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# Assessment of Nursing Students' Knowledge towards the Risk Factors of Breast Cancer/ Mosul City North Iraq

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### ABSTRACT

**Background:** Breast cancer continues to be a global public health issue, and it is now the most frequent malignancy on the planet. Breast cancer is a life-threatening disease that affects women and is the main cause of death among them. It is now a worldwide problem, yet it is still detected in its advanced stages due to women's neglect in self-inspecting and clinically examining their breasts. **Aim of the study:** To assess the knowledge awareness about the breast cancer's risks in college of nursing in Al\_Mosul university. **Methodology:** Descriptive correlation study was conducted in college of nursing. The study was initiated from 1st January 2022 to the 20th April 2022. A purposive sample that consists of (232) patients, (162) females and (162) males chosen according to the criteria. Their age ranges between (18-45) years. A questionnaire was developed for purposive of study & included 3 parts is consisting of part one demographic data and part two is composed of (14) items. The overall questions included (20) items. **Results:** The age groups are between (21-23) years and constituted (39%), Most of samples were females and constitute of (70%) of the total samples. In regard with marital status the result shows that (82%) of samples are singles. (32%) of the samples were in 1st stage and most of students were studying in morning shift. **Conclusion:** Age, marriage and Study stage variables are the most socio-demographic variables that were associated knowledge of students about cancer of the breast risk factors and the gender variable. **Recommendation:** Start a self-examination once a month after age 20 or an MRI once a year (in addition to a mammogram) beginning at age 30. Reduce the intake of fats, because they store hormones inside the body.

## 1. Introduction

The cancer in breast is the most frequent cancer in women and the alternate leading cause of death from cancer in women in the United States. Bone cancer is a type of cancer that develops in the bone towel, utmost generally in the inner filling of milk tubes or the lobules that supply milk to the tubes. (Cancer-Its Different Types and Causes.2009).

Cancer in breast is the alternate most frequent type of non-skin cancer (after lung cancer) and the fifth most common cause of cancer mortality in women worldwide, counting for 10.4 of all cancer cases in women. Bone cancer claimed the lives of people encyclopedically in 2004. (7 percent of cancer deaths; nearly 1 percent of all deaths). Bone cancer is 100 times more common in women than in men, yet males have a worse prognostic

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due to discovery detainments. (Mieszkowski M.R. 2006).

Cancer cells develop from normal cells as a result of DNA and/or RNA mutations. These mutations can occur spontaneously (ill Law of Thermodynamics - increase in entropy) or they can be induced by other factors such as nuclear radiation, electromagnetic radiation (microwaves, X-rays, Gamma-rays, Ultraviolet-rays, etc. ), viruses, bacteria and fungi, parasites (due to tissue inflammation irritation, heat, chemicals in the air, water, and food, mechanical cell-level injury, free radicals, (Kelemen L. E., et al. 2008).

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## 1.2 Significant of the study

The importance of this study lies in shedding light on a serious phenomenon represented by assessment of knowledge awareness about the risks of breast cancer, early detection of breast cancer that leads to reduced risk factors thus less mortality, and knowledge of self-examination strategies.

## 1.3 Aim of the study

1. To assess knowledge awareness about the breast cancer's risks in college of nursing in Al\_Mosul university.
2. To identify the relationship between demographic data and the student's level of knowledge about breast cancer risk.

## 2. Methodology

This section presented the methodological procedures which were applied in this study to achieve the objectives of the study.

## 2.1 Design of the study

Quantitative design (a descriptive study) was carried out to evaluate the Nursing students' knowledge towards the risk factors of breast cancer. Starting from 1<sup>st</sup> January 2022 to the 20th April 2022.

## 2.2 setting and sample of the study

An electronic questionnaire was designed and distributed to students electronically in order to assess the knowledge of nursing students about the risk factors for breast cancer. A purposive sample that consists of (232) patients , (162) females and(162) males chosen according to the criteria . Their age ranges between (18- 45) years.

