Knowledge, Practice about Female Workers' Breast Cancer Prevention and Early Detection in the 10th Garment Joint Stock Company

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Abstract: Objectives: To describe female workers' knowledge and practice on breast cancer prevention and early detection at the 10th Garment Joint Stock Company in 2017. Method: Cross-sectional description of 259 female workers. Results: 23.9% knew about factors that increased the risk of breast cancer, 21.6% knew that there was no vaccine to prevent cancer, 11.6% knew the age that was susceptible to cancer and only 22.8% of female workers had good knowledge of cancer prevention. The rate of having never heard of breast self-examination method was 56.8%, mammography was 65.3%, the rate of having knowledge about breast self-examination method was only 19.7%, the time of performing breast self-examination was 28.2% and and the rate of knowledge of early signs of breast cancer was only 13.9%. The percentage of female workers with good practice on prevention and early detection of breast cancer was 79.9%, 100% of female workers did not smoke or drink alcohol, 53.3% of them consumed enough green vegetables as recommended; and 40.9% of them have a low-fat diet. The rate of self-assessment as a good practice for early breast cancer detection methods was very low: breast

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self-examination (11.2%), breast examination at specialized health facilities (22.8%), and mammography (8.1%). Conclusions: There is a disparity in knowledge and practice of breast cancer prevention and early detection among 259 female workers. The percentage of workers with correct knowledge about breast cancer prevention and methods of early detection of breast cancer was low, the percentage of female workers had good practice on prevention and early detection of cancer was quite high, but the rate of good practice when self-assessing practices of early detection methods was very low. Breast self-examination was less accurate and however, regular self-examination would detect breast abnormalities early, increase the chances of treatment, and prolong the patient's life.

Keywords: Knowledge; Practice; Early Detection; Breast-Cancer; Female Workers.

1. Introduction

In many nations throughout the world, breast cancer (BC) was the most prevalent type of cancer in women and the main cause of mortality among women who died from cancer (Tran Van Thuan, 2007; Bui Dieu et al., 2012). The World Health Organization (WHO) estimated that there were 2.1 million new cases of cancer worldwide in 2018, accounting for 11.6% of all cancers. Additionally, BC was responsible for 6.6% of all cancer deaths, placing fifth overall out of the 627,000 cancer deaths (WHO, 2018). According to data from 2010, breast cancer was the most common form of cancer in women in Vietnam, with a projected age-standardized incidence rate of 29.9/100.000 individuals in the nation. In 2020, this figure was 38.1/100.000 and in Hanoi, an average rate of 146.9/100.000 people, had the highest incidence rate of age-standard breast cancer among women in Vietnam (Bui Dieu et al., 2012).

Cancer was one of the diseases with a good prognosis. The disease was curable if detected at an early stage. The experience of many countries around the world showed that the earlier screening and detection would help to timely treat patients, increase the treatment efficiency, reduce the treatment costs, and

improve the quality of life (WHO, 2006). Although the measures to prevent and detect BC early were relatively simple and bring many benefits, in reality their awareness and practical skills were still limited. According to a study conducted by Nguyen Huu Chau in 2015 on 1.200 women aged 20-60 in Khanh Hoa province, 67.9% had correct knowledge about breast cancer (Nguyen Huu Chau, 2017). Another study by Bui Thi Duyen (2018) found that 5.3% women aged 20-49 years old in Thanh Hoa had the correct practice of the breast self-examination method's contents (Bui Thi Duyen, 2018).

Currently, cancer prevention activities focused on raising public awareness and screening for early detection. However, these programs did not specifically target female employees in enterprises, where the labor force was concentrated, partly due to the lack of proper attention from medical staffs, leaders at businesses, partly because health insurance did not cover cancer screening and early detection as well as there were no mandatory regulations on cancer screening in the health examination regulations periodically for workers. Therefore, the prevention and early detection of breast cancer among female workers in some enterprises still faced many difficulties. What was the current rate of knowledge and practice on prevention and early detection of breast cancer among female workers at 10th Garment Joint Stock Company? Therefore, the research topic was carried out in order to describee the knowledge and practices regarding breast cancer prevention and early detection of female workers at the 10th Garment Joint Stock Company.

