



# International Journal of Midwifery and Nursing Practice

E-ISSN: 2663-0435  
P-ISSN: 2663-0427  
[www.nursingpractice.net](http://www.nursingpractice.net)  
IJMNP 2021; 4(2): 102-106  
Received: 25-09-2021  
Accepted: 15-10-2021

**Nhan Thi Nguyen**  
PhD, University of Medicine  
and Pharmacy at Ho Chi Minh  
City, Vietnam

**My Thi Diem Tran**  
University of Medicine and  
Pharmacy at Ho Chi Minh  
City, Vietnam

## Factors related to breast self – examination practice among midwifery student in Ho Chi Minh City, Vietnam

**Nhan Thi Nguyen and My Thi Diem Tran**

### Abstract

Breast self-examination is first step that helps to early detect breast abnormalities; however, the incidence to practice it remains very low in Vietnam. This study aimed to determine the rate of breast self-examination practice and determine the factors related to its practice among midwifery students. A cross-sectional descriptive study was conducted among 270 midwife students with self-administrated questionnaires. Descriptive statistics and bivariate analysis were used to analyze the data. About 64.3% of the midwifery students had ever practice of breast self-examination. Nearly half of midwifery students had a knowledge of breast cancer, and 70.3% of them had a positive attitude towards breast self-examination. There were significant correlations between knowledge, attitude, personal history of breast disease, and breast self-examination practice ( $r=.24, p<.001$ ;  $r=.20, p<.01$ ;  $r_{pb}=.12, p<.05$ ; respectively). The results from this study highlighted the importance of knowledge of breast cancer and attitude toward breast self-examination; it would lead to increase practice of breast self-examination.

**Keywords:** Breast self-examination, knowledge, attitude, practice, Vietnam

### 1. Introduction

Health is an important indicator to ensure the quality of life, therefore protecting health and increasing the average life expectancy of people is a substantial goal in many countries including Vietnam. However, along with the development of industrialization and modernization in the country, the rate of chronic diseases, cancer is tending to increase. Vietnam ranks 57 over 185 countries where having high rate of cancer, and 159 new cases of cancer was diagnosed and rate of cancer mortality was 104 per 100.000 population <sup>[1]</sup>. Nationally, there were approximately 126.000 new cases of cancer in which breast cancer only accounted for 12% of new cases; breast cancer and lung cancer was considered as the most common cancer in the world and breast cancer is considered the most common type of cancer occurred in women with the mortality rate was 35% <sup>[2]</sup>.

The trend of breast cancer was increasing in Vietnam; to illustrate, there were 18 cases per 10.000 women in the year 2000, by the year 2010 it increased almost double to 30 people. More seriously, the average age of patients with breast cancer in Vietnam getting younger and younger, it can be seen at women only 20 to 21 years-old and the reason of this rejuvenation has not been identified yet <sup>[3]</sup>. Breast cancer has many development stages, depends on each stage, the obstetricians give appropriate treatment and indications; but the nature of the treatment requires a lot of time and costs. As a consequence, it caused the burden to the health system, affecting the growth and development of a country, and importantly affecting and upsetting the lives of patients and theirs' families. According to statistics of Vietnam National Cancer Hospital, the cost of treatment for cancer annually was ranged from 140 US dollar up to 40.482 US dollar. Especially, the cost for treatment of breast cancer was estimated about 774 US dollar to 3.750 US dollar <sup>[4]</sup>. Fortunately, breast cancer was discovered in the early stage can be treated and the outcome of treatment was very positive <sup>[5]</sup>.

Currently, there are a number of techniques used to examine the breasts such as mammography, ultrasound, and breast self-examination, is the process of self-checking the symmetrical shape of the breast through a mirror, which to detect early the appearance of tumors, other abnormalities. The subclinical methods have high accuracy, reliability, but require to be performed in hospital and by a professional healthcare provider, will be costly and time consuming while breast self-examination can be done at home by the women and can be practice at any time. Breast self-examination when performed accurately and regularly would prompt for early diagnosis and timely treatment.

**Corresponding Author:**  
**Nhan Thi Nguyen**  
PhD, University of Medicine  
and Pharmacy at Ho Chi Minh  
City, Vietnam

Therefore, breast self-examination is considered as an important first step before receiving the high technology. However, the rate of practicing breast self-examination is still low with 41.7% of participants used to practice it and only 9.1% practiced it regularly among female students<sup>[6]</sup> or only 24% in Malaysia<sup>[7]</sup>. In Vietnam, the rate of practice breast self-examination remained very low of 15.8%<sup>[8]</sup>.

