

Breast Cancer Risk-Factors and Breast Self Examination Practice among Jordanian Women

Najah K Jaradeen, RN, PhD, EA*

Objective: To evaluate the level of knowledge of breast cancer risk factors and breast self examination (BSE) among Jordanian women.

Design: Survey.

Setting: Al-Karak governmental hospital, southern of Jordan.

Method: One hundred and fifty-one women working in the hospital, aged (20-51). The subjects completed an instrument composed of 3 forms developed by the researcher, the first one including personal characteristics of the subjects, the second form composed of 14 items concerning breast cancer risk factors and the third form composed of 7 items of breast self examination (BSE). Data were analyzed using descriptive statistics.

Result: Subjects had low mean level of knowledge about breast cancer risk factors (mean = 6.95 SD = 2.8) (correct 49%). Knowledge of BSE was good, 91.4% heard of BSE, 73.5% know the time of performing it, 71% know the frequency and 65% know the method to perform BSE. Thirty-nine percent practice BSE monthly.

Conclusion: Knowledge of breast cancer risks factors and breast self examination practice need to be promoted among Jordanian women.

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Breast cancer forms a serious health issue, which creates a significant health burden in every country¹. Recent global cancer statistics indicate rising incidence of breast cancer among women²⁻³. According to the latest Jordanian statistics available, breast cancer ranked first among cancer affecting females, and it accounted to 35.8% of all female cancers. In 2007, there were 826 breast cancer cases; accounting for 19.1% of all newly diagnosed cancer cases⁴.

Breast cancer causes are unknown, thus it is considered as a disease primarily associated with some risk factors. These factors are simply being a female, getting older, family history of breast cancer especially a first-degree relative, early menarche at the age of 12 and under, late menopause after the age of 55, and having the first child after the age of 30⁵⁻¹². Breast-feeding appears to be protective against breast cancer, and null parity is associated with an increased risk of developing breast cancer⁵. Additionally, women who were exposed to prior-thoracic radiotherapy at early childhood are at an increased risk¹³⁻¹⁴. Prolonged use of oral contraceptive pills, hormonal therapy, and being overweight or obese have been found to

* Faculty of Nursing - Mu'tah University
Mu'tah - Karak
Jordan
Email: etaiwi-mahmoud@hotmail.com

increase breast cancer risk among menopausal women¹⁵⁻¹⁸.

Low level knowledge of breast cancer risk factors was reported to be 35% among Karachi registered nurses¹⁹. Sixteen percent of Indian women stated that late initiation of or not practicing breast feeding were main causes of breast cancer²⁰. One hundred and forty-five Jordanian women aged 18-70 had low level of knowledge of breast cancer risk factors²¹. Two hundred and forty-one Jordanian female teachers and nurses knew most of breast cancer risk factors, nurses were more aware about BSE²².

Screening awareness is strongly recommended because the incidence of breast cancer is rising, the mortality rate was high due to delayed diagnosis and insufficient public awareness^{2,4,23}.

American cancer society 1980, recommended that BSE is one of the screening methods which could detect breast cancer early²⁴.

In a study, one thousand Pennsylvanian women reported that 97% of them heard of BSE, but only 31% practiced BSE regularly²⁵. Eighty-five percent of Middle Eastern Asian Islamic immigrant women in the United States know BSE; unfortunately, they do not practice it²⁶. A study of 578 Iranian female teachers indicated that only 6% of performed BSE regularly²⁷. Six percent of 485 Tehranian Muslim women practiced BSE regularly²⁸. Seventy percent of 300 Saudi female patients had never heard of BSE, just 18.7% reported that they practiced BSE²⁹. Eighty-six percent of 359 Jordanian registered nurses performed BSE, only 18% did it regularly³⁰. Sixty-seven of 519 Jordanian women stated that they had heard/read about BSE, only 7% performed it regularly³¹. Fifty-two percent of 80 Jordanian nurses performed BSE¹¹. Thirty-seven of 65 second-year female university Australian nursing students reported that they examined their breast 9-12 times in the previous year¹⁶. Sixty-six percent of nursing students aged 18-30 practiced BSE regularly¹².