2. Research Methods

Research Subjects, Time and Place of the Study

The female workers had been employed for at least 1 year before October 2016. Selection criteria: subjects were aged 35 years or older if a mother or sister had breast cancer in the family. Subjects agreed to participate in the study. Exclusion criteria: subjects with diseases that could not participate in the study or subjects with a diagnosis of breast cancer.

The study was conducted from October 2016 to October 2017 at the 10th Garment Joint Stock Company, Long Bien District, Hanoi City.

Study Design and Sampling

The descriptive cross-sectional method was used to design the study. Using random sampling, choose 259 study participants (estimated sample for a population proportion study based on research by Le Thanh Tung et al., 2017): Create a list of potential study participants in a garment company, and then randomly choose participants (lottery) from the list until the sufficient sample was complete.

Techniques, Data Collection Tools and Assessment Scales

The semi-structured questionnaire was built based on the breast cancer awareness measurement questionnaire (BREAST-CAM) developed by Cancer Research UK. Distributing the questionnaire for the subjects to complete themselves after clearly explaining the purpose and meaning of the study, monitoring the completion of the questionnaire, if the subject gave up, then choose the next sample. The questionnaire included information: Risk factors for breast cancer, knowledge of prevention and early detection of breast cancer. After filling out the questionnaire, the participant would be evaluated by the medical staff on breast self-examination practice according to the 5-step checklist recommended: 1) checking shape and symmetry 2) finding abnormalities 3) finding abnormal tumors 4) look for axillary lymphadenopathy 5) check for nipple discharge.

Assessment Scale: The score for assessing knowledge and practice of breast cancer prevention and early detection was the total score of the questions related to each subsection, in which some important answers would have a higher score.

The subsections included: a) knowledge of breast cancer prevention 15 points; b) knowledge of breast cancer early detection (breast self-examination 22 points, breast examination at specialized medical facilities 6 points,

mammography 9 points) c) practice of breast cancer prevention 10 points d) practice of early breast cancer detection (practice of breast self-examination 24 points, practice of breast examination at specialized health facilities 6,5 points, practice of mammography 6,5 points). When the total score was greater than or equal to half of the maximum score, the knowledge was assessed as good; when the total score was less than half of the maximum score, the knowledge was assessed as not good. For the evaluation score of breast examination practice according to the 5 step recommendation of breast self-examination, the total practice score was 12 points divided into 2 levels: Good (≥ 6 points) and not good (< 6 points).

Data analysis

EpiData 3.1 software was used to double-enter the data, and Stata 12 was used to synthesize and process the results. Research results were presented in percentages with medical statistical analysis.

3. Results

3.1. Current status of knowledge on prevention and early detection of breast cancer

The results of Table 1 showed that 52.9% of female workers knew that breast cancer was a common cancer in women. The rate of having correct knowledge of measures to reduce the risk of breast cancer was 32.8%, about factors that increased the risk of breast cancer was 23.9%, about vaccine to prevent breast cancer was 21.6% and the lowest rate was that the percentage of female workers who had correct knowledge of the age group that was susceptible to breast cancer was only 11.6%. This finding demonstrated that female workers were unaware of the risks they were exposed to, and were unware of ways to reduce thosee risks. Only 22.8% of the 259 female workers who took part in the study had general good knowledge of breast cancer prevention, this result was less than the study of Nguyen Thi Kim Ngan et al. (42.4%).