Midwifery students, who have been provided with basic and professional knowledge about women health; they will be the health care provider for women in participating breast examination or treatment of breast cancer, or even to face with this disease by themselves. Therefore, conducting a study in this population to assess the level of breast self-examination and examine the factors related to its practice is very important. The results from this study will provide the picture of breast self-examination among student who had the background of health science education; hence, the health care provider can design the education for students in other schools, other population in order to provide fully perception about the benefits of breast self-examination and can perform it regularly.

## 2. Materials and Methods

### 2.1 Study design

A cross-sectional descriptive study was used to address the research purpose.

### 2.2 Research setting

This study was conducted at University of Medicine and Pharmacy at Ho Chi Minh City, Vietnam from June 2021 to July 2021.

### 2.3 Participants

The convenience sampling technique was used to recruit the participants, including all the midwifery students who were studying at the university during the period of this study and agreed to respond the questionnaire. In total, 270 midwifery students, from the first year to the fourth year, voluntarily participated in the study.

### 2.4 Ethical considerations

The current study was approved by the Institutional Review Board (IRB) Committee from the University of Medicine and Pharmacy at Ho Chi Minh City, Vietnam, No. 390/HĐĐĐ-ĐHYD issued on May 31, 2021. The participation in this study was completely voluntary. Consent form were electronically signed by the participants before the start of data collection.

### 2.5 Research instruments

Four self-administrated questionnaires used for collecting data in the current study are described as follows

- 1) Demographic characteristics questionnaire was developed by the researchers including five items asking about the age of midwifery student, academic year, marital status, self-history of breast disease, family history of breast cancer.
- 2) Knowledge about breast cancer scale was to measure the knowledge of midwifery students about the risk factors and protective factors of breast cancer. The scale consists of six items with three responses for each item in which yes = one score, and not sure/do not know = 0 score. The higher scores indicate higher

knowledge about breast cancer

- 3) Attitude toward breast self-examination scale was to measure the attitude of midwifery students about breast self-examination. The scale consists of 7 items with 5-point rating scale ranging from 1 (strongly disagree) to 5 (strongly agree). For the negative questions, the scores were converted from 1 (strongly agree) to 5 (strongly disagree). The answer for 4 scores or greater were considered as positive attitude. The higher scores indicate the more positive attitude toward breast self-examination
- 4) Breast self-examination practice scale was to measure the practice of breast self-examination among midwifery students including the questions about the time, position, how to perform breast self-examination. The scale consists of 8 items with 3-point rating scale ranging from 1 (never) to 3 (always). The answers “often” or “always” were considered as had practice of breast self-examination. The higher scores indicate the higher practice of breast self-examination.

The mentioned questionnaires were developed by the researchers in Vietnamese language. To test for the psychometric properties of the questionnaires, the content validity was performed with the result of item-level content validity was .91, .93, .94 for knowledge about breast cancer, attitude toward breast self-examination, and breast self-examination practice, respectively. Pilot research with 30 midwifery students who met the same criteria as the study sample was implemented to check for the reliability of the questionnaire. The result of reliability tests was .80 for the knowledge about breast cancer, Cronbach's alpha coefficient was valued at .83, .91 for the attitude towards breast self-examination, the breast self-examination practice, respectively.

### 2.6 Data collection procedures

Due to COVID-19 pandemic outbreak in Vietnam during the data collection, the researcher created the google form for data collection. The form including two main parts: the first part was information about the study and consent form, the second part was the questionnaires. The researcher (MTDT) approached the class via the leaders explained the purpose of the study and their rights. The link of survey was sent to the class via zalo application. The midwifery students who agreed to participate were clicked on the button “Agree” in the first part of link. The questionnaires were self-administrated by the students and it took about 10 to 15 minutes to complete the survey link. If over 15 minutes, the answers would not be recorded.

### 2.7 Data analysis

The data were analyzed by using the statistical package of social science version 18.0. The significance level of statistical test was set at .05. Descriptive statistics was used to describe the demographic characteristics variables, breast cancer knowledge, attitude and practice of breast self-examination. The bivariate analysis using Pearson product moment correlation and Point-Biserial were employed to determine the correlation between demographic characteristics, breast cancer knowledge, attitude and practice breast self-examination.