The aim of the study is to evaluate the knowledge of breast cancer risk factors and to assess knowledge and practice of BSE among Jordanian women.

METHOD

Two hundred women were invited to participate in this study; hundred and fifty-one women responded, aged 21-51, a response rate of 75.5%. None of the participants had breast cancer.

Three forms were used to collect data. Personal data form, which include: age, marital status, educational level, occupation, breastfeeding, family history of breast cancer. The second form includes 14 items about breast cancer risk factors, answered by "correct" and "incorrect". The third includes 7 items concerning knowledge and practice of BSE.

Participants were asked to respond "Yes" or "No". Six nurses and two medical experts, who, evaluated the validity of the designed instruments found the content satisfactory.

The Directorate of human resource development, Ministry of Health, approved the study. Informed consent, a statement assuring anonymity, confidentiality, and the right to withdraw were enclosed with the forms.

Data Analysis

Data were analyzed with SPSS® version 16.0 (SPSS Inc.) and descriptive statistics.

RESULT

Personal characteristics are shown in Table 1. The age of women younger than 40 years ranged from 20-51 years, (93.4%), 41.1% of women were married, and more than half of them had breastfed their children. Family history of breast cancer was reported by 13 (8.6%), 44.4% were university graduates, 36.4% had diploma, and 15.2% were high secondary school, only (4%) had secondary school educational level. More than half were nurses and midwives (51.7%), 20.5% were student nurses, 19.2% were administrative and service workers, the rest (8.6%) were paramedical employees.

Table 1: Personal Characteristics of Subjects (n = 151)

Characteristics	No of subjects	Percentage
Age group		
20-29	88	58.3%
30-39	53	35.1%
40-49	5	3.3%
50 and more	5	3.3%
Level of education		
Secondary school	6	4%
High secondary school	23	15.2%
Diploma	55	36.4%
University	67	44.4%
Occupation		
Nurses and Midwives	78	51.7%
Student nurse	31	20.5%
Paramedical	13	8.6%
Administrative	21	13.9%
Services	8	5.3%
Marital status		
Single	89	58.9%
Married	62	41.1%
Breast feeding	54	35.8%
Family history of breast cancer	13	8.6%

Table 2 shows respondents' knowledge of breast cancer risk factors. Scores ranged from 0-14, or 0% - 100% correct. The mean score on the breast cancer risk factors knowledge test was (6.95, SD = 2.8), (49% correct). The following breast cancer risk factors were answered incorrectly by the respondents, 77.5% whose close blood relatives have the disease, 79% started menstruation before age 12, 72.2% late age of menopause and 70.2% having their first child after the age of thirty.

Table 2: Women's Knowledge of Breast Cancer Risk Factors (n = 151)

Risk Factors of Breast Cancer	Correct Number and (%)	Incorrect Number and (%)
A woman's risk of breast cancer increases with increase in age	84 (55.6%)	67 (44.4%)
A woman's using contraceptive increases the risk of breast cancer	69 (45.7%)	82 (54.3%)
Women who inherited the gene of breast cancer will develop breast cancer	111 (73.5%)	40 (26.5%)
Increases weight after menopause increases risk of breast cancer	68 (45%)	83 (55%)
Childless women are at higher risk for developing breast cancer	84 (55.6%)	67 (44.4%)
Women who had their first child after the age of 30 are at higher risk for developing breast cancer	45 (29.8%)	106 (70.2%)
Women who reached menopause at later ages (after age 51) are at higher risk for developing breast cancer	42 (27.8%)	109 (72.2%)
Breastfeeding may decreases breast cancer	115 (76.2%)	36 (23.8%)
Women who started menstruation before age 12 are at higher risk for developing breast cancer	32 (21.2%)	119 (78.8%)
Women who treated with hormonal therapy are at higher risk of breast cancer	90 (59.6%)	61 (40.4%)
A Jordanian women are more likely to develop breast cancer at an earlier age than Western women	89 (58.9%)	62 (41%)
Woman who had breast cancer in one breast has increased risk of developing a new cancer in the other breast	85 (56.3%)	66 (43.7%)
Breast cancer risk is higher among women whose close blood relatives have the disease (mother, sister, grandmother)	34 (22.5%)	117 (77.5%)
A women who had radiotherapy in younger ages are at higher risk of breast cancer	107 (70.9%)	44 (29.1%)

