KNOWLEDGE, ATTITUDE AND PRACTICE OF BREAST CANCER PREVENTION IN KHANH HOA PROVINCE, VIETNAM

Nguyen Tu Nam Khanh Hoa

Institute for Population and Social Research, Mahidol University,
Nakhon Pathom 73170, Thailand

Abstract

Objective: Previous research showed that early detection of breast cancer is very important for effective treatment and is the key determinant of breast cancer control. This study examined factors related to knowledge, attitude, and practice of breast cancer prevention among women aged 20-60 in KhanhHoa province, a South Central Coast province of Vietnam. Materials and methods: A cross-sectional survey of 1,200 women was conducted in September 2015 to examine the relationships between socio-demographic and socio-economic factors and knowledge, attitude and practice as well as the relationship among knowledge, attitude and practice of participants. Multivariate regression analysis then is used to examine the most significant factors affecting breast cancer prevention practices. Results: The major results of this study showed that there was a statistically significant association of attitude and knowledge, attitude and practice of prevention, knowledge and age, and occupation, and attitude and breast self-examination. Conclusion: Overall the results showed that there was no relationship between breast cancer knowledge and preventive practice for breast cancer. Surprisingly, although the older age group (40-60 years old) had a higher level of correct knowledge about breast cancer, they were less likely to have preventive practice for breast cancer. Similarly, while older women had more positive attitudes towards breast cancer preventive practice, they were less likely to actually practice breast cancer prevention. This may be due to their negative experiences of breast cancer screening. The findings should help to develop prevention messages and targeting for prevention of breast cancer in KhanhHoa Province.

Key words: Breast Cancer, KAP, Women aged 20-60 years, Prevention, Screening

1. INTRODUCTION

Breast cancer is the leading cause of death for women after cervical cancer globally [1-4]. According to GLOBOCAN (2012), the number of women suffering and dying from breast cancer continues to increase, in developed countries as well as in developing countries. In 2012, the world recorded nearly 1.67 million women diagnosed with breast cancer (25% of all cancers) and 6.23 million women were diagnosed with breast cancer in the past five years. It is the most common cancer in women both in more and less developed regions with around 788,000 cases in more developed regions and 883,000 cases in less developed regions. Since 2008 scientists have estimated that the numbers of breast cancer cases have increased by over 20% and the number of deaths related to breast cancer in women increased by 14%. It is also the second cause of cancer death in more developed regions with 198,000 deaths, 15.4% of total after lung cancer and it is the most common type of cancer in women

was recorded in 140 countries per 184 countries in globally [1]. The results of some research in many countries around the world have shown that in general knowledge and awareness of breast cancer in women are limited, especially concerning the risk factors for breast cancer[4-8]. The percentage of women practicing breast self-examination (BSE), periodic clinical breast examination (CBE), mammography and other types of screening for breast cancer is very low[7, 9-12].

In Vietnam, the reports of a survey that the National K Hospital (from October 2011 to April 2012) conducted on 400 patients shows that they often delay getting medical services. The reasons given for delaying include being too busy, financial problems, insufficient medical service information, traveling time and cost [13]. Many patients do not know that cancer can be cured if they have early detection.

The key fundamental challenge is not only focus to improve women's awareness of breast cancer but also that early examination when having abnormal

- Corresponding author: Nguyen Tu Nam Khanh Hoa, email: nguyentunamkhanhhoa@gmail.com
- Received: 10/11/2016 Revised: 22/12/2016 Accepted: 25/12/2016

symptoms in the breast is very important. Early diagnosis for cancer determines the treatment results and reduces the cost of treatment. Among cancers, breast cancer is one of the most important to prioritize screening and early detection. For women over 40 years old, clinical breast examination and mammography once a year is the simple but highly effective screening method [14].

2. OBJECTIVES

The research objective of this paper is to identify the interrelationship among knowledge of breast cancer symptoms and prevention, attitudes towards breast cancer treatment and preventive practice, and practice of breast cancer prevention among older women aged 40-60 in Khanh Hoa province.