### 3. Results

#### 3.1 Demographic characteristics

The research included a total of 270 midwifery students with the average age of 20.36 (SD = 1.3). About 30% of the

participants was freshmen students and nearly 20% was senior students. Most of the participants were single and did not have the personal history of breast diseases or family history of breast cancer (Table 1).

**Table 1:** Frequency and percentage of the participants' characteristics (N=270).

Characteristics	n	%
<b>Age</b>		
Mean = 20.36, SD = 1.3, Min-Max = 18-25		
<b>Academic year</b>		
First year	80	29.6
Second year	69	25.6
Third year	69	25.6
Fourth year	52	19.2
<b>Marital status</b>		
Single	207	76.6
Dating	62	23
Married	1	0.4
<b>Personal history of breast disease</b>		
Yes	1	0.4
No	269	99.6
<b>Family history of breast cancer</b>		
Yes	3	1.1
No	267	98.9

#### 3.2 Breast self-examination practice

As shown in Table 2, among 270 midwifery students at the University of Medicine and Pharmacy at Ho Chi Minh City, Vietnam, about 71% of them could practice breast self-examination regularly every month while the remainders could not. More than half of participants knew how to practice breast self-examination such as breast self-examination should practice from 7<sup>th</sup> to 10<sup>th</sup> day after

menstrual cycle (59.7%), undress the clothes up to the waist when practicing breast self-examination (57%), touching the armpits when performing breast self-examination (71.5%), hands alternately raised above head when practicing breast self-examination (64.1%), standing in front of a mirror to practice breast self-examination (64.1%), performing breast self-examination by fingertips (74.4%), performing breast self-examination in the supine position (53%).

**Table 2:** Practice of breast self-examination among midwifery students (N = 270)

Breast self-examination practice	Ever practice		Never practice	
	n	%	n	%
Practice of breast self-examination regularly every month	191	70.7	79	29.3
Practice of breast self-examination from 7 <sup>th</sup> to 10 <sup>th</sup> day after menstrual cycle	161	59.7	109	40.3
Undress the clothes up to the waist when practicing breast self-examination	154	57.0	116	43.0
Touching the armpits when performing breast self-examination	193	71.5	77	28.5
Hands alternately raised above head when practicing breast self-examination	173	64.1	97	35.9
Standing in front of a mirror to practice breast self-examination	173	64.1	97	35.9
Performing breast self-examination by fingertips	201	74.4	69	25.6
Performing breast self-examination in the supine position	143	53.0	127	47.0
Overall percentage of breast self-examination practice		64.3		35.7

#### 3.3 Knowledge, attitude of breast self-examination practice variables

The knowledge of midwifery students about breast cancer was depicted in Table 3. Overall, half of the midwifery students had a true knowledge about the breast cancer in

which the highest percentage of knowledge was about family history of breast cancer affect to the risk of breast cancer (67.4%). The lowest percentage of knowledge about breast cancer was "puberty increase the risk of breast cancer" with two-third of them did not know about that.

**Table 3:** Knowledge about breast cancer among midwifery students (N = 270)

Knowledge about breast cancer	True		Not true	
	n	%	n	%
Family history of breast cancer affect to the risk of breast cancer	182	67.4	88	32.6
Giving birth after 30 years-old increase the risk of breast cancer	130	48.1	140	51.9
Early puberty increase the risk of breast cancer	87	32.2	183	67.8
Use of hormone replacement therapy for long period increase the risk	174	64.4	96	35.6
Lack of physical exercise increase the risk	93	34.4	177	65.6
Lactation reduce probability of breast cancer	141	52.2	129	47.8
Overall percentage of knowledge about breast cancer		49.8		50.2

For the attitude of midwifery students towards breast self-examination, 70.3% of midwifery students had positive attitude towards breast self-examination practice. The

details of attitude toward breast self-examination practice among midwifery students was presented in the Table 4.