Table 1. General breast cancer knowledge

Correct knowledge of breast cancer prevention	Frequency (n)	Percentage (%)
Cancer was a common disease in women	137	52.9
Measures to reduce the risk of breast cancer (Diet, physical activity, healthy lifestyle...)	85	32.8
Factors that increased the risk of breast cancer (Older age, family history, etc.)	62	23.9
Vaccination against BC (No vacccine)	56	21.6
The average age at which cancer occurred (35 years and older)	30	11.6
Total	259	100
Good	59	22.8
Not good	200	77.2

Chart 1. General knowledge of study population about early detection methods of breast cancer

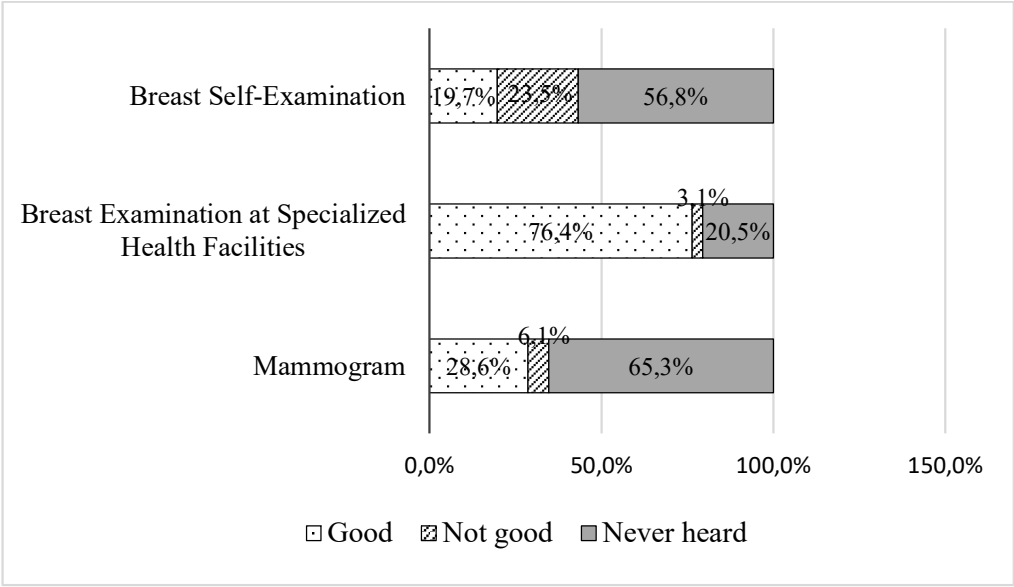

Chart 1 showed that up to 56.8% had never heard of breast self-examination, the rate of never having heard of breast examination at specialized health facilities accounted for the lowest rate (20,5%); and the highest rate was a method of mammography (65.3%). In which, the respondents with good knowledge of breast self-examination methods only reached 19.7%; 28.6% of the respondents had good knowledge of mammography; and the highest rate was the percentage of respondents with correct knowledge of breast examination methods at specialized health facilities (76.4%).

Table 2. Knowledge of early detection methods of breast cancer

Accurate knowledge of breast cancer early detection	**Frequency (n)**	**Percentage %)**
Age of monthly breast self-examination	9	3.5
Routine breast self-examination	32	12.4
Benefits of breast self-examination	61	23.6
Time for breast self-examination	73	28.2
Earliest signs of BC	36	13.9
Age of breast examination at a specialized health center	137	52.9
Periodic breast examination at specialized health facilities	15	5.8
Benefits of going to a breast examination at a specialized health facility	186	71.8
Age for mammography	50	19.3

Accurate knowledge of breast cancer early detection	Frequency (n)	Percentage %)
Periodic mammography	19	7.3
Benefits of a mammography	56	21.6
Total	259	100

The results of Table 2 showed that the percentage of female workers who answered correctly with knowledge about age, periodical implementation, and benefits of each method was quite low, respectively: breast self-examination (3.5%; 12.4%; 23.6%), the rate of knowing when to perform breast self-examination was 28.2%, knowing the early warning signs of breast cancer was 13.9%, maybe garment workers had a low educational level, so their knowledge was also low. The rate of breast examination at specialized health facilities (52.9%; 5.8%; 71.8%), and mammography (19.3%; 7.3; 21.6%). These rates were still low because the means of examination and the cost were quite high compared to the income of the workers, so only the cases after detecting abnormalities in the breast and having the assignment of a doctor could have access to the methods.

