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Province, Viet Nam: A Cross-Sectional Study**



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Breast Self-Examination Practice and Associated Factors among Rural Women in Hai Duong Province, Viet Nam: A Cross-Sectional Study

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Abstract

Purpose: The purpose of this study was to identify the practice level of breast self-examination among rural women, and some factors related to this level of research participants.

Methodology: A cross-sectional descriptive study was conducted on 309 women living in some rural areas of Hai Duong province, Vietnam from January to June 2022. Data were analyzed by SPSS 20.0 software, and a Chi-square test was used to determine factors related to some demographic characteristics and breast self-examination practices of rural women.

Findings: The study results show that 70.6% of rural women have never performed breast self-examination, in addition, 15.9% practiced every once a month. For evaluation of breast self-examination practice through direct observation shows that only 17.5% of women practice at level with passed. Family history of breast cancer and monthly income of rural women were related to the level of breast self-examination practice ($p < 0.05$).

Unique Contribution to Theory, Policy, and Practice: The percentage of rural women practicing breast self-examination following steps by steps correctly was low. Therefore, conducting an educational program to guide breast self-examination practice is necessary for rural women to help them proactively screen and early detect breast-related diseases, especially breast cancer.

Keywords: *Associated Factors, Breast Self-Examination, Practice, Rural Women, Vietnam*

INTRODUCTION

Today, breast cancer is the most common type of cancer for women worldwide [1],[2]. It is estimated that each year about 4.4 million women die from cancer, of which breast cancer accounts for 25% [3]. In Vietnam, breast cancer is also the most common cancer in women, but most patients go to the doctor and are diagnosed at a late stage [4]. According to the shift in Vietnam's aging population structure, along with lifestyle changes, breast cancer is forecast to remain the leading cancer diagnosis in women by 2025 [6]. Meanwhile, breast cancer is a completely curable cancer if detected early and treated promptly [7] and the cost of treatment in the early stage is only 20% of that of treatment in the late stage [8]. Therefore, early detection of breast cancer is extremely important, it not only brings high survival and cure rates but also speeds up the treatment process, reduces costs, and improves the quality of life for patients after the treatment process [9].

Breast self-examination is one of the most effective strategies that can be used to detect breast cancer early, in addition, it is a safe technique, simple to perform, not time-consuming, and does not depend on medical staff [10],[11]. Especially up to 90% of breast cancer cases are detected early through monthly medical examinations of the disease [10],[11]. Although breast self-examination alone is not enough basis to diagnose breast cancer, this is a method that helps encourage women to take more responsibility for their health to screen for breast cancer, especially women in rural areas who have low income and limited medical care [12],[13]. In Vietnam, research conducted by Do Quang Tuyen et al (2019) showed that the proportion of women correctly performing breast self-examination techniques was very low (7.5%), and less than 16% performed breast self-examination monthly [14]. Understanding the importance and current status of women's breast self-examination practice in Vietnam, the Ministry of Health has also introduced the breast self-examination method as a level of primary health care in the national guidelines on cancer prevention (especially for breast cancer) [15]. In addition, until now we have not found many Vietnamese studies evaluating this issue conducted on women living in rural areas, so that the reason why we conducted a study with two objectives (1) determining the level of breast self-examination practices of rural women, and (2) identify some factors related to the study subjects' practice of breast self-examination. The results of this research will be the basis for us to propose intervention programs to improve the skills and frequency of performing breast self-examination of rural Vietnamese women.

MATERIAL AND METHODS

Design

A cross-sectional study was conducted from January to June 2022.

Sample/Participants

Sample size: Apply the sample calculation formula to estimate a proportion of a population.

$$n = Z_{1-\alpha/2}^2 \cdot \frac{p(1-p)}{(p\varepsilon)^2}$$

In which:

n: sample size

p: a ratio of women practiced breast self-examination correctly. In this study, following the result of previous study, $p = 0.158$ [16]

α : Statistical significance level with $\alpha = 5\%$, coefficient $Z_{1-\alpha/2} = 1.96$

ε : relative error between trial study and population proportion (ranging from 0.1 - 0.5)

Our study took $\varepsilon = 0.27$, so the sample size of the study was 280. In addition, the research team added 10% sampling error. So, the required sample size was 300 women, in fact we conducted research on 309 women, finally.

Inclusion criteria: rural women included to the study if their age from 20- to 59-year-old; were not pregnant or breastfeeding; can speak, read, listen, and understand Vietnamese; not in a serious stage of illness; and volunteer to participate in research.

Exclusion criteria: we removed participants out of the list if they were diagnosed with cognitive disorders; having disabilities in the ability to listen, read, and understand Vietnamese; changed their place of residence during the follow-up period.

Data collection

The survey consisted of three parts: demographic characteristics, breast self-examination practice status and a checklist of breast self-examination practice.

