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Application of the Health Belief Model in Breast Self- Exam among Tikrit Nursing Student

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Abstract: Performing breast self-exam monthly help in early detection of breast cancer agreed by 73 (72.3 %) of the students. Performing breast self-exam monthly help in detection of tumors before going to doctors agreed by 75 (74.3 %) of the students. Performing breast self-exam monthly will decrease complications of BC if I got its agreed by 75(74.3 %) of the students. Performing breast self-exam decrease the chance of making operation if I got it agreed by 15 (14.9 %) of the students. When I performed breast self-exam I became self-satisfied agreed by 17 (16.8 %) of the students. Performing breast self-exam decrease the anxiety about breast cancer agreed by 29(28.7 %) of the students. Monthly BSE practice among nursing students was poor. Confidence of breast self-exam was good. The performing breast self-exam was considered a trivial thing or unfavorable thing in half of the nursing students. Good percentage of the students considered that performing breast self-exam monthly help in early detection of breast cancer & were knowing how to perform breast self-exam and could find a breast lump by performing breast self-exam.

Keywords: Health Belief Model in BSE in Nursing Student, Breast Self-Exam in Tikrit Nursing Student

INTRODUCTION

One of the most common malignancy that affects women worldwide, and Iraq is Breast cancer [1 2]. Breast cancer is accounting to one third of the cancerous female population according to the Iraqi Cancer Registry [3]. Breast cancer incidence in Iraqi females of all ages has been elevating, and the common vulnerable age group is 60–69 years [4]. In the previous thirty years, in Iraq, breast cancer was responsible for 19.4% of all newly diagnosed cancers, 34.7% of female's cancers, and 22.5% of malignancy related deaths [5]. The reduction in breast cancer mortality rate can be achieved by screening and early detection of breast cancer with appropriate therapy [6 9]. BSE is one of the vital and easily performed techniques for the early detection of breast cancer which can be performed by females themselves. Some studies show that up to 90% of breast cancers can be detected by females themselves, although performing BSE regularly in women does not necessitate the discovery of the illness [10, 11]. In the developing countries, it was found that BSE is not adapted well by health system causing low awareness and low practice/irregular practice of BSE in public. The BSE regular practice was much low, 7.6% and 14% in two different settings in Iran [12, 13]. versus 24.9% of women recognized BSE as screening method in Qatar, and 18.7% of women practiced BSE [14]. In Saudi Arabia 43.4% identified BSE as a screening method but 67.6% never practiced BSE [15]. However, in Iraq, under the program, monthly practice of BSE has been recommended for women aged more than 20 years hence better observations were found 69.1% of participants aware about BSE and 42.6% had practiced BSE occasionally regular practice of BSE was not found [12,16,17]. The Health belief model (HBM) has been widely used to investigate women's belief regarding practice of the BSE [18,19]. This model, women's study various factors i.e., women's perceived seriousness and susceptibility to the disease, women's motivation and confidence towards health, perceived benefits and barriers of BSE and determine the women's beliefs and attitude about BC and practice of the BC screening behaviors such as BSE [12,20]. The aim of this study is to identify the Knowledge, attitude and practices of female nursing students on breast self-examination in Tikrit nursing college.

MATERIALS AND METHODS

Patient and methods

A cross sectional study was done in Tikrit university – College of Nursing, during the period of 1st October- 2022 to 1st April 2023. Randomly selected 101 student from the college of nursing 3rd and 4th class at nursing college

Tikrit University. Data collected through designed questionnaire by the researchers, to test the knowledge, attitude and practice of the students. The questionnaire was originally designed in English and then translated into Arabic language and was validated in a pilot study before finally utilized. The questionnaire is composed of: (1) demographic characteristics of students, (2) knowledge of students about breast self-examination, (3) practice of breast self-examination questions. (4) the health belief model (HBM) to collect data about women's perception to BSE. It consists of 6 concepts: perceived susceptibility to illness (5 items), perceived seriousness of illness (7 items), perceived benefits for the presumed action (6 items), perceived barriers for the presumed action (7 items), confidence in one's ability (11 items) and health motivation (7 items). All the items have 5 response choices ranging from strong disagreement (1 point) to strong agreement (5 points). All scales are positively related to screening behavior, except for barriers which are negatively associated.