**Table 4:** Attitude toward breast self-examination practice among midwifery students (N=270)

Attitude towards breast self-examination practice	Positive attitude		Negative attitude	
	n	%	n	%
*Doing breast self-examination is wasting time	212	78.5	58	21.5
*If there is a lump, I prefer to get treatment from a traditional healer	170	63.0	100	37.0
*I felt fear to think about breast cancer	194	71.9	76	28.1
I am interested in doing breast self-examination	131	48.5	139	51.5
If there is a lump when doing breast self-examination, I will go to consult with specialist doctor	242	89.6	28	10.4
*If do not have abnormal changes, I will stop breast self-examination	159	58.9	111	41.1
*Breast cancer cannot be treated	220	81.5	50	18.5
Overall percentage of attitude toward breast self-examination practice		70.3		29.7

\*negative question

**3.4 Analysis of factors related to breast self-examination practice**

Table 5 presented that there was no correlation between factors such as age, education, family history of breast cancer and breast self-examination practice. Meanwhile,

personal history of breast diseases, knowledge about breast cancer, attitude toward breast self-examination were significantly correlated with the practice of breast self-examination (r = 0.12; p = 0.04; r = 0.24; p < 0.001; r = 0.20; p < 0.01; respectively).

**Table 5:** The study variables in relation to practice of breast self-examination (N=270).

Variables	1	2	3	4	5	6	7	8
1. Age	1							
2. Academic year	.89***	1						
3. Marital status	.46	.23	1					
4. Personal history of breast disease	.30	.04	.11	1				
5. Family history of breast cancer	-.14*	-.10	.24	-.006	1			
6. Knowledge about breast cancer	.30***	.32***	.03	.36	-.12*	1		
7. Attitude toward breast self-examination	.11	.06	.08	.15*	-.54	.13*	1	
8. Practice of breast self-examination	.09	.10	.06	.12*	-.07	.24***	.20**	1

Note: \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

**4. Discussion**

Practice of breast self-examination is considered as the early method to detect breast's abnormalities, it is also the proactive, effective and low-cost method help to detect breast cancer; hence it prevents serious consequences that breast cancer might causes. Among 270 midwifery students, the rate of breast self-examination practice was about 64.3% which was higher than previous studies in Vietnam of 15.8% [8] or 24% in Malaysia [7]. The higher rate of breast self-examination practice could be about the population in this study. Midwifery students are future medical staff who will directly give the advice and guide the practice of breast self-examination or directly participate in the treatment of breast cancer patients. Not surprising, the practice of breast self-examination in this population higher than other groups such as female textile workers or female pharmacy students [7-8].

In this study, nearly half of midwifery students had true knowledge about breast cancer (49.8%). This rate was higher to the study of Rbia Latif in which 29.3% of the students having good knowledge for breast cancer [9]. The result was similar with the study of Abdullah Nasser Alomair and colleagues where participants had average knowledge (57.4%) [10]. To explain this, the participants had received the information about breast cancer through the course work in the university and also from the internet. Nowadays, most of students owned a smart phone that easily connected to the internet; so that they can search whatever information they need and including the knowledge about breast cancer. Obviously, mass media were the most common source of information about breast

cancer for people especially for the young people [11]. Regarding the attitude towards breast self-examination, the midwifery students in current study had a positive attitude toward breast self-examination (70.3%). Most of midwifery students perceived that breast self-examination was not time-consuming and even though there was no abnormal change they would continue to practice breast self-examination. This finding was similar with previous study where 75% of people disagreeing with the practice as a waste of time and 79.5% saying that even if there was no change they would continue to practice [12].

Regarding the factors related to breast self-examination practice, there was statistically significant between knowledge about breast cancer, attitude toward breast self-examination, personal history of breast disease, and practice of breast self-examination. This result was similar to the previous studies when the rate of practicing breast self-examination was significantly higher among women who knew how to perform breast self-examination, and confident to perform it [13-14]. In addition, higher knowledge about breast cancer was also a significant predictor for practicing breast self-examination. The results also revealed a positive correlation between knowledge and practice of breast self-examination in which low knowledge low practice of breast self-examination, the study also concluded that the rate of breast self-examination practice would improve significantly if the awareness of breast self-examination increased [14-15].

**Limitation of the study**

The current study used convenience sampling technique;

therefore, the generalization is limited. In addition, the data collection using the google form, the accuracy of knowledge might be affected even though the researchers limited the time to answer the questionnaires.

## 5. Conclusion

This is the first study conducting to examine the breast self-examination among students in the medical university in Vietnam. The findings from this study confirmed the crucial role of knowledge and attitude about the breast self-examination in order to increase the practice. From the study findings, implementation of education program about the breast self-examination for students to enhance the awareness about breast self-examination among female students and improving the knowledge about breast self-examination, as well as breast cancer for students are essential. For the community, the health care provider can design the education program to improve the knowledge and attitude of women in community to promote the practice of breast self-examination. For further research, a well-designed sampling strategy that represents geographical areas should be in consideration, and the predictive correlational design should be conducted to depict the comprehensive pictures of breast self-examination practice and its influencing factors could be illustrated.