For demographic characteristics, it contained 6 items, including age, education level, marital status, employment, monthly income level, and family history of breast cancer. However, there were 03 questions related to breast self-examination practice.

For a checklist of breast self-examination practice, it was developed by the research team based on communication documents for some cancer disease of the Ministry of Health of Vietnam [11]. The checklist included 8 items with 5 main steps of the breast self-examination process. Each step was evaluated as 1 point in "Yes" column when rural women do it well, vice versa, a researcher score 0 point as "No" column if participants did not do it or did it but seriously wrong. Finally, as Kashfi SM et al. (2012) recommendation, rural women was classified as passes result when the total score accounted equal or over 8.5 points, while they got fail result if total score under 8.5 points [17].

Ethical Considerations

The study was approved by the Medical Ethics Council of Nam Dinh University of Nursing according to Decision No. 2675/GCN-HDDD dated October 22, 2021. Women participate in

research on a voluntary basis and do not directly interfere with the patient's life, so ethics in research is guaranteed. In addition, the study was conducted with the consent of the local government where the data was collected.

Data analysis

Data were analysed by SPSS 20.0 software. Descriptive statistics were used for the ratio tables, and a Chi-square test was used to determine factors related to some demographic characteristics and breast self-examination practices of rural women.

RESULTS

General characteristics of participants

Table 1. General characteristics of participants

Contents	N	%
Age group		
≤ 40	81	26.2
> 40	228	73.8
Education level		
High school or Under	232	75.1
Post-high school	17	24.9
Marital status		
Single/ Widow/ Divoce	17	5.5
Living with husband	292	94.5
Employment		
Civil servants	72	23.3
Others	237	76.7
Monthly income level		
< 2 milion (Vietnam dong)	99	32.0
>= 2 milion (Vietnam dong)	210	68.0
Family history of breast cancer		
Yes	12	3.9
No	297	96.1

Among 309 rural women participating in the study, 73.8% were over the age of 40, 24.9% graduated from high school and most (94.5%) were living with their husbands. However, 68% participants earned above the minimum income level, and most of them were a farmer (46.9%). Only 3.9% of women have a family history of breast cancer (see Table 1).

Practice of breast self-examination among rural women

Table 2. Practice of breast self-examination among rural women

Contents		N	%
Practice of breast self-examination at home	No	218	70.6
	Yes	91	29.4
Practice of breast self-examination within 7-10 days after menstruation	Not the right time	74	81.3
	Right time	17	18.7
Frequent for practice of breast self-examination	Never	180	58.3
	Sometimes	80	25.9
	Always	49	15.9

Table 2 shows that 70.6% of rural women have never performed breast self-examination at home, moreover, 81.3% women in this group did not practice breast self-examination on the right time within 7-10 days after menstruation. Only 15.9% of participants performed breast self-examination regularly every month, while most of them (58.3%) never performed it.

Table 3. Results of observing rural women performing breast self-examination correctly according to the procedure

Breast Self-Examination Steps	Perfomedcorrectly (n)	%
Observe breasts while standing in front of a mirror	100	32.4
The breast examination position is lying with a pillow under the shoulders	78	25.2
Evaluate the shape of both breasts	63	20.4
Observe the skin of the breast area	80	25.9
Observe the nipples for unusual discharge	122	39.5
Compare both breasts	169	54.7
Evaluate changes in nipple orientation	92	29.8
Observe the breast in the position of leaning forward with hands on hips	32	10.4
Press fingers against the breast tissue	75	24.3
Change in pressure during examination	92	29.8
The examination rotates evenly without missing the breast tissue	84	27.2
Use right hand to examine left breast and vice versa	156	50.5
The hand on the side whose breast is being examined is placed behind the head or extended	98	31.7
Check for nipple discharge	73	23.6
Examination of supraclavicular lymph nodes	70	22.7
Examination of axillary lymph nodes	50	16.2
Examination of internal thoracic lymph nodes	10	3.2

Table 3 shows that the rate of rural women correctly practiced steps of breast self-examination was low. Some important steps such as observing and evaluating the nipples to see if they were pulled inward or have nipple discharge accounted only 20.4% and 39.5% respectively. In a step of finger pressure and palpation, only 24.3% of women performed, while only 27.2% rotated evenly without missing the breast area. For step of checking discharge, only 23.6% of participants did it. Most of rural women did not perform the steps to check the supraclavicular, axillary, and internal thoracic lymph nodes, with low results accounted at 22.7%; 16.2%; 3.2%, respectively.

Table 4. Level of breast self-examination practice observed by nurses

Practice breast self-examination that observed by nurses	N	%
Passed	54	17.5
Fail	255	82.5

Most of rural women practice breast self-examination with fail result according to the checklist observed by nurses (82.5%), while the proportion of women got passed result were low, with 17.5% (see Table 4).