## 2.3 study instruments

In order to collect the study information, a questionnaire was constructed depending on the criteria of (format adopted and modified by researcher) and related literature. It is composed of three parts: -

1. Part one: This part includes (6) items which focus on the patients socio-demographic characteristics such as (Age, Gender, Marital status , Study Stage , Type of study and Residence ) .
2. Part two: It consists of (14) item , it consist of Level of assessment of students' knowledge of breast cancer risk factors .
3. Part Three: It consist of (10) items , it demonstrate of The association between students' knowledge about breast cancer risk factors and the sex variable.

## 2.4 Data collection and analysis

The data was collected throughout the period of 1<sup>st</sup> January 2022 to the 20th April 2022. Each patient need to spends approximately (20-30 min) to give the test result. The data was prepared, organized and coded into the computer file; Statistical Package for Social Science (SPSS) version (24) that was used for data analysis and the significances level depended was descriptive statistical data analysis. This approach was

applied through the measurement of the following:

This part presents the statistical analysis for the data collected during the study period.

### 3. Results

**Table (3-1): Distribution of the Socio-Demographic Characteristic of the Study Sample (No=232).**

| Significant(S.N) | Variables(V.) | Frequency(F.) | Percentage(%) |
|------------------|---------------|---------------|---------------|
| Age Group        | 18-20         | 62            | 27%           |
|                  | 21-23         | 91            | 39%           |
|                  | 24-26         | 45            | 19%           |
|                  | 27-29         | 19            | 8%            |
|                  | 29-30         | -             | -             |
|                  | 30-32         | 6             | 3%            |
|                  | 33-35         | 4             | 2%            |
|                  | 35-37         | 3             | 1%            |
|                  | 38-40         | -             | -             |
|                  | 41-42         | 2             | 1%            |
|                  | 43-45         | -             | -             |
|                  | Gender        | Male          | 70            |
| Female           |               | 162           | 70%           |
| Marital Status   | Married       | 40            | 17%           |
|                  | Single        | 191           | 82%           |
|                  | Widower       | 1             | 1%            |
|                  | Divorced      | -             | -             |
| Study Stage      | First stage   | 75            | 32%           |
|                  | Second stage  | 37            | 16%           |
|                  | Third Stage   | 50            | 22%           |
|                  | Forth stage   | 70            | 30%           |
| Type of Study    | Morning       | 174           | 75%           |
|                  | Evening       | 58            | 25%           |
| Residence        | Urban         | 188           | 81%           |
|                  | Rural         | 44            | 19%           |

table (3.1) shows that highest significant in (21-23) and consist of 39% of total samples, In gender , the result indicate that most of samples were females and constitute of (70 %) of the total samples . In regard with marital status the result shows that (82%) of samples were singles

**Table (3.2) : Level of assessment of students' knowledge of breast cancer risk factors**

| Items   | Variables  | F.  | %   |
|---|--|-----|-----|
| Symptoms indicating the possibility of breastcancer   | Change in breast shape   | 10% | 24  |
|   | Having a knot in the armpit Area   | 14% | 31  |
|   | White milky discharge from the nipple  | 25  | 5   |
|   | Appearance of visible veins above the skin of the breast   | 1%  | 2   |
|   | Itching with crusty sores on the Nipple  | 1%  | 2   |
|   | A change in the shape of the breast, the presence of a knot in the armpit area and the appearance of clear veins | 7%  | 17  |
|   | Change in the shape of the breast and the presence of visible veins above the skin                               | 3%  | 8   |
|   | The presence of knots and milky discharge from the nipple  | 2%  | 4   |
|   | The presence of a knot in the armpit and the appearance of veins   | 1%  | 3   |
|   | Change in the shape of the breast and the presence of a knot in the armpit                                       | 11% | 26  |
|   | *All of the above symptoms   | 48% | 110 |
| What is the effect of age on the risk of breastcancer in general?   | Increase   | 60% | 139 |
|   | Drop   | 3%  | 6   |
|   | No effect  | 16% | 38  |
|   | I do not know  | 21% | 49  |
| What is childlessness on the effect of probability Having breast cancer?                                      | Increase   | 35% | 82  |
|   | Drop   | 10% | 22  |
|   | No effect  | 23% | 54  |
|   | I do not know  | 32% | 74  |
| What is the effect on the risk of breast cancer if the ovaries are raised at an early age?                    | Increase   | 24% | 55  |
|   | Drop   | 15% | 34  |
|   | No effect  | 21% | 49  |
|   | I do not know  | 40% | 94  |
| The main reason behind the increased likelihood of Breast cancer incidence in obese women after menopause is? | Lack of movement and Lethargy  | 18% | 42  |
|   | High estrogen level  | 14% | 33  |
|   | High levels of oxidants in the blood   | 14% | 33  |
|   | High levels of estrogen and high levels of oxidants in the   | 54% | 124 |