3.2. Practice on breast cancer prevention and early detection

The survey results in Table 3 showed that 100% of female employees currently did not smoke or consume alcohol. Most of them did not use oral contraceptives every day (93.1%). The percentage of female workers who consumed enough green vegetables as recommended was 53.3%, and 40.9% followed a low-fat diet, but only 9.3% of female workers exercised regularly. Out of 259 female workers who were evaluated, 207 female workers (79.9%) had a good practice of cancer prevention, and the remaining 52 female workers (20.1%) were evaluated as not good.

Table 3. Good practice in breast cancer prevention of study subjects

Good Practice in Breast Cancer Prevention	Frequency (n)	Percentage (%)
No smoking	259	100
Don't drink alcohol	259	100
Limit the use of birth control pills	241	93.1
Eat enough green vegetables as recommended	138	53.3
Low-fat diet	106	40.9
Regular exercise	24	9.3
Total	259	100
Good	207	79.9
Not good	52	20.1

The results of Table 4 revealed that the use of self-assessment for early detection of breast cancer by study participants was quite low. The general practice of breast self-examination was only 11.2%, and 15.5% practiced monthly breast self-examination. The general practice of breast examination at specialized health facilities reached 22.8%, of which 22.0% had regular breast examinations at specialized health facilities. The general practice of mammography was only 8.1%, and only 7.3% of regular mammography was performed at specialized health facilities.

Table 4. Methods for early detection of breast cancer in general practice

Practice in early detection of BC		Frequency (n)	Percentage (%)
General practice assessment of breast self-examination	Good	29	11.2
	Not good	230	88.8
Frequency of breast self-exams	Frequent (monthly)	40	15.5
	Infrequent (>1 month) and never	219	84.5
Evaluation of general practice in breast examination at specialized health facilities	Good	59	22.8
	Not good	200	77.2
Frequency of examination breast at specialized health center	Frequent (≤ 1 year)	57	22.0
	Infrequent (>1year) and never	202	78.0
General practice in mammography	Good	21	8.1
	Not good	238	91.9
Frequency of going mammogram	Frequent (≤ 1 year)	19	7.3
	Infrequent (>1 year) and never	240	92.7

According to Table 5, the results of breast self-examination practice assessed by the 5-step checklist of the self-assessment breast self-examination process by the respondents themselves were also very low, at 1.9% (5/259 subjects achieved).

And this rate was even lower when assessed by health workers. The rate of achievement was only 0.4% (1/232 participants achieved).

Table 5. Breast self-examination practice assessment according to the 5-step checklist of the breast examination process

Practice breast self-examination and evaluation according to the 5-step checklist of the breast examination process.	**Respondents' Self-assessment**		**Health workers evaluate**	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Good	5	1.9	1	0.4
Not good	254	98.1	231	99.6
Total	**259**	**100**	**232**	**100**

4. Discussion

4.1. Current status of knowledge about prevention and early detection of breast cancer in female workers at the 10th Garment Joint Stock Company

Only 22.8% of the female workers who took our study's general knowledge on cancer prevention had good knowledge. This result was lower than the results of a study by Nguyen Thi Kim Ngan over 600 women in a commune of Hai Duong province, where 42.4% had good knowledge about breast cancer prevention (Nguyen Thi Kim Ngan et al., 2009). Additionally, the study revealed that 52.9% of the female participants understood that breast cancer was a prevalent malignancy in women. This figure was lower than the 90.7% found in author Bui Thi Duyen's research from Thanh Hoa (2018). (Bui Thi Duyen, 2018). It was crucial to provide women with information and support so they might accurately understand risk factors, recognize their predisposing age, or understand what could be done to change and reduce the chance of breast cancer. However, only 23.9% of the 259 study participants had adequate knowledge of

the risk factors for breast cancer; 11.6% knew that the optimal age for developing breast cancer was over 35; 21.6% knew there was no vaccine to prevent breast cancer; and 32.8% had good knowledge of the steps to lower the risk of breast cancer, which was quite low when compared to other studies. Therefore, it was crucial for female employees to have the correct awareness of the disease and early practice to reduce risks from these factors. Communication programs and enhancing education about breast cancer were also highly important.