RESULTS

About 88(87.1%) of the student were single and 13(12.9%) were married. Positive family history found among Near relatives (Mother/Sister/Daughter) 10(9.9%), and Far relatives 6(5.9%). Monthly BSE to be done per year was reported among 30(29.7%) of the female students. Once per year mammography to be done answered by 15(14.9%). When BSE should be performed with regular menses, 50(49.5%) of the student answered 5th days after menses. About 39(38.6%) of the students performed BSE. The common place of performing BSE was home 60(59.4%), followed hospital 19(18.8%). The last time performed BSE was more than 1 year 37 (21.8%), followed by less than 1 year 23(22.8%), and the less than 1 month 19(18.8%), as shown in Table 1.

The commonest source of information was internet 37(36.6%), followed by 1ry health care 25(24.8%), Medical journal 14(13.9%) friends 13 (12.9%), TV10 (9.9%) and educational camping public 9(8.9%), other sources 16915.8%), as shown in Figure 1.

About 57(56.7%) thought that BC is a hopeless disease. I think I will not live more than 5 years with BC found among 14(13.9%), When I think about BC my heart beat faster found among 49(48.5%). I am afraid even to think about BC 57(56.4%). If I got BC this will threaten my marital life found among 41(40.6%), All my life will be changed if I got BC was agreed by 58(57.4%), I think the problem about BC will persist long agreed among 60(59.4%) of the students, The thought of BC scare me found among 62(61.4%) of the students, as shown in Table 2.

Table 1: The general characteristics

Parameters	Frequency	Percent
Marital state		
Single	88	87.1
Married	13	12.9
Family history of BC		
Negative	85	84.2
Near relatives (Mother/Sister/Daughter)	10	9.9
Far relatives	6	5.9
How often could BSE be done per year		
Daily	22	21.8
Weekly	49	48.5
Monthly	30	29.7
How often could mammography be done per year		
Daily	3	3.0
Weekly	3	3.0
Monthly	32	31.7
Once per year	48	47.5
Don't know	15	14.9
When BSE should be performed with regular menses		
Regular day of each month	15	14.9
5th days after menses	50	49.5
Do not know	36	35.6
Have you done BSE before		
Yes	39	38.6
No	62	61.4
Where do you perform BSE		
Home	60	59.4
Early detection programs	12	11.9
Private hospital	10	9.9
Governmental hospital	19	18.8
The last time performed BSE		
Less than 1 month	19	18.8
Less than 1 year	23	22.8
More than 1 year	37	36.6
I don't Know	22	21.8