## 6. Acknowledgement

The authors feel thankful to all the participants for their time to participate in this study.

## 7. Declaration of Interest

The authors declare that there is no conflict of interest in this study.

## 8. References

- World Health Organization. *Cancer* in Vietnam. Retrieved August 15, 2021 from <https://www.who.int/vietnam/health-topics/cancer>.
- Nguyen TH, Le TD. Current status of cancer in Vietnam: Correlation with Southeast Asian countries. *Journal of Science and Technology of Duy Tan University* 2019;1(32):3-9.
- Mai XK. Current status and update of cancer in Vietnam. Retrieved July 25, 2021 from <http://www.benhvien103.vn/thuc-trang-va-cap-nhat-ung-thu-tai-viet-nam/>.
- Nguyen QA, Nguyen LAT. Direct cost of Breast cancer treatment in Vietnam, 2019. *Vietnam Medicine Journal* 2021;502(2):145-149.
- Vietnamese Ministry of Health. Guidelines for the diagnosis and treatment of breast cancer. Retrieved July 18, 2021 from [https://kcb.vn/wp-content/uploads/2020/07/3128\\_QD-BYT\\_Huong-dan-chan-doan-va-dieu-tri-ung-thu-vu.pdf](https://kcb.vn/wp-content/uploads/2020/07/3128_QD-BYT_Huong-dan-chan-doan-va-dieu-tri-ung-thu-vu.pdf).
- Pengpid S, Peltzer K. Knowledge, attitude and practice of breast self-examination among female university students from 24 low, middle income and emerging economy countries. *Asian Pacific Journal of Cancer Prevention* 2014;15:8637-8640. <http://doi.org/10.7314/APJCP.2014.15.20.8637>.
- Ali AN, Yuan FJ, Ying CH, Ahmed NZ. Awareness, knowledge and attitude towards breast self-examination: A cross-sectional study among female pharmacy students in Malaysia. *International Research Journal of Oncology* 2019;2(4):1-10.
- Tuyen DQ, Dung TV, Dong HV, Kien TT, Huong TT. Breast self-examination: knowledge and practice among female textile workers in Vietnam. *Cancer Control* 2019;26(1):1-7. <http://doi.org/10.1177/1073274819862788>.
- Latif R. Knowledge and attitude of Saudi female students towards breast cancer: A cross-sectional study. *Journal of Taibah University Medical Sciences* 2014;9(4):328-334. <http://doi.org/10.1016/j.jtumed.2014.05.004>.
- Alomair AN, Felemban DG, Felemban MS, Awadain JA, Altowargi AS, Alfawzan NF. Knowledge, attitude and practice of breast self-examination toward breast cancer among female students at king Saud University in Riyadh, Saudi Arabia. *International Journal of Medicine in Developing Countries* 2020;4(2):429-434. <http://doi.org/10.24911/IJMDC.51-1576668182>.
- Birhane K, Alemayehu M, Anawte B, Gebremariyam G, Daniel R, Addis S *et al.* Practices of breast self-examination and associated factors among female Debre Berhan University students. *International Journal of Breast Cancer* 2017;2017:1-6. <http://doi.org/10.1155/2017/8026297>.
- Fondjo LA, Owusu-Afriyie O, Sakyi SA, Wiafe AA, Amankwaa B, Acheampong E *et al.* Comparative assessment of knowledge, attitudes, and practice of breast self-examination among female secondary and tertiary school students in Ghana. *International Journal of Breast Cancer* 2018;2018:1-10. <http://doi.org/10.1155/2018/7502047>.
- Abou El azayiem Bayumi H. Breast Self-Examination (BSE): Knowledge and Practice among Female Faculty of Physical Education in Assuit, South Egypt. *Breast* 2016;25:1-8.
- Parsa P, Kandiah M, Parsa N. Factors associated with breast self-examination among Malaysian women teachers. *EMHJ - Eastern Mediterranean Health Journal* 2011;17(6):509-516. <https://apps.who.int/iris/handle/10665/118650>.
- Ayed A, Eqtait F, Harazneh L, Fashafsheh I, Nazzal S, Talahmeh B *et al.* Breast Self-Examination in Terms of Knowledge, Attitude, and Practice among Nursing Students of Arab American University/Jenin. *Journal of Education and Practice* 2015;6(4):37-47.