55	13	30	2.25	M
14-	Radiation exposure	79	3	16	2.64	H
15-	High fatty diet	17	15	66	1.5	L
16-	Breast feeding protect against breast cancer.	63	20	15	2.44	H
17-	Single women have about 40% higher rate than married women	9	18	71	1.36	L
	Treatment	Know	Uncertain	Don't know	M.S	Severity
1-	Simple mastectomy.	15	52	31	1.83	M
2-	Radical mastectomy.	74	23	1	2.74	H
3-	Chemotherapy.	65	6	27	2.38	H
4-	Radiation therapy.	59	2	37	2.22	M
5-	Hormonal therapy.	51	9	38	2.13	M
	Source of your information about	Know	Uncertain	Don't	M.S	Severity

	disease			know		
1.	Physicians	71	15	12	2.6	H
2.	Nurses	73	13	12	2.62	H
3.	Family members (mother & sisters)	56	12	30	2.26	M
4.	Relatives	19	5	74	1.43	L
5.	Friends	21	18	59	1.61	L
6.	Television	77	9	12	2.66	H
7.	Radio	13	18	67	1.44	L
8.	Magazines	35	44	19	2.16	M
9.	Kurdistan women's union	7	14	77	1.28	L
10.	Internet	49	10	39	2.1	M
11.	Others	2	5	91	1.09	L

This table indicates that the mean of scores are high on items (1, 3) and moderate on items (2, 4) for the general information items. And high on items (1, 5, 7) & moderate on the remaining items for the clinical manifestation of the breast cancer. And high on items (1, 2, 14, 16) & moderate on items (5, 7, 8, 11, 12, 13) & low severity on the remaining items, while the mean of scores are high on items (2,3) and moderate on items (1, 4, 5) regarding treatment of breast cancer. The mean of scores are high on items (1, 2, 6) and moderate on items (3, 8, 10) & low on the remaining items for the source of sample information about breast cancer.

Table (4): Association between age of female students (sample of the study) and their knowledge concerning breast cancer.

Age	Scores		Know		Uncertain		Don't know		Total		Sig.
	F	%	F	%	F	%	F	%	F	%	
18-19	6	6.1	7	7.1	28	28.5	41	41.8	S		
20-21	20	20.4	3	3.0	1	1.0	24	24.4			
22-23	16	16.3	1	1.0	0	0.0	17	17.3			
24-25	11	11.2	0	0.0	0	0.0	11	11.2			
26 years & older	5	5.1	0	0.0	0	0.0	5	5.1			
Total	58	59.1	11	11.2	29	29.6	98	100			
		X^2 obs.= 63.2		df=8		X^2 crit.=15.51		P<0.05			

This table shows that there is highly significant association between age of female students and their knowledge.

Table (5): Association between marital status of female students (sample of the study) and their knowledge concerning breast cancer.

Marital Status	Scores		Know		Uncertain		Don't know		Total		Sig.
	F	%	F	%	F	%	F	%	F	%	
Single	53	54	8	8.1	22	22.4	83	84.7	N.S		
Married	13	13.2	2	2.0	0	0.0	15	15.3			
Total	66	67.3	10	10.2	22	22.4	98	100			
		X^2 obs.= 5.2		df=2		X^2 crit.=5.99		P<0.05			

This table indicates that there is no significant association between marital status of female students and their knowledge.

Table (6): Association between monthly income of female students (sample of the study) and their knowledge concerning breast cancer.

Scores Monthly income	Know		Uncertain		Don't know		Total		Sig.
	F	%	F	%	F	%	F	%	
Sufficient	16	16.3	2	2.0	8	8.2	26	26.5	N.S
Barely sufficient	11	11.3	6	6.1	7	7.1	24	24.5	
Insufficient	27	27.6	7	7.1	14	14.3	48	49	
Total	54	55	15	15.4	29	29.6	98	100	
X^2 obs.= 2.99 df=4 X^2 crit.=9.49 P≤0.05									

This table shows that there is no significant association between monthly income of female students and their knowledge.

Table (7): Association between residential area of female students (sample of the study) and their knowledge concerning breast cancer.

Scores Residential area	Know		Uncertain		Don't know		Total		Sig.
	F	%	F	%	F	%	F	%	
Urban	49	50	3	3.0	10	10.2	62	63.3	S
Rural	19	19.4	8	8.1	9	9.2	36	36.7	
Total	68	69.3	11	11.3	19	19.4	98	100	
X^2 obs.= 9.41 df=2 X^2 crit.=5.99 P≤0.05									

This table indicates that there is a significant association between residential area of female students and their knowledge.

Discussion:

Through the data analysis distribution of demographic variables, the present study shows that the age range is between (18-19) year was considered as the highest percent of (30.6%), most of them were single (84.7%). These findings come along with Petro-Nustus, 2002, who found that women's age and level of education having influence of breast cancer. [12]

The findings of the present study indicate that almost half of the study sample was insufficient monthly income (49%). Dundar et.al, 2006, stated that high percent of women with B.C were in low socio- demographic level, illiterate and living in rural areas .[13]

Concerning the residential area, most of the female students were living in urban area (63.3%) and most of them were in the first stage of the college. Because of the college of nursing in the university of sulaimani is still new, so the number of students is little except this year were (41) female student (41.8).

Regarding to the family history of the sample, the present study shows that the majority of the study sample has no family history of breast cancer (96.9 %), and only (3.6%) of them has past history of breast cancer with first degree (mother & sister). American cancer society (ACS), 2007 mention that women who perceives that she is or her mother susceptible to breast cancer is a serious disease would be more likely to improve their level of knowledge. [14]

On the other hand the finding of the present study indicates that the mean of score of general information of students regarding breast cancer, clinical manifestation, risk factors and their knowledge about treatment of the disease were ranged between highly significant

and moderate. These findings come along with the student's scientific study and information in their college.

Further more the source of information about breast cancer is highly significant at items of Doctors, nurses, and television. While moderate on items family member, magazines and internet.

This finding indicated the source of their information were from their teachers and scientific references and the declaration of ministry of health on the television about the danger of the breast cancer. Findings of the present study revealed that there is significant association between age and the knowledge of the students (Table 4), which explain the homogenous of the sample of the study.

Significant association is found between residential area and the knowledge of the study sample (Female students) concerning breast cancer (Table 7). These findings come along with Susan, p who stated that women who live in the cities have a good chance for education about breast self examination (BSE) from physicians, nurses, and health educators, and encounter reinforce the value and importance of BSE. Women who live in the urban areas have different life style, maintenance of ideal body weight and regular aerobic exercise which provide the best known defenses against disease .[15]

Conclusions:

According to the findings of the present study and their discussion, it is concluded that:

- 1- High percentage (30.6 %) of the sample was at (18-19) years old.
- 2- The majority of the sample was single.
- 3- Half of them were insufficient monthly income.
- 4- The majority of the sample was in the first class and most of them were living in the urban area.
- 5- The majority of the sample has no family history of breast cancer.
- 6- Mean of scores were high and moderate on the items of knowledge of breast cancer.
- 7- There was significant relationship between age and knowledge of breast cancer.
- 8- There was significant relationship between residential area and knowledge of breast cancer.

Recommendations:

On the basis of the results of the study, it is recommended that:

- 1- Providing opportunity for female students to continuing updating their education to maintain knowledge about breast cancer.
- 2- An education program about breast cancer should be performed by health teams for female in the rural areas in sulaimani city teach them self breast examination.

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