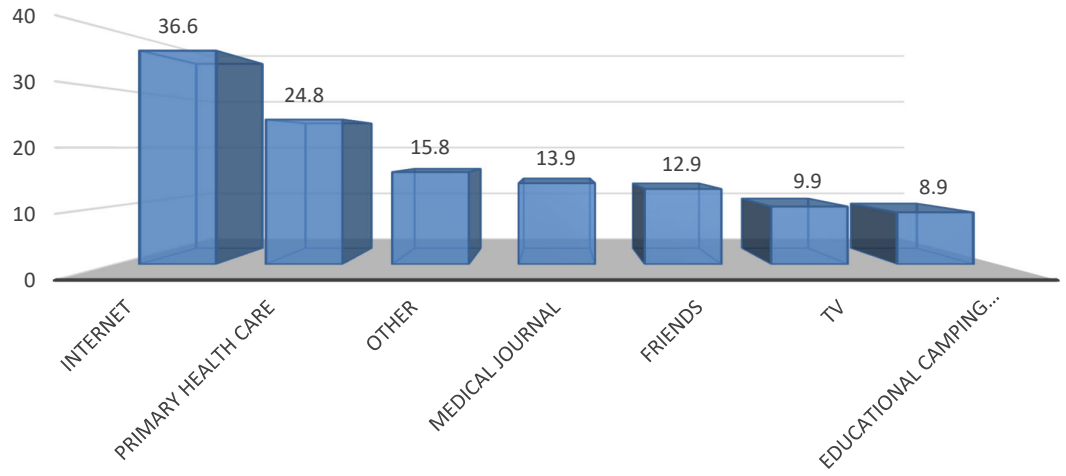


Figure 1: The sources of information

Table 2: The seriousness of breast cancer

Seriousness	Strongly Disagree/ Dısagree		Neutral		Agree/ Strongly Agree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
BC is a hopeless disease	22	21.8	22	21.8	57	56.4
I think I will not live more than 5 years with BC	55	54.5	32	31.7	14	13.9
When I think about BC my heart beat faster	31	30.7	21	20.8	49	48.5
I am afraid even to think about BC	26	25.7	18	17.8	57	56.4
If I got BC this will threaten my marital life	33	32.7	27	26.7	41	40.6
All my life will be changed if I got BC	25	24.8	18	17.8	58	57.4
I think the problem about BC will persist long	16	15.8	25	24.8	60	59.4
The thought of BC scare me	19	18.8	20	19.8	62	61.4

Table 3: The susceptibility of breast cancer

Susceptibility	Strongly Disagree/ Dısagree		Neutral		Agree/ Strongly Agree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
I am susceptible to breast cancer in the future	58	57.4	25	24.8	18	17.8
I feel that I am susceptible to breast cancer	69	68.3	25	24.8	7	6.9
I think I am susceptible to breast cancer more than anyone	74	73.3	19	18.8	8	7.9
My personal chance of getting breast cancer is big	63	62.4	29	28.7	9	8.9
I am highly susceptible to breast cancer next 10 years	16	15.8	16	15.8	69	68.3

Table 4: The confidence of breast self-examination

Confidence	Strongly Disagree/ Dısagree		Neutral		Agree/ Strongly Agree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
I know how to perform BSE	11	10.9	33	32.7	57	56.4
I am confident in performing BSE correctly	15	14.9	15	14.9	71	70.3
I am sure of the steps of BSE	25	24.8	24	23.8	52	51.5
I can use the correct parts of my fingers when performing BSE	21	20.8	25	24.8	55	54.5
I am confident I can discover breast tumors by performing BSE	27	26.7	23	22.8	51	50.5
I can discover breast tumor at size of big spot	36	35.6	29	28.7	70	69.3
I can discover breast tumor at size of small peas	29	28.7	29	28.7	43	42.6
I am able to discover breast tumors alone through performing BSE	35	34.7	24	23.8	42	41.6
I can discover breast tumor at size of small spot	11	10.9	20	19.8	36	35.6
I am able to differentiate between normal and abnormal breast tissue through BSE	8	7.9	6	5.9	87	86.1
When I look at mirror I can identify abnormal changes in my breast	8	7.9	13	12.9	80	79.2

Regarding the susceptibility of breast cancer: I am susceptible to breast cancer in the future agreed by 18(17.8%) of the students. I feel that I am susceptible to breast cancer agreed by 7(6.9%) of the students. I think I am susceptible to breast cancer more than anyone agreed by 8(9.7%) of the students. My personal chance of getting breast cancer is big agreed by 9 (8.9%) of the students. I am highly susceptible to breast cancer next 10 years agreed by 69 (68.3%) of the students.