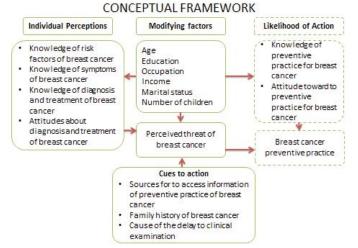
3. METHODS

This study used data from a cross-sectional survey on knowledge, attitude and practice of breast cancer prevention among women aged 20-60 in Khanh Hoa province, Vietnam. The survey was conducted by the Khanh Hoa Endocrine Center (Khanh Hoa Provincial Health Department) from September 2014 to September 2015. It conducted geographic and social mappings to create a list of women who lived in all districts and cities in Khanh Hoa province (except the Spratly Islands). The Probability Proportion

to Size method was employed to select a sample size of 1,200 women. The survey aimed to identify knowledge and attitudes about breast cancer related to screening practice on breast cancer and preventive practice of breast cancer among older women (40-60 years old).

There have been many previous theoretical models that have been developed, with a view to explaining that a person's health-related behavior depends on the person's perception. In this study the Health Belief Model developed in 1950s by a group of US Public Health Services social psychologist was applied. This model is a good model for addressing problem behaviors that evoke health concerns.

This study used the conceptual framework based on the theory and literature review. For the women in the age group 20-39 years old, the conceptual framework does not have the part with the dashed line (the likelihood of action part) and for the women in the age group 40-60 years old, the conceptual framework including all part like the conceptual framework below. The factors of demographic socioeconomic characteristics affect to knowledge and attitude of risk factors, symptoms, diagnosis and treatment of breast cancer and knowledge and attitude of preventive practice for breast cancer, it also affects to perceived threat of breast cancer and finally it affects to breast cancer preventive practice.



The dependent variable of this study was breast cancer preventive practice. In this study just focused in the women in older group (40-60 years old), the preventive practice in this group combined 3 variables: ever going to examine breast, ever ultrasound scan breast and ever do mammography screening. If the women ever practice at least 1 among 3 variables, they were in the group

preventive practice. The independent variables were knowledge of breast cancer and attitude toward to breast cancer.

The data was analyzed employing Statistical Package for Social Sciences (SPSS version 21). Bivariate analysis using the Pearson's Chi Square test (χ 2) tests the relationship between independent variables (knowledge and attitude) and the dependent variable (preventive practice).

4. RESULTS

Table 1. Characteristics of the sample

Characteristic (n=1200)	Younger women (20-39 years old) (n=557)	Older women (40-60 years old) (n=643)	
Educational attainment (%)			
Illiteracy	3.8	3.9	
Primary school	17.1	33.7	
Secondary school	40.4	37.2	
High school	23.8	21.5	
College, university, postgraduate	14.9	3.7	
Total (%)	100.0	100.0	
Occupation (%)			
Farmer	16.7	25.2	
Employee	6.6	2.5	
Own business	18.3	25.5	
Government official	11.7	6.8	
House-work	32.0	31.9	
Daily laborers	14.7	8.1	
Total (%)	100.0	100.0	
Income per month (thousand VND) (%)			
Under 1 million	10.4	13.2	
1 to under 3 million	44.5	48.2	
3 to under 5 million	33.8	29.2	
5 million and over	11.3	9.3	
Total (%)	100.0	100.0	
Marital status (%)			
Single	11.8	2.2	
Married	88.2	97.8	
Total	100.0	100.0	
The number of children (%)			
No children	15.1	3.4	
1 to 2 children	71.1	49.3	
3 to 4 children	13.1	36.2	
5 and over	0.7	11.1	
Total (%)	100.0	100.0	

Characteristic (n=1200)		Younger women (20-39 years old) (n=557)	Older women (40-60 years old) (n=643)
Any members in the family have ever had breast	t cancer	(%)	
,	Yes	3.1	2.8
	No	96.9	97.2
Total(%)		100.0	100.0
Source for access information of preventive practice	tice of b	reast cancer (%)	
Television (%)			
• •	Yes	85.6	86.0
	No	14.4	14.0
Total (%)		100.0	100.0
Radio (%)			
	Yes	58.9	61.6
	No	41.1	38.4
Total (%)		100.0	100.0
Newspaper (%)			
	Yes	39.9	30.5
	No	60.1	69.5
Total (%)		100.0	100.0
Leaflets, posters (%)			
	Yes	24.9	20.0
	No	75.1	80
Total (%)		100.0	100.0
Medical doctors (%)			
	Yes	50.4	52.9
	No	49.6	47.1
Total (%)		100.0	100.0
Friends, relatives (%)			
	Yes	44.3	44.0
	No	55.7	56.0
Total (%)		100.0	100.0
Internet (%)			
	Yes	21.3	8.4
	No	78.7	91.6
Total (%)		100.0	100.0
Other (%)			
	Yes	0.6	1.5
	No	99.4	98.5
Total (%)		100.0	100.0

As can be seen in Table 1, most women in this study had education from secondary school, 40.4% in the younger group and 37.2% in the older group, most reported that their occupation is house-work and the salary of them is from 1 to under 3 million VND per month. In the older group just only 2.2% of them still single compare to the younger group

the number is 11.8%. Women in younger group had 1-2 children with 71.1% but in the older group this number is 49.3% and in they also have 3-4 children with 36.2%. Television and radio were the main source for them to access information of preventive practice of breast cancer.