BSE knowledge is shown in Table 3. Scores ranged from 0-6, or 0% - 100% correct. High percentage of women 91.4% (n = 138) heard of BSE, 71% (n = 107) reported that it should be performed monthly (frequency), 73.5% (n = 111) know the appropriate time for BSE, and 65% (n = 98) know the correct methodology.

Table 3: Women's Knowledge and Practice of Breast Self Examination (n = 151)

Item	YES Number and (%)	NO Number and (%)
BSE done at home	139 (92%)	12 (8%)
BSE performed one week after the period	111 (73.5%)	40 (26.5%)
BSE performed monthly	107 (71%)	44 (29%)
Do you know the procedure of BSE	98 (65%)	53 (35%)
Every woman who aged 20 and more should perform BSE once every month	94 (62.3%)	57 (37.8%)
Did you hear about BSE	138 (91.4%)	13 (8.6%)

Table 4: Women’s Practice of Breast Self Examination (n = 151)

Item	YES Number and (%)	NO Number and (%)
Did you perform BSE monthly	59 (39%)	92 (61%)

DISCUSSION

Practicing BSE as a screening method is thought to help in early detection of breast cancer; therefore, increasing women's awareness for the importance of BSE³².

This study revealed that Jordanian women had insufficient knowledge (low) of breast cancer risk factors. In other studies, knowledge of breast cancer risk factors found to be low among Jordanian woman aged 18-70, Jordanian nurses and Karachi registered nurses^{21,19,30}. These findings suggest that women's knowledge of breast cancer risk factors is low all over the world. High percentage of women answered four risk factors of breast cancer incorrectly indicating lack of knowledge. Incorrect answers of early menarche, and late menopause might be due to the belief that the occurrence and continuity of menstruation indicate femininity³⁰.

This study reported that 76.2% (n = 115) of women know that breast feeding decreases breast cancer, compared to only 16% Indian women, the reason for this result may the focus of media on breast feeding, and the religious belief which encourages breast feeding²⁰.

This study suggests that Jordanian women's knowledge of BSE is good; this is may be due to the influence of health centers and media, which play an important source of BSE information. Ninety-one percent of women heard of BSE, this is consistent with Rutledge et al study²⁵. Other studies had much lower rates^{29,30}.

Although women's knowledge of BSE is good, only 59 (39%) practiced BSE monthly. In other studies, the percentage of monthly BSE have been found to be 52% among Jordanian nurses, 37% among Australian nursing students, 31% among Pennsylvanian women^{11,16,25}. Other studies showed low practice BSE^{26-28,30,31}. These studies point out that practice of BSE is globally low among female regardless of their age, and occupation.

The current study revealed that out of 31 nursing student, 67.7% (n = 21) know the correct methodology of BSE, and 38.7% (n = 12) performed BSE regularly; this indicates that students' knowledge and practice of BSE should be increased during their undergraduate study. Furthermore an equal proportion of married and single women practices BSE regularly, this finding possibly due to women's awareness concerning the importance of early detection of the disease.

CONCLUSION

This study reveals that knowledge of BSE was good, knowledge of breast cancer risk factors and BSE practice were low. Nurses should have sufficient knowledge of the disease and BSE to educate and train the public.

Nursing faculty members should focus on knowledge of breast cancer, BSE, and attitude towards BSE practice; which might be reflected on students and public. Training guidelines in breast cancer and BSE should be established.

Further studies to determine women's attitudes and beliefs of breast cancer and BSE are advised. The results of the study cannot be generalized, because the study's sample is not representative.

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