Table 5: The benefits of breast self-examination

Benefits1	Strongly Disagree/ Dısagree		Neutral		Agree/ Strongly Agree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Performing BSE monthly help in early detection of BC	12	11.9	16	15.8	73	72.3
Performing BSE monthly help in detection of tumors before going to doctors	8	7.9	18	17.8	75	74.3
Performing BSE monthly will decrease complications of BC if I got it	9	8.9	17	16.8	75	74.3
Performing BSE decrease the chance of making operation if I got it	80	79.2	6	5.9	15	14.9
When I performed BSE I became self-satisfied	69	68.3	15	14.9	17	16.8
Performing BSE decrease the anxiety about BC	58	57.4	14	13.9	29	28.7

Table 6: The barriers of breast self-examination

Barriers	Strongly Disagree/ Dısagree		Neutral		Agree/ Strongly Agree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Performing BSE is a trivial thing	55	54.5	28	27.7	18	17.8
Performing BSE is unfavorable thing	37	36.6	24	23.8	40	39.6
No private place at home to perform BSE	50	49.5	18	17.8	33	32.7
Feeling of shame and embarrassment when performing BSE	7	6.9	6	5.9	88	87.1

Table 7: The bse self-efficacy of breast self-examination

BSE self-efficacy (confidence	Strongly Disagree/ Dısagree		Neutral		Agree/ Strongly Agree	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
(1) I know how to perform BSE.	12	11.9	17	16.8	72	71.3
2) I can perform BSE correctly.	20	19.8	21	20.8	60	59.4
(3) I could find a breast lump by performing BSE.	6	5.9	22	21.8	73	72.3
(4) I am able to find a breast lump that is the size of rather greater filbert.	20	19.8	27	26.7	66	65.3
(5) I am able to find a breast lump that is the size of a filbert.	13	12.9	22	21.8	54	53.5
(6) I am able to find a breast lump that is the size of a pea.	12	11.9	17	16.8	72	71.3
(7) I am sure of the steps to follow for doing BSE.	20	19.8	21	20.8	60	59.4
(8) I am able to tell something is wrong with my breast when doing breast self-examination.	6	5.9	22	21.8	73	72.3

Regarding the Confidence of Breast Self-examination: I know how to perform BSE agreed by 57(56.4 %) of the students. I am confident in performing BSE correctly agreed by 71(70.3 %) of the students. I am sure of the steps of BSE agreed by 52(51.5 %) of the students. I can use the correct parts of my fingers when performing BSE agreed by 55(54.5 %) of the students. I am confident I can discover breast tumors by performing BSE agreed by 51(50.5 %) of the students. I can discover breast tumor at size of big spot agreed by 70(69.3 %) of the students. I can discover breast tumor at size of small peas agreed by 43(42.6 %) of the students. I am able to discover breast tumors alone through performing BSE agreed by 42(41.6 %) of the students. I can discover breast tumor at size of small spot agreed by 36(35.6 %) of the students. I am able to differentiate between normal and abnormal breast tissue through BSE agreed by 87(86.1 %) of the students. When I look at mirror I can identify abnormal changes in my breast agreed by 80(79.2 %) of the students, as shown in Table 4.

Regarding the Benefits of Breast self-examination: Performing BSE monthly help in early detection of BC agreed by 73(72.3 %) of the students. Performing BSE monthly help in detection of tumors before going to doctors agreed by 75(74.3 %) of the students. Performing BSE monthly will decrease complications of BC if I got its agreed by 75(74.3 %) of the students. Performing BSE decrease the chance of making operation if I got it agreed by 15(14.9 %) of the students. When I performed BSE I became self-satisfied agreed by 17(16.8 %) of the students. Performing BSE decrease the anxiety about BC agreed by 29(28.7 %) of the students, as shown in Table 5.

Regarding the Barriers of Breast self-examination: Performing BSE is a trivial thing disagreed by 55(54.5 %) of the students. Performing BSE is unfavorable thing disagreed by 37(36.6 %) of the students. No private place at home to perform BSE disagreed by 50(49.5 %) of the students. Feeling of shame and embarrassment when performing BSE disagreed by 7(6.9 %) of the students, as shown in Table 6.

Regarding the BSE self-efficacy of Breast self-examination: I know how to perform BSE agreed by 72(71.3 %) of the students. I can perform BSE correctly agreed by 60(59.4 %) of the students. I could find a breast lump by performing BSE agreed by 73(72.3 %) of the students. I am able to find a breast lump that is the size of rather greater filbert agreed by 66(65.3 %) of the

students. I am able to find a breast lump that is the size of filbert agreed by 54(53.5 %) of the students. I am able to find a breast lump that is the size of a pea agreed by 72(71.3 %) of the students. I am sure of the steps to follow for doing BSE agreed by 60(59.4 %) of the students. I am able to tell something is wrong with my breast when doing breast self-examination agreed by 73 (72.3 %) of the students, as shown in Table 7.