|   |  |     |     |
|---|--|-----|-----|
|   | blood  |     |     |
| What is the effect of obesity on women after age?<br>Despair over the possibility of breast cancer                                    | Increase                                     | 60% | 138 |
|   | Drop   | 2%  | 5   |
|   | No effect                                    | 15% | 35  |
|   | I do not know                                | 23% | 54  |
| Choose all the breast cancer diagnoses you know   | Clinical breast examination                  | 21% | 48  |
|   | Mammogram                                    | 27% | 64  |
|   | Ultrasound examination                       | 9%  | 21  |
|   | Breast biopsy                                | 43% | 99  |
| Choose all the breast cancer screening methods you know   | Clinical breast examination                  | 23% | 53  |
|   | Breast self-examination                      | 30% | 69  |
|   | Mammogram                                    | 47% | 110 |
| Which of the following is the best time to do a breast self-exam (choose one option)  | Weekly                                       | 6%  | 13  |
|   | per month (after menstruation)               | 47% | 109 |
|   | Monthly on the 7-10th of the menstrual cycle | 26% | 60  |
|   | annually                                     | 21% | 50  |
| Which of the following suffers from a person with breast cancer (choose all that you think are correct)                               | emotional pain                               | 11% | 26  |
|   | psychological pain                           | 37% | 86  |
|   | physical pain                                | 52% | 120 |
| Breast cancer affects   | women only                                   | 56% | 131 |
|   | men only                                     | 1%  | 3   |
|   | Both sexes                                   | 42% | 98  |
| Periodic examination every 1-2 years helps in early diagnosis of breast cancer and save patients from death                           | Yeah   | 90% | 209 |
|   | No   | 10% | 23  |
| Early diagnosis of breast cancer increases the chances of getting better results (preserving the breast - saving patients from death) | Yeah   | 97% | 226 |
|   | No   | 3%  | 6   |
| Is smoking related to breast cancer?  | Increase                                     | 60% | 138 |
|   | Drop   | 4%  | 10  |
|   | no effect                                    | 16% | 37  |
|   | I do not know                                | 20% | 47  |