Table 2. Distribution of whether older women were screened for breast cancer by their response to knowledge questions (correct answer in parentheses)

	Older women (n=643) (40-60 years old)			
Knowledge	No preventive practice	Preventive practice	Chi-Square	p-value
Perceived threat (%)				
Breast cancer is one of the most common cancers in women. (True)				
Incorrect (False/No) Correct(True/Yes)	77.4 56.8	22.6 43.2	8.482	0.004**
In general, breast cancer is the leading cause of death for women among other cancer diseases. (True)				
Incorrect (False/No)	62.6	37.4		
Correct (True/Yes) Knowledge of risk factors (%)	57.5	42.5	1.066	0.302
Only women get breast cancer. (False)				
Incorrect (True/Yes) Correct (False/No)	55.1	44.9	0 = 10	0.465
Correct (raise/No)	59.1	40.9	0.542	0.462
Breast cancer can be transmitted from people to people. (False)				
Incorrect (True/Yes)	58.7	41.3		
Correct (False/No)	55.3	44.7	0.172	0.679
Breast cancer is mostly due to gene? (Having grandmother, mother or older, younger sisters get breast cancer). (True)				
Incorrect (False/No)	58.7	41.3		
Correct (True/Yes)	58.4	41.6	0.006	0.939
Women under 30 years old are easy to get breast cancer? (False)				
Incorrect (True/Yes)	57.3	42.7		
Correct (False/No)	60.9	39.1	0.720	0.396
Smoking. (True)				
Incorrect (False/No)	57.6	42.4		
Correct (True/Yes)	59.4	40.6	0.215	0.643
Drinking alcohol may cause breast cancer. (True)				
Incorrect (False/No)	58.2	41.8		
Correct (True/Yes)	58.8	41.2	0.021	0.884
Having the first child after 35 years old. (True)				
Incorrect (False/No)	62.8	37.2		
Correct (True/Yes)	54.8	45.2	4.182	0.041*
Precocious puberty (under 12 years old). (True)				
Incorrect (False/No)	61.9	38.1		
Correct (True/Yes)	49.4	50.6	8.280	0.004**

		Older women (n=643) (40-60 years old)		
Knowledge	No preventive practice	Preventive practice	Chi-Square	p-value
Late menopause (>55 years old). (True)				
Incorrect (False/No		38.2		
Correct (True/Ye	54.2	45.8	3.785	0.052
Not having a child. (True)				
Incorrect (False/No	·	39.3	4 222	0.000
Correct (True/Ye	56.4	43.6	1.220	0.269
Women with small breasts are at lower risk				
of developing breast cancer than women				
with big ones. (False)				
Incorrect (True/Yes	·	41.2	0.056	0.044
Correct (False/No	57.8	42.2	0.056	0.814
Overweight/obesity. (True)				
Incorrect (False/No		37.4		
Correct (True/Ye	54.3	45.7	4.580	0.032*
Breast feeding. (True)				
Incorrect (False/No		42.6		
Correct (True/Ye	65.2	34.8	2.009	0.156
Knowledge of symptoms.(%)				
You may get breast cancer without symptoms. (True)				
Incorrect (False/No) 61.4	38.6		
Correct (True/Yes	56.5	43.5	1.517	0.218
Leaking fluid from the nipple (pink or bloody). (True)				
Incorrect (False/No) 65.5	34.5		
Correct (True/Yes		43.0	2.662	0.103
Breast cancer patients always have tumors in breast. (True)				
Incorrect (False/No		26.5		
Correct (True/Yes	57.2	42.8	4.911	0.027*
Tumors become thicker in the breast. (True)				
Incorrect (False/No	١	20 =		
Correct (True/Yes	61.3	38.7 41.0	0.200	0 500
la flammation at the same to t	58.1	41.9	0.290	0.590
Inflammation at your breast. (True)	\	42.0		
Incorrect (False/No Correct (True/Yes		43.8 40.6	0.534	0.465
Nipples are deep set in the breast or shrink.		70.0		0.403
(True)	۲٥ ٦	40 F		
Incorrect (False/No Correct (True/Yes		40.5 42.2	0.178	0.673
Correct (True/Tes		42.2	0.176	0.073