Some factors related to the practice of breast self-examination among rural women**Table 5. Some factors related to the practice of breast self-examination among rural women**

Contents		Practice breast self-examination that observed by P nurses		P
		Passed	Fail	
Age group	≤ 40	65 (80.2)	16(19.8)	0.530
	> 40	190(83.3)	38(16.7)	
Education level	High school or Under	194 (83.6)	38 (16.4)	0.378
	Post-high school	61 (79.2)	16 (20.8)	
Marital status	Single/ Widow/ Divoce	239 (81.8)	53 (18.2)	0.324
	Living with husband	16 (94.1)	1 (5.9)	
Employment	Civil servants	56 (77.8)	16 (22.2)	0.226
	Others	199 (84.0)	38 (16.0)	
Monthly income level	< 2 milion (Vietnam dong)	88 (88.9)	11 (11.1)	0.043
	>= 2 milion (Vietnam dong)	167 (79.5)	43 (20.5)	
Family history of breast cancer	Yes	7 (58.3)	5 (41.7)	0.040
	No	248 (83.5)	49 (16.5)	

The study identified that there was a correlation between monthly income and family history of breast cancer with participant's breast self-examination practice level. Specifically, rural women with income ≥ 2 million/month practiced with a passed level higher than the low-income group ($p=0.043$). Similarly, in the group of women with a family history of breast cancer, the ability to practice was higher than the other group ($p= 0.040$) (see Table 5).

DISSCUSSION

Breast self-examination is an important strategy for early detection of breast cancer. However, our research results show that women in some rural areas of Vietnam have a low rate of regular breast self-examination practice (15.9%). Especially among those who perform it, up to

81.3% did not do it at the right time within 7-10 days after menstruation, this can greatly affect the results of the woman's breast self-examination. This result was lower than other studies results conducted by Diem Huong and Ngan (2021) [18], and Vo Thi Ngoc Ha et al (2016) [19], both studies collected data in big cities. But compared to a study by Toan et al (2019) conducted in a mountainous commune of Thanh Hoa province, the rate of women performed breast self-examination in the study was very low, only 13.8%, and this rate was much lower than our study [20]. This may be explained by the difference in research areas. In big cities, people's living standards and income levels were often higher than in rural areas, as well as the opportunity to access medical services was more convenient, people tended to pay more attention to their health, so the rate of regular breast self-examination was higher.

The most different feature of our study is that we evaluated study participants' breast self-examination practices according to the Ministry of Health's procedure checklist and was observed by nurses. The results showed that the pass level of practice rate was low (17.5%), while most participants (82.5%) practiced with failed results. Especially in some important technical steps, the percentage of successful performers was low, such as: assessing the shape of both breasts (20.4%); observing nipples for abnormal discharge (39.5%); rotating examination did not miss breast tissue (27.2%); and examine of axillary lymph node accounts for 16.2%. However, this result has improved significantly when compared to a study by Do Quang Tuyen et al (2019) conducted on female workers with only 7.7% practiced correctly [16]; but our result was lower when compared with the research results of Alazmi et al. (2012) [21]; and the study of Shallo et al. (2019) [22].

Our study found an association between a family history of breast cancer and breast self-examination practices of rural women who were directly evaluated by nurses ($p=0.04$). This result was similar to most previous studies [TLTK]. In addition, our study identified a significant association between monthly income level and the rate of breast self-examination practice among participants. Specifically, people with no income or low income have a higher rate of fail practice than the group with an income over 2 million/month ($p=0.043$). This result was similar to the study of Toan et al. (2019) [20]. This was a factor that has rarely been considered in previous studies. This can be explained because our research was conducted in rural areas, where women have different income levels leading to uneven living standards. This is completely consistent with the fact that people with good economic conditions will be more able to carry out health interventions for themselves than people with no income or low income, who live dependent on others with limited expenses, so they do not have the opportunity to seek medical services or pay attention to interventions for their health. This factor was considered a good indicator of the appropriateness and necessity of implementing a program to guide breast self-examination practices in rural areas for women. Breast self-examination is a safe method, does not cost much money, is simple to perform, and helps detect early abnormalities in the breast, especially breast cancer. Thereby reducing the burden of disease, and treatment costs and helping women in rural areas have the opportunity to be screened for breast cancer regularly and continuously.

CONCLUSION

The rate of practicing breast self-examination regularly and with correct techniques among rural women was low. Therefore, this result affects the ability to self-control abnormalities and detect breast cancer of women participating in the study. In addition, we found that family history of breast cancer and monthly income were factors related to the performance of women in breast self-examination in the study.

RECOMMENDATION

Breast self-examination plays an important to prevent breast cancer for rural women. So, the research results will be the basis for community nurses to consider to develop an intervention program to improve breast self-examination practices for rural women.

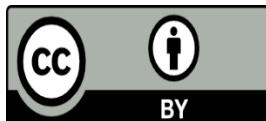
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