**Table (3.3) : Association between students' knowledge about breast cancer risk factors and the gender variable**

| Items   | Variables  | Female | Male | M.S    | SD     |
|---|--|--------|------|--------|--------|
| Symptoms indicating the possibility of breast cancer  | Change in breast shape   | 17     | 7    | 24.871 | 0.007* |
|   | Having a knot in the armpit area   | 23     | 8    |        |        |
|   | White milky discharge from the nipple  | 1      | 4    |        |        |
|   | Appearance of visible veins above the skin of the breast   | 0      | 2    |        |        |
|   | Itching with crusty sores on the nipple  | 0      | 2    |        |        |
|   | A change in the shape of the breast, the presence of a knot in the armpit area and the appearance of clear veins | 13     | 4    |        |        |
|   | Change in the shape of the breast and the presence of visible veins above the skin                               | 2      | 6    |        |        |
|   | The presence of knots and milky discharge from the nipple  | 3      | 1    |        |        |
|   | The presence of a knot in the armpit and the appearance of veins   | 2      | 1    |        |        |
|   | Change in the shape of the breast and the presence of a knot in the armpit                                       | 20     | 6    |        |        |
|   | *All of the above symptoms   | 81     | 29   |        |        |
| What is the effect of age on the risk of breast cancer in general?  | Increase   | 90     | 49   | 15.709 | 0.001* |
|   | Drop   | 1      | 5    |        |        |
|   | No effect  | 30     | 8    |        |        |
|   | I do not know  | 41     | 8    |        |        |
| What is childlessness on the effect of probability Having breast cancer?                                      | Increase   | 59     | 23   | 0.612  | 0.894  |
|   | Drop   | 14     | 8    |        |        |
|   | No effect  | 38     | 16   |        |        |
|   | I do not know  | 51     | 23   |        |        |
| What is the effect on the risk of breast cancer if the ovaries are raised at an early age?                    | Increase   | 35     | 20   | 5.468  | 0.141  |
|   | Drop   | 24     | 10   |        |        |
|   | No effect  | 30     | 19   |        |        |
|   | I do not know  | 73     | 21   |        |        |
| The main reason behind the increased likelihood of Breast cancer incidence in obese women after menopause is? | Lack of movement and lethargy  | 23     | 19   | 10.136 | 0.017* |
|   | High estrogen level  | 25     | 8    |        |        |
|   | High levels of oxidants in the blood   | 19     | 14   |        |        |
|   | High levels of estrogen and high level of oxidants in the blood  | 95     | 29   |        |        |

## 4. Discussion of the Results

### 4.1 Socio-demographic Characteristics

**Age and gender:** The analysis of the results in regard to socio-demographic characteristics of breast cancer students indicates that the age between (21-23) constitutes the highest percentage as (39%). of the total sample (Table 4-1). Our finding disagree with (Secginli S, et al. 2006) who indicate that most of student were in age group between (30-35) years and constitute of (41%). The result of the present study indicates that more of half of student were female and constitute of (70%) of the total samples. Our finding agree with (Abdel-Fattah M, et al .2000) who indicate that female is more relevant to get breast cancer and constitute of (69.3%) .

**Marital status and Residence:** The result of the present study indicates that (82%) of the total samples were singles. the result of present study disagrees with previous research in (Maximum R . 2002) who reported that breast cancer more common in married patients and constitute (86.1%). the result show that most of students living in urban areas and constitute of (81%) of the total samples. Our finding agrees with (Attia AK, et al .1997) who indicate that most of students living in urban areas.

### 4.2 Association between students' knowledge about breast cancer risk factors and the gender variable

Prior to the course, the actors' capability to fete inside cancer signs and symptoms was limited. Seventy-three percent (30) of the actors were apprehensive that palpable nodes are a sign of bone cancer, but roughly two-thirds were ignorant that palpable lymph bumps are also a sign of bone cancer. Seventy percent of them were ignorant that a swerved nipple is a common bone cancer symptom. In Iraq, bone cancer is a public health issue. In cooperation with the World Health Organization, the government is working diligently to combat bone cancer (AusteinM. 2006). The experimenters assume that the actors' significant enhancement in knowledge during the post-test may boost their genuine confidence. Due to the direct goods of the factory, it has a short-term effect. In order to insure long-term knowledge retention and confidence (Balkaya NA, etal. 2007). The findings were analogous to those of Budden's study (Abdel-Fattah M, etal. 2000) in that there was no significant link between the practice of bone cancer and the actors' knowledge of how to examine

their guts and demographic data. Other exploration has discovered a link between BC practice and a woman's age, education position, and particular history of bone issues (Secginli S, et al. 2006).

Mammograms were misunderstood by the participants. However, 65 percent believe there's no need for a mammogram, and 48 percent believe mammograms cause breast cancer, If one has had BC. These beliefs among pupil nurses may act as a block to women getting mammograms.

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