Knowledge	Older women (n=643) (40-60 years old)			
	No preventive practice	Preventive practice	Chi-Square	p-value
Pain in the breast area? (True)				
Incorrect (False/No)	60.2	39.8		
Correct (True/Yes)	57.9	42.1	0.287	0.592
Skin on the breast change color. (True)				
Incorrect (False/No)	62.9	37.1		
Correct (True/Yes)	56.5	43.5	2.335	0.126
Knowledge of screening methods. (%)				
Checking your breast by yourself.				
No	68.0	32.0		
Yes	57.2	42.8	3.172	0.075
Going to medical services to check your breast.				
No	81.8	18.2		
Yes	58.1	41.9	2.511	0.113
Mammography screening.				
No	61.5	38.5		
Yes	58.0	42.0	0.409	0.522
Ultrasound scans on your breast.				
No	76.3	23.7		
Yes	57.4	42.6	5.294	0.021*
Knowledge of preventive practice. (%)				
Breast examination is not necessary because there are no symptoms. (False)				
Incorrect (True/Yes)	56.5	43.5		
Correct (False/No)	66.2	33.8	3.956	0.047*
Breast cancer screening is necessary. (True)				
Incorrect (False/No)	75.0	25.0		
Correct (True/Yes)	57.5	42.5	4.288	0.038*
If we diagnose breast cancer soon and have good treatment, it can be cured up to 90%. (True)				
Incorrect (False/No)	58.3	41.7		
Correct (True/Yes)	58.5	41.5	0.001	0.977

Table 2 shows that those who knowed breast cancer was one of the most common cancers in women were more likely to be screened for breast cancer (43.2% vs 22.6%, p-value<0.05). However, many of those who knowed that breast cancer was common they did not practice to prevent breast cancer (56.8%). Besides that, those who knowed that having the first child after 35 years old and overweight or obesity were the risk factors

of breast cancer were more likely to practice to prevent breast cancer (over 45% vs over 37%). However many of those who knowed that having the first child after 35 years old, overweight or obesity were the risk factors of breast cancer, they did not practice to prevent breast cancer (over 54%). In addition, half of them knowed that precocious puberty (under 12 years old) was one of many risk factors of breast cancer were more likely

to be screened for breast cancer. Furthermore, those who knowed that getting breast cancer always had tumors in breast were more likely to be screened for breast cancer (42.8 vs 26.5) but over half of those who knowed it they did not practice to prevent breast cancer (57.2%). Following that those who knowed that ultrasound scan was one of the most useful methods for early detection for breast cancer were more likely to be screened for breast cancer (42.6 vs 23.7). In contrast to those who knowed ultrasound scan was the useful screening method, they did not practice to prevent

breast cancer (57.4%). At the end of process, those who knowed that although without symptoms breast examination was necessary for early detection were less likely to be screened for breast cancer (33.8% vs 43.5%) different from those who know ed this knowledge they did not practice to prevent breast cancer. Finally, those who knowed that breast cancer screening was necessary were more likely to be screened for breast cancer (42.5% vs 25.0%) while many of those who knowed this knowledge they did not practice to prevent breast cancer (57.5).

Table 3. Distribution of whether older women were screened for breast cancer by their responses to attitude question (positive attitude response in parentheses)

		Older wome (40 -60 ye					
Attitude	No preventive practice	Preventive practice	Chi-Square	p-value			
Attitude towards examination, screening, d	iagnosis, treatm	nent for breast ca	ancer (%)				
If breast cancer can be discovered and diagnosed early, it can be treated more effectively. (True)							
Negative/fatalistic attitude (False/No)	78.6	21.4	2 200	0.433			
Positive attitude (True/Yes)	58.0	42.0	2.380	0.123			
Breast cancer is incurable no matter how soon we discover it. (False)							
Negative/fatalistic attitude (True/Yes)	55.2	44.8					
Positive attitude (False/No)	67.9	32.1	8.082	0.004**			
Chest radiography for health check is cause of breast cancer. (False)							
Negative/fatalistic attitude (True/Yes)	57.7	42.3					
Positive attitude (False/No)	62.8	37.2	0.834	0.361			
Breast cancer means going to die. (False)							
Negative/fatalistic attitude (True/Yes)	54.9	45.1					
Positive attitude (False/No)	62.2	37.8	3.569	0.059			
Breast cancer means the end, being cured or not is the same. (False)							
Negative/fatalistic attitude (True/Yes)	57.6	42.4					
Positive attitude (False/No)	63.4	36.6	1.104	0.293			
If we give a surgery on breast cancer, it will cause metastasis soon. (False)							
Negative/fatalistic attitude (True/Yes)	56.1	43.9					
Positive attitude (False/No)	61.0	39.0	1.599	0.206			
Breast cancer is the destiny, cannot avoid it. (False)							
Negative/fatalistic attitude (True/Yes)	53.9	46.1					
Positive attitude (False/No)	62.3	37.7	4.591	0.032*			

