ECRONICON OPEN ACCESS

EC GYNAECOLOGY
Research Article

Breast Cancer Health Beliefs and the Use of Mammography Among Women Randomly Selected in Vlora, Albania

Fatjona Kamberi[1]*, Rezarta Lalo[1] and Enkeleda Sinaj[2]

[1]Faculty of Public Health, University of Vlore "Ismail Qemali", Vlore, Albania

[2]Faculty of Technical Medical Sciences, University of Medicine, Tirana, Albania

***Corresponding Author:** Fatjona Kamberi, Faculty of Public Health, University of Vlore "Ismail Qemali", Vlore, Albania.

Received: June 05, 2017; **Published:** June 28, 2017

Abstract

Objective: To determine the women`s health beliefs about breast cancer and its association with the use of screening mammography.

Methodology: A cross-sectional study was conducted from April to June 2016 in Vlora, Albania. 220 women were assessed by completing a standard questionnaire based on health beliefs of women about breast cancer and the use of mammography. Descriptive statistics and confidence interval were used to calculate the data. P values of less than 0.05 were accepted as statistically significant.

Results: The greatest percentage of women belonging to the age of > 50 years. 43.54% of women have had a mammography, without a physician's recommendation. Strong statistical correlation was observed between the use of mammography and education, p = 0.0022. The association between perceived efficacy and perceived susceptibility of women and mammography use, appears statistically significant p < 0.05. The majority of women felt annoyed/ashamed of mammography examination. Although, almost all women refer that breast cancer is very dangerous, 43.33% of them report that have never had breast self-examination, or do not know to do it.

Conclusions: Women's health beliefs related to breast cancer affect their participation in screening. The study outlines the importance of reducing the real and perceived barriers of women in relation to breast cancer, in order to have increased participation of women in mammography screening. Addressing the right preventive programs based on the health belief model are very important to detect breast cancer early and reduce women`s mortality from this type of cancer.

Keywords: *Breast Cancer; Women; Mammogram; Health Beliefs; Prevention*

Introduction

Breast cancer is the most common cancer in women worldwide, with increasing incidence especially in developing countries, where most of the cases are diagnosed in the advanced stage [1]. In Albania, breast cancer is one of the most frequent diagnosed cancers, also the most common cause of death among women aged 45 - 55 years old [2]. Low survival in developing countries is explained by the lack of early screening programs, diagnosis and lack of facilities for treatment, resulting in large numbers of women with breast cancer at an advanced stage [3].

Screening with mammography and breast self-examination are the best ways to detect breast cancer early. Mammography is a type of X-ray of the breast, which is recommended in women age range 40 - 70 years. It detects breast cancer very early, when the changes are not seen or touched. Breast self-examination makes possible to familiarize the women, how that looks and feels hear breast, and to be referring in time to doctor, if she see changes [4,5].

Numerous studies have pointed out that an important role in the prevention of breast cancer play the womens health beliefs about breast cancer [6,7].

In addition, women's beliefs of breast cancer and breast screening are key indicators of women`s readiness to first screening mammography uptake [8].

Despite, the10-year action plan in place (2011 - 2020) based on national priorities in prevention and screening of cancer in Albania [2], a study suggests that screening recommendations may be motivated by other factors such that the harms of screening in younger women outweighed the benefit [9]. It is found that women's health beliefs and breast cancer fear levels impacted their participation in mammography [10].

In addition, a quasi-experimental study evidenced that interventions based on health behavior models positively affected breast cancer screening behaviors of women [11].

For establishing effective strategies for increasing utilization of breast screening, there is need to explore the extent to which women are aware about the problem. Therefore, this study aimed to determine the women`s beliefs related to breast cancer, the rate of breast self-examination and uptake of mammography among women up 40 years old in Vlore, Albania.

Methodology

Study design, setting and sampling technique: A cross-sectional study was carried out from April to June 2016 in the city of Vlora, Albania. 200 women, 40 years and above randomly selected in community and health care facilities, mainly in hospital, where women were visitors or family members of patients. Inclusion criteria: women aged > 40 years, eligible to take part in the study.

