

*Original Article*

## Effectiveness Of Planned Teaching Intervention on Knowledge Of Breast Self-Examination Among Nursing And Midwife Students In First- And Second-Year At Jamhuriya University

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### Abstract

Breast cancer is the most common cancer in women worldwide after skin cancer. When a breast change is detected in its early stages, chances of surviving the disease are greatly improved. Regularly examining her own breasts allows a woman to become familiar with how her breasts normally look and can help her more readily detect any changes that may occur.

#### Objectives

The aim of the study was to assess the effectiveness of planned teaching intervention on knowledge of breast self-examination among nursing and midwife students first and second years at Jamhuriya University of Science and Technology.

#### Methodology

Pre-experimental one-group pre-test post-test design was conducted among first year and second year nurses and midwife students at Jamhuriya University Science and Technology (JUST) from December 2020 to August 2021. A sample of 70 students participated in the study and students were selected using probability sampling techniques. Data collection tools of this study were structured knowledge questionnaire and analyzed by using SPSS version (20.0) and presented in frequency tables & figures. Paired "t" test was used to compare the pre-test and post-test knowledge score.

#### Result

The results that we found were that the mean post-test knowledge scores (6.13), median (6.00), mode (6), range (3) and St. Deviation (0.797) of breast self-examination among first- and second-year students are significantly higher than that of the mean of pretest (2.97), median (3.00), mode (3), range (1) and std deviation (0.168). There was a significant difference between the mean posttest and pretest knowledge scores ( $t = -21.528$ ,  $df = 69$ ,  $P\text{-value} = 0.000$ ).

#### Conclusion

Nursing and midwives are two health personnel's working in the community should be equipped with adequate knowledge and skill to educate the women on breast self-examination. The study suggests further study about practice toward breast self-examination.

**Keywords:** Breast cancer, Breast self-examination, knowledge, PTI

## Introduction

Cancer is one of the most significant diseases threatening human health. The American Cancer Society (2007) has published figures showing breast cancer to be the most common cancer among women(1). Breast cancer is the most common cancer in women worldwide after skin cancer. When a breast change is detected in its early stages, chances of surviving the disease are greatly improved. Regularly examining her own breasts allows a woman to become familiar with how her breasts normally look and can help her more readily detect any changes that may occur. The screening guidance includes early mammograms starting at age 40 and timing for as long as a woman is in good health (2).

The importance of the early detection in the prevention of breast cancer cannot be overstated. Early discovery has resulted in a 5-year survival rate of roughly 85 percent, but later detection has resulted in a survival rate of 56%(3).

Breast cancer is made distinct from other types of cancers by the fact that it occurs in a noticeable organ and can be detected and treated at an early stage(4). Breast cancer does not cause symptoms at first. Symptoms include a painless lump in the breast, a lump beneath the armpit, breast soreness, swelling or thickening of the skin around the breast, and spontaneous nipple discharge as the tumor grows larger (particularly if bloody, erosion, or inversion in the nipple)(5).

Despite studies demonstrating that breast self-examination can contribute to the early detection of non-invasive breast cancer and as an easy and private detection method, there is a knowledge and practice

gap, particularly in developing countries, exacerbated by the rising number of cancer morbidity and mortality(6).

According to Alwan N A and colleagues (2012), the most common reason for not performing BSE was a lack of knowledge about how to perform the technique correctly. Almost 84% of the female participants were willing to teach others the BSE technique.(7)

BSE is a simple, quick, convenient, private, cost-free, and safe technique that does not necessitate any equipment. The clinical breast examination (CBE) and mammography, on the other hand, necessitate a doctor's visit and the use of specific equipment(8). Therefore, the objective of the study was to assess knowledge levels regarding breast self-examination before and after the training of breast self-examination among students in their first and second year at Jamahiriya University.

## Methodology

### Research design

Pre-experimental one group pre-test post-test research design was conducted among first year and year Nursing and Midwifery students. This design examined the effectiveness of planned teaching intervention on knowledge of breast self-examination among nursing and midwife students first and second years at Jamhuriya University of Science and Technology.

### Sample and sampling technique

Sample size was calculated using Sloven formula and was 70 samples. Simple random sampling technique was employed to select participants from population.

### Data collection tool

Researchers prepared the assessment tools. Before the implementation of the tool, it was tested in a pilot study. The pilot study revealed that the tool was easy to use and applicable. Pre-test was administered to the subjects using structured knowledge questionnaire. First pretest survey was carried out, after that, a planned teaching intervention was conducted regarding BSE to the students. The post test was performed after 7 days of intervention.

#### Data analysis

Data was analyzed using SPSS version (20). Descriptive statistics such as frequency, mean and percentage to was utilized for data presentation. The paired t-test was used to compare the changes in scores from pre- to post intervention and to assure the effectiveness of planned teaching intervention.

#### Ethical consideration

Ethical committee permission was obtained to conduct the research. Institutional permission was granted from Jamhuriya University of Science and Technology. The researchers explained the aim and procedures of the current research to the students. Nursing students and Midwifery gave written informed consent. The participants were asked to complete and return the questionnaires. Their confidentiality was guaranteed.

## Results

### SECTION 1

#### Description of Demographic Data

Table 1: Frequency and percentage distribution of demographic data (n=70).

Variables	Frequency(n)	Percentage (%)
Age		

15-24	70	100
<b>Sex</b>		
Single	65	92.90%
Married	5	7.10%
<b>Academic year</b>		
1st year	37	52.90%
2nd year	33	47.10%
<b>Department</b>		
Nurse	37	52.90%
Midwife	33	47.10%
<b>Total</b>	<b>70</b>	<b>100</b>

### SECTION 2

Analysis Knowledge score on breast self-examination among respondents before and after the intervention

Table 2: Frequency and percentage distribution of pre-post-test knowledge score

	Pretest		Post test	
Level of Knowledge	Frequency	Percentage	Frequency	Percentage
Poor	68	97.10%	6	8.6
Average	2	2.9	43	61.4
Good	0	0	21	30

Table3: Comparison of pre-test and post-test knowledge scores regarding breast self-examination. By using paired T test

Knowledge level	Mean	St. d	t-test	Df	Sig
Pretest	1.84	1.39			
Post test	6.07	1.09	-21.53	69	0

There was a statistically significant difference between pre- and post-training knowledge scores ( $p < 0.05$ ). Post-test scores significantly increased compared to pre-test

scores ( $t = -21.528$ ,  $p = 0.000$ ). This finding indicated that Planned teaching intervention improved knowledge related to Breast Self-Examination (BSE)

## Discussion

The study was conducted to assess the effectiveness of planned teaching intervention on knowledge of breast self-examination among nursing and midwife students first and second years at Jamhuriya University of Science and Technology.

The findings also revealed that students' mean post-test knowledge score after PTP administration was higher than their mean pre-test knowledge score. A similar result was found in a study conducted by Maha Mousa Mohamed Moussa and Nagat Salah Shalaby, which revealed that students' knowledge was extremely low prior to the intervention, with statistically significant improvements following the implementation of an educational training program(9). Another study conducted by Shalini, Divya Varghese, and Malathi Nayak revealed that the BSE awareness program was very effective and that knowledge scores improved after administration of PTP(10).

According to the mean the pre test mean score was higher than the mean of pretest knowledge score. So, the Planned teaching intervention was effective this finding was supported by another study conducted by(6).

## Conclusion

According to the results of the study, the planned teaching intervention was effective in improving the knowledge of the nurses and midwifery students regarding breast self-examination (BSE). The study

recommends conducting further study about the practice of breast self-examination (BSE).

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**Conflict of interests:** No conflict of interests is declared.

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