Based on the results in the table 3, those older women with positive attitudes towards breast cancer screening and treatment were less likely to be screened for breast cancer. Those who thought that breast cancer incurable had 44.8% going for screening whereas those who did not think it was incurable only have 32.1% going for screening (statistically significant with p-value <0.05). In addition, those with positive attitudes towards that breast cancer was not the destiny, they can avoid it were less likely to practice to prevent for breast cancer (37.7%% vs 46.1%). However those with positive attitudes towards that breast cancer was not the destiny, can avoid it they did not practice to prevent breast cancer (62.3%).

5. DISCUSSION

According to WHO breast cancer is the main cause of death for women after cervical cancer in globally; in Vietnam breast cancer was the leading cancer among women in 2012 [15]. Early detection in order to improve breast cancer outcomes and survival remains the cornerstone of breast cancer control. Preventive practice is the basic method; while, these practices are simple and low cost, it is very useful for women to detect abnormalities in their breasts at an early stage. Early detection makes breast cancer easier to treat and it may help extend life for women for many years. This study found that older women (40-60 years old) in Khanh Hoa province had higher levels of correct knowledge and positive attitudes towards breast cancer prevention, yet they did not have the habit to practice breast cancer prevention.

Based on the results of this study, 56.8% of older women had correct knowledge but they did not practice prevention (p-value = 0.004). Half of older women had correct knowledge of risk factors but they also did not practice breast cancer prevention (p-value <0.005). This finding is similar to previous studies in Uganda (2010)[16] and in Nigeria (2009) [5] where over 50% of respondents did not know the risk factors of breast cancer. Our study also found that 66.2% of older women knowed that they should be screened for breast cancer even if they did not have symptoms, yet they do not practice breast cancer screening (p-value <0.005). While 57.4% of them knowed that ultrasound scanning was one of the methods for diagnosing breast cancer but they do not practice it (p-value = 0.021). This finding is similar to the study in the United Arab Emirates (2001) [9] where just only 13.8% of respondents practice clinical breast examination. Two-thirds (67.9%) of older women felt that breast cancer can be treated if it is diagnosed early yet did not practice to prevent it (p-value <0.01). Though the majority (62.3%) had positive attitudes toward prevention in knowing that breast cancer was not an unpreventable destiny, they also did not have prevention practices (p-value <0.01).

In conclusion, women 40 years old and over in Khanh Hoa province had correct knowledge and positive attitude for breast cancer prevention but they did not have habit to practice prevention. Explanation for these problems, the barriers for screening breast cancer are lack of doctors' advice, felling shy, expenditure and the infrastructures of health sector in Khanh Hoa province is still poor and outdated. The quality of population's life is still low, as can be seen in the results of this study a monthly income of almost women is still low just only from 1 to less than 3 million VND. For changing the habit of women to practice for early detection breast cancer need the effort of the health sector to improve the medical services, implement programs for breast cancer screening around the province to early detection, diagnosis and timely treatment. In this study also found that the older women with positive attitude towards examination, screening, diagnosis, treatment for breast cancer are less likely to practice to prevent breast cancer. Because of the experience of them when they have practice to prevent breast cancer such as ultrasound scan or mammography at medical services they did not get the benefits from the service like doctors' advice, counseling from medical staff or guiding for them what they should do if they did not get breast cancer in the next time. After that they think it was not useful for them.

6. RECOMMENDATIONS

Findings of the study revealed older women are less likely to have preventive practice although they have correct knowledge and positive attitudes towards breast cancer preventive practice. This finding suggests the recommendation that medical staff should be trained in counseling women about breast cancer so that the breast cancer screening experience is positive. This will give more benefits for the women who access the services and increase the likelihood that they will practice screening regularly.