Three frequently utilized methods of early breast cancer diagnosis: breast self-examination, breast examination at specialized medical facilities, and mammography were looked at in this study.

- Breast self-examination:

Every woman should be prepared to perform a self-examination of her breasts. Breast self-examination enabled women to detect abnormalities in their breasts early and seek medical attention for diagnosis. Breast changes could be a sign of disease and should be taken note of. It was completely curable if treated promptly. According to the findings of the research, only 43.2% of female workers had heard of this strategy, and up to 56.8% had never heard of it. This rate was nearly identical to the study conducted in Thanh Hoa by author Bui Thi Duyen (2018), which discovered that 58.7% of participants had heard of breast self-examination, but significantly lower than the studies conducted by Abass BR et al (2015), which discovered that 73.3% of participants had, and Adamu H et al (2016), which discovered that 86.3% of participants had (Shuaibu K, Adamu H, Adamu AN, 2016).

However, only 19.7% of people understood the breast self-examination procedure. In which, the rate of correct knowledge about the time of periodic breast self-examination reached 12.4%, the age group starting monthly breast self-examination reached 3.5%, the time of breast self-examination reached 28.2%, the benefit of breast self-examination reached 23.6%, the early signs of breast cancer reached 13.9%. This low knowledge's result of breast exam was

consistent with the findings of Donnelly TT et al. (2014), who discovered that in Saudi Arabia, 28.9% of study participants correctly understood the breast self-examination advice (Donnelly TT et al., 2014). However, the results of our study were lower than Shuaibu K et al. (2016), 46% of participants had adequate knowledge of breast self-examination (Shuaibu K, Adamu H, Adamu AN, 2016). This showed that workers' inadequate awareness was due to limited access to information, lack of time and sense of self-care. It was very necessary to have a communication and education program about breast cancer to raise awareness of female workers for the prevention and early detection of breast cancer.

- Breast examination at specialized medical facilities:

Breast examination at specialized medical facilities was a clinical breast exam (CBE) performed by medical personnel in order to detect breast cancer in its early stages. It was usually performed in developing countries where mammography was not widely used and breast cancer was on the rise. According to our findings, 79.5% of respondents had heard of the breast inspection procedure used in specialized medical facilities. This result was quite high when compared to other authors' studies, such as Deniz S et al. (2017)'s finding that 37.8% were aware of clinical breast examination (Kurt B, Deniz S et al., 2017). Donnelly TT and et al. (2014) discovered that 41.8% of study participants were aware of clinical breast examination recommendations at specialized medical facilities (Donnelly TT and et al. (2014). This difference might be due to the effectiveness brought about by the propaganda programs and free screening for early detection of breast cancer for women over 40 years old, which had been carried out continuously in recent years.

- Mammography:

Mammography was the most effective screening method for early detection of breast cancer, and it lowerred the risk of breast cancer-related death. The findings revealed that, of the 259 female workers who took part in the survey,

65.3% had never heard of the mammography technique for early breast cancer detection. This outcome was comparable to that of Donnelly TT et al's (2014) study, which revealed that 26.4% of study participants correctly understood the guidelines for mammography (Donnelly TT et al., 2014).The rate of 21.6% correctly identified the benefit of mammography was very low. Because the current mammography procedure was still relatively new and had a high cost in comparison to our country's average income, this finding is rather logical. Only those cases when breast abnormalities were detected after clinical breast examination and were prescribed by a doctor would have access to this method.

4.2. Actual situation practice of breast cancer prevention and early detection in female workers at the 10th Garment Joint Stock Company

Through cancer prevention, simple daily actions could help women reduce their risk of developing breast cancer. According to research findings, 79.9% of people practiced cancer prevention on a regular basis. Good practice restricted the use of oral contraceptives in 93.1% of cases, and 100% of female employees did not smoke or consume alcohol. However, the rate of regular exercise activity is very low, only 9.3% of female workers exercised regularly, and at an average level, only 53.3% consumed the recommended number of vegetables and low fat in their diets (40.9%, respectively). The above-mentioned findings corresponded to the characteristics of the study participants. Due to long-standing traditions and lifestyle choices, Vietnamese women were less likely to smoke, drink alcohol, or use birth control pills than women in other countries. Female garment workers, on the other hand, were less concerned with things like daily food recommendations, sports, and exercise. This could be due to their unique economic situation, irregular work schedules, and demanding daily workload.