DISCUSSION

The BSE is an effective and cost-free technique to detect breast anomalies, which occasionally result in breast cancer [21]. In low resourced and destructed health infrastructure areas such as Tikrit in Iraq, access to advanced imaging technologies is a challenge. The BSE serves as an essential alternative and is critical in the early detection of breast tumors. Tikrit University in Iraq, as nursing staff is the first of attachment point with women in the community. Correct information regarding mammography found among 15(14.9%) of the females, this goes with Shkur Azeez in Iraq found that 43.2% of women had information about mammography [22]. In the current study correct knowledge of breast cancer regarding: Monthly BSE to be done per year was reported among 30(29.7%) of the female students, and preferred to done during the 5th day of regular menses by 50(49.5%) of the student answered 5th days after menses. This results goes with Ansari S *et al..* [23] only 18.9% of nurses said that it should be done monthly. In contrast a study conducted by Jemebere [24] concluded that 87.7% of the nurses opined that BSE should be performed monthly preferably on 5th or seventh day after menstruation.

About 39(38.6%) of the students performed BSE. This lower than Baloushah *et al.* in Palestine 2020 (60%) confirmed they performed BSE before The common place of performing BSE was home 60(59.4%), followed hospital 19(18.8%). The last time performed BSE was less than 1 month in 19(18.8%) [25]. The commonest source of information was internet 37(36.6%), followed by 1ry health care 25(24.8%), Medical journal 14(13.9%) friends 13 (12.9%), TV10 (9.9%) and educational camping public 9(8.9%), other sources 16915.8%). In this study (68.3%) of the students feel they are highly susceptible to breast cancer next 10 years. Regarding the Confidence of Breast Self-examination: knowing how to perform BSE agreed by 57(56.4 %) of the students. confident in performing BSE correctly agreed by 71(70.3 %) of the students. sureness of the steps of BSE agreed by 52(51.5 %) of the students. This in contrast to Akhtari-Zavare M 2014 only 19.6% of the students in Malaysia have been reported to perform BSE. [26]. Regarding the Benefits of Breast self-examination: Performing BSE monthly help in early detection of BC agreed by 73(72.3 %) of the students. Performing BSE monthly help in detection of tumors before going to doctors agreed by 75(74.3 %) of the students. Regarding the Barriers of Breast self-examination: Performing BSE is a trivial thing 18 (17.8 %), unfavorable thing 40 (39.6 %) of the students. No private place at home to perform BSE 33 (32.7%), feeling of shame and embarrassment when performing BSE 88(87.1 %) of the students. While in a study in Palestine done by Baloushah S *et al..* 2020 found the barriers were 94 (40%) had the perception that they had no disease and therefore did not need a BSE. Other barriers included the lack of knowledge, 89 (37.9%); the fear of detecting cancer, 23 (9.8%); not thinking it is necessary, 15 (6.4%); the perception that it is time consuming, 6 (2.5%); the feeling that it deviates privacy, 6 (2.5%); and the feeling of embarrassment, 2 (0.9%) [27]. Regarding the BSE self-efficacy: knowing how to perform BSE agreed by 72(71.3 %), can perform BSE correctly agreed by 60(59.4 %) , I could find a breast lump by performing BSE agreed by 73(72.3 %). This results goes with Ansari S *et al..* found that 43.3% of the nurses used finger tips to palpate [28].

CONCLUSION

Monthly BSE practice among nursing students was poor. Confidence of Breast Self-examination was good. The performing BSE was considered a trivial thing or unfavorable thing in half of the nursing students. Good percentage of the students considered that performing BSE monthly help in early detection of BC & were knowing how to perform BSE and could find a breast lump by performing BSE.

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