Perhaps due to the small sample size of this study, the analysis cannot find a relationship with

preventive practice for breast cancer for some factors, therefore a larger sample size is needed for future studies. Moreover, future studies need to examine the status of women get breast cancer and distribution of them in Khanh Hoa province.

Qualitative research is necessary in the future in order to know the deep reasons that women do not practice to prevent breast cancer.

7. ACKNOWLEDGEMENTS

Special thanks to Institute for Population and Social Research, Mahidol University, Dr. Kerry Richter my major advisor, Dr. Amara Soonthorndhada my co-advisor and my family for supporting me and giving such a wonderful opportunity to me to conduct this study. I hope that my research will dedicate benefits to the breast cancer field and the women aged 20-60 in Khanh Hoa province Vietnam. Furthermore, this

study finding may contribute the literature review for the intensive research in the future.

REFERENCES

- 1. Chong PN, Krishnan M, Hong CY, Swah TS. Knowledge and practice of breast cancer screening amongst public health nurses in Singapore. Singapore medical journal. 2002;43(10):509-16.
- 2. **Harris DM, Miller JE, Davis DM**. Racial differences in breast cancer screening, knowledge and compliance. Journal of the National Medical Association. 2003;95(8):693-701.
- 3. **Taleghani F, Yekta ZP, Nasrabadi AN**. Coping with breast cancer in newly diagnosed Iranian women. Journal of advanced nursing. 2006;54(3):265-72; discussion 72-3.
- 4. **Nafissi N, Saghafinia M, Motamedi MH, Akbari ME**. A survey of breast cancer knowledge and attitude in Iranian women. Journal of cancer research and therapeutics. 2012;8(1):46-9.
- 5. **Akhigbe AO, Omuemu VO.** Knowledge, attitudes and practice of breast cancer screening among female health workers in a Nigerian urban city. BMC Cancer. 2009;9:203.
- 6. Hadi MA, Hassali MA, Shafie AA, Awaisu A. Evaluation of breast cancer awareness among female university students in Malaysia. Pharmacy practice. 2010;8(1):29-34.
- 7. **Heidari Z, Mahmoudzadeh-Sagheb HR, Sakhavar N**. Breast Cancer Screening Knowledge And Practice Among Women In Southeast Of Iran. Acta Medica Iranica. 2008:8.
- 8. **Pham CT, McPhee SJ**. Knowledge, attitudes, and practices of breast and cervical cancer screening among Vietnamese women. Journal of cancer education: the official journal of the American Association for Cancer Education. 1992;7(4):305-10.
 - 9. Bener A, Alwash R, Miller CJ, Denic S, Dunn

- **EV**. Knowledge, attitudes, and practices related to breast cancer screening: a survey of Arabic women. Journal of cancer education: the official journal of the American Association for Cancer Education. 2001;16(4):215-20.
- 10. **Kwok C, Tranberg R, Lee FC**. Breast cancer knowledge, attitudes and screening behaviors among Indian-Australian women. European journal of oncology nursing: the official journal of European Oncology Nursing Society. 2015;19(6):701-6.
- 11. **Mah Z, Bryant H**. Age as a factor in breast cancer knowledge, attitudes and screening behaviour. CMAJ: Canadian Medical Association journal = journal de l'Association medicale canadienne. 1992;146(12):2167-74.
- 12. **Okobia MN, Bunker CH, Okonofua FE, Osime U**. Knowledge, attitude and practice of Nigerian women towards breast cancer: A cross-sectional study. World Journal of Surgical Oncology. 2006;4:11.
- 13. **Central Government K Hospital**. Current sittuation of early diagnosis and some factors related to go to clinical breast examination lately of patients get some types of cancer in the K general government hospital (from October, 2011 to April, 2012). Vietnam: 2012.
- 14. **Central Government K Hospital**. The status of cancer among women in Hanoi in 1988-2007 (from April, 2011 to April, 2012). . Vietnam: 2010.
- 15. IARC. Globocan 2012: Estimated Cancer Incidence, Mortality and Prevalence Worldwide in 2012. 2012 [cited 2016 April 20th]. Available from: http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx.
- 16. Elsie KM, Gonzaga MA, Francis B, Michael KG, Rebecca N, Rosemary BK, et al. Current knowledge, attitudes and practices of women on breast cancer and mammography at Mulago Hospital. The Pan African