The actual practice of female garment workers in the early detection of breast cancer was also evaluated on all three methods: breast self-examination, breast examination at specialized medical facilities, and mammography.

- Breast self-examination:

Only 15.5% of the 259 female workers in our study practiced monthly breast self-examination. 63.3% had never performed a self-examination on their breasts, nearly double the 36.7% who had. This finding was consistent with studies such as Aljohani S (2016), which discovered that only 35.5% of participants had ever performed a breast self-examination and 27.3% had done so on a monthly basis (Saib I, Aljohani S; Noorelahi M, 2016), and Alshraideh HA (2015), where the rate was 34.9% (HA Alshraideh et al., 2015). In contrast to Kurt B Deniz S's (2017) study, our finding was lower than 51% of participants had ever performed a breast self-exam (Kurt B; Deniz S et al., 2017).

The general practice assessment of female workers' breast self-examination results showed that 11.2% were assessed as good. This figure was higher than the 5.3% reported in a study by Bui Thi Duyen (2018), who found that approximately 5.3% of study participants correctly practiced the contents of the breast self-examination method (Bui Thi Duyen, 2018). This difference could be explained by the individuals' increased access to the media and their increased sense of self-care as a result of caring for a relative with breast cancer. The rate of breast self-examination was relatively low even though it was simple to perform at home, and inexpensive.

Another way our study differed from others was that we used a checklist to assess breast self-examination practice in addition to questionnaires and real-world scenarios. Breast self-examination should be done in five steps. This included assessments made by both the participants and medical personnel. Only 232 of the 259 study participants agreed to the breast self-examination by medical experts. The remaining 27 female employees declined to participate, citing cultural restrictions or shyness that prevented them from showing their breasts to another person. The results in our study showed that the rate of breast self-examination according to 5 recommended steps was quite low because the research subjects self-assessed only 1.9%, and this rate was even lower when evaluated by the medical staff (0.4%). This finding was similar to that of Obaikol

R (2010), who found that only 1% of participants correctly performed breast self-examination techniques (Galukande M et al., 2010). However, much lower than in the Saadoun F (2013) study, approximately 35% of women who practiced breast self-examination had completed exactly 6 steps out of 12 steps of breast examination (Alkhabbaz A et al., 2013).

- Breast examination at specialized medical facilities:

According to survey results, 22.8% of the 259 female workers who participated in the study performed breast examinations at specialized medical facilities and furthermore, 22% of female employees frequently visited specialized medical facilities for breast examinations. This finding was comparable to that of Saib I., Aljohani S. et al. (2016), who discovered that while 27,4% of participants in their study reported having had a clinical breast exam, only 8.8% of those in specialized medical facilities reported having one annually (Saib I, Aljohani S; Noorelahi M, 2016), while according to Nguyen Huu Chau's (2015) research, 14.3% had an annual checkup (Nguyen Huu Chau, 2015). Most other studies, in comparison to this one, showed a lower rate of continuing annual checks. This disparity might be explained by the fact that the research subjects were female garment workers with limited access to and opportunity for breast examinations at specialized medical facilities. Those who had visited the doctors and were aware of the benefits would, however, continue to do this periodically as advised. In order to change people's attitudes and promote knowledge of the value of routine medical exams at specialized medical facilities, health professionals must consult and spread information in addition to performing their jobs successfully when subjects visited specialized medical facilities for breast examinations.

- Mammography:

According to Table 4, only 8.1% of female employees were good at mammography practice, and only 7.3% had regular mammography. This finding was lower than the findings of Bui Thi Duyen (2018), who discovered that 10.1%

of the study subjects had ever had a mammography (Bui Thi Duyen, 2018) and the study by Alshraideh HA et al., (2015), the rate of mammography practice was low at 8.6% (Alshraideh HA et al., 2015). Mammography was the most effective breast cancer screening procedure of the three; it could reduce the risk of breast cancer-related death and detect the disease early, even in cases where the cancer had not yet been diagnosed and possessed a tumor. This approach, no matter how costly, could not be used to screen all women in Vietnam or many other countries. Similarly, clinical breast examination at specialized medical facilities was still an expensive procedure for the majority of employees in Vietnam, particularly the female garment workers in our study. While breast self-examination was a simple and low-cost technique that could be applied by women of all backgrounds, of course, breast self-examination was less reliable and detected lesions later than the other two techniques. Routine self-examination, on the other hand, would aid in the early detection of breast abnormalities; the earlier the diagnosis, the better the chance of successful treatment and the longer the patient's life.

5. Conclusion

There was a difference in knowledge, practice of prevention and early detection of breast cancer in 259 female workers:

The percentage of workers with correct knowledge of breast cancer prevention was low: 23.9% knew about factors that increased the risk of breast cancer, 21.6% knew that there was no vaccine to prevent breast cancer, 11.6% knew that age was susceptible to cancer and only 22.8% of female workers had good knowledge of cancer prevention.

Knowledge of workers about early detection methods of breast cancer was still limited: the rate of workers who had never heard of breast self-examination method was 56.8%, mammography (65.3%); the rate of having knowledge of breast self-examination only reached 19.7%; the time of performing breast self-examination was 28.2%; and early signs of breast cancer was only 13.9%.

The percentage of female workers who have good practices for prevention and early detection of breast cancer was quite high: The overall rate was 79.9%, 100% of female workers did not smoke or drink alcohol, 53.3% of them consumed enough green vegetables according to the guidelines; and 40.9 of them had a low-fat diet. However, the rate of self -assessment as a good practice for early breast cancer detection methods was very low: breast self-examination (11.2%), breast examination at specialized health facilities (22.8%), and mammography (8.1%).

References

Abass BR, Salman AA. (2015). "Breast Cancer: Knowledge, Attitudes and Practices of Female Secondary Schoolteachers and Students in Samarra City". *Iraqi Journal of Cancer and Medical Genetics*, Vol 8 (1), pp.52-59.

Alkhabbaz A, Saadoun F, Almutawa HA, Ismaiel AE, Makboul G, El-Shazly MK. (2013). "Practicing breast self-examination among women attending primary health care in Kuwait". *Alexandria Journal of Medicine*, Vol 14, pp.281-286.

Alshraideh HA, Abu-Helalah MA, Ala-Aldeen Ahmad Al-Serhan AA, Kawaleet M, Nesheiwat AI. (2015). "Knowledge, Barriers and Attitudes Towards Breast Cancer Mammography Screening in Jordan". *Asian Pacifc Journal of Cancer Prevention*, Vol 16, pp.3982-3990.

Bùi Diệu, Trần Văn Thuấn, Nguyễn Bá Đức và cộng sự. (2012). "Gánh nặng bệnh ung thư và chiến lược phòng chống ung thư quốc gia đến năm 2020". *Tạp chí Ung thư học - Hội thảo quốc gia phòng chống ung thư lần thứ 16 tháng 10 năm 2012*, Số 1 (2012). [Bui Dieu, Tran Van Thuan, Nguyen Ba Duc and others (2012). "The burden of cancer and the national cancer prevention strategy to 2020". *Journal of Oncology - The 16th National Conference on Cancer Prevention, October 16, 2012*, No. 1 (2012)].

Bùi Thị Duyên. (2018). *Kiến thức, thái độ và thực hành phát hiện sớm ung thư vú và một số yếu tố liên quan của phụ nữ từ 20 - 49 tuổi tại xã Cẩm Giang, Huyện Cẩm Thủy, Thanh Hóa*, Luận văn thạc sỹ Y tế công cộng, Trường Đại học Y Hà Nội. [Bui Thi Duyen. (2018). *Knowledge, attitude, practice and factors related to early detection of breast cancer among women aged 20 - 49 years old in Cam*

Giang commune, Cam Thuy district, Thanh Hoa province, Hanoi Medical University].

Donnelly TT, Khater AH, Al-Bader SB, Al Kuwari MG, Malik M, Al-Meer N, Singh R, Fung T. (2014). "Factors that influence awareness of breast cancer screening among Arab women in Qatar: results from a cross sectional survey". *Asian Pac J Cancer Prev*, Vol 15 (23), pp.10157-10164.

Galukande M, Obaikol R, Fualal J. (2010). "Knowledge and Practice of Breast Self Examination among Female Students in a Sub Saharan African University". *East and Central African Journal of Surgery*, Vol 15 (1), pp.22-27.

Kurt B, Deniz S, Oğuzöncül AF, Nazlıcan E, Akbaba M, Nayir T. (2017). "Knowledge, attitudes and behaviours of women regarding breast and cervical cancer in Malatya, Turkey". *Plos One*, Vol 12 (11), pp.1-9.

Lê Thanh Tùng, Nguyễn Thị Hằng. (2017). "Thực trạng kiến thức về ung thư vú và tự khám vú của phụ nữ trong độ tuổi từ 20-59 tuổi tại xã Ngọc Liên - Cẩm Giàng - Hải Dương". *Tạp chí Y học Việt Nam*, Tập 454 (2), trang 11-15. [Le Thanh Tung, Nguyen Thi Hang. (2017). "Knowledge of breast cancer and breast self-examination of women aged 20-59 years old at Ngoc Lien commune - Cam Giang - Hai Duong". *Vietnam Medical Journal*, Vol. 454 (2), pp. 11-15].

Nguyễn Hữu Châu. (2015). "Nghiên cứu thực trạng kiến thức, thái độ, thực hành về bệnh ung thư vú ở phụ nữ 20 - 60 tuổi trên địa bàn tỉnh Khánh Hòa". *Tạp chí Ung thư học Việt Nam*, số 5/2015, trang 22-25. [Nguyen Huu Chau. (2015). "Study on the current status of knowledge, attitudes and practices about breast cancer in women aged 20-60 years in Khanh Hoa province". *Vietnam Journal of Oncology*, Vol. 5 (2015), pp. 22-25.

Nguyễn Thị Kim Ngân, Nguyễn Ngọc Bích, Trần Vũ. (2008). "Một số yếu tố liên quan đến hành vi tự khám vú tại nhà ở phụ nữ độ tuổi 15-49 tại Xã Hưng Đạo, Huyện Tứ Kỳ, tỉnh Hải Dương". *Tạp chí Y tế công cộng*, tập 11 (11), trang 38-43. [Nguyen Thi Kim Ngan, Nguyen Ngoc Bich, Tran Vu. (2009). "*Relative factors to the breast self-exam behavior of women aged 15 - 49 in Hung Dao commune, Tu Ky district, Hai Duong province*". *Journal of Public Health*, vol. 11 (11), pp. 38-43.]

Saib I, Aljohani S, Noorelahi M. (2016). "Women's Performance of Breast Cancer Screening (Breast Self-Examination, Clinical Breast Exam and Mammography)". *Advances in Breast Cancer Research*, Vol 6, pp.16-27.

Shuaibu K, Adamu H, Adamu AN. (2016). "Knowledge, Attitude and Practice of Breast Self Examination among Female Students of a Tertiary Institution in Sokoto, North-West Nigeria". *Annals of International Medical and Dental Research*, Vol 2 (4), pp. 74-79.

Trần Văn Thuấn. (2007). *Sàng lọc và phát hiện sớm bệnh ung thư vú*. Nxb. Y học Hà Nội. [Tran Van Thuan. (2007). "Screening and early detection of breast cancer", Hanoi Medical Publishing House].

WHO. (2018). New Global Cancer Data: GLOBOCAN 2018.

WHO. (2006). Breast self - examination: Guidelines for the early detection and screening of breast cancer, pp. 27-32.