Data Collection Tool

The questionnaire was developed according to objective of the study based on Health Belief Model. The anonymous questionnaire comprises three sections, first was based on socio-demographic characteristics i.e. age, civil status, occupation, educational status, knowledge and awareness when first mammogram should be done and mammography uptake. Second section was having questions regarding the perceived efficacy and third section was having questions about perceived susceptibility and use of self- breast examination.

Data Analysis

All the data were entered and processed using Epi Info™. Descriptive statistics, 95% Confidence Intervals (CI) and Chi-square test were used to analyze the data. P values of less than 0.05 were accepted as statistically significant.

Ethical Considerations

Confidentiality was guaranteed at each stage of the study. An oral informed consent was taken from all participants after explaining the study. In addition, authorization for the research was obtained from the relevant authorities, for the selected participants in the hospital premises.

Results

Questionnaire was completed by 210 women. 50.59% of women belonged to the age group >50 years. 51.9% of women were unemployed. 92.38% women were married. 40.95 % of women had secondary level of education, while 14.76% of women had higher education. Health insurance had 68.10% of women, while the public health insurance was predominant. 56.46% of participants report they had not had a mammogram. 54.35% of women who had mammograms had paid themselves for performing this service. 85.65% of women

suggest that mammography examination should begin after the age of 40. About 70% of women reported that they did not have a physician 's recommendation to perform a mammogram (Table 1).

Variables	n	%	95% CI [lower–upper]	P values
Age categories				
40 - 49	103	49.5	[42.10 - 56.02]	0.026
> 50	107	50.95	[43.98 - 57.90]	
Marital status of the participants				
Married	194	92.38	[87.92 - 95.58]	
Unmarried	16	7.62	[4.42 - 12.08]	
Employment status				
Employed	70	33.33	[27.00 - 40.15]	0.048
Unemployed	109	51.90	[44.92 - 58.83]	
Retired	31	14.76	[10.26 - 20.29]	
Educational status				
Elementary education	86	40.95	[34.23 - 47.93]	0.0022
Secondary education	93	44.29	[37.45 - 51.28]	
Higher education	31	14.76	[10.26 - 20.29]	
Health insurance				
Po	143	68.10	[61.33 - 74.34]	0.0003
No	67	31.90	[25.66 - 38.67]	
Type of health insurance				
Public	129	86.00	[79.40 - 91.12]	
Private	21	14.00	[8.88 - 20.60]	
Have you ever done mammograph				
Yes	91	43.54	[36.71 - 50.55]	
No	118	56.46	[49.45 - 63.29]	
If Yes who paid for the last mammogram you made				
Myself	50	54.35	[43.63 - 64.78]	
Others/Free	42	45.65	[35.22 - 56.37]	
Recommendation by the physician for mammography				
Yes	49	31.01	[23.90 - 38.85]	0.00003
No	109	68.99	[61.15 - 76.10]	
What age should start the screening				
40 - 49	179	14.35	[9.90 - 19.85]	
> 50	30	85.65	[80.15 - 90.10]	

Table 1: *Sociodemographic variables (n = 210).*

The association between perceived efficacy of women and mammography use appears statistically significant for the cost of mammography, p = 0.001 and that the majority of women felt annoyed and were ashamed of mammography examination, p = 0.001 (Table 2).

Variables	How possible is the detection of breast cancer by mammography		
	Not possible	**Somewhat possible**	**Very likely**
Yes (n %) No (n %)	0 (0.0) 6 (5.08)	26 (28.57) 41 (34.75)	65 (71.43) 71 (60.17)
	Chi –square 6.2390	df 2	P values 0.044
Variables	How accurate is mammography for the detection of breast cancer		
	Not accurate	Somewhat accurate	Very accurate
Yes (n %) No (n %)	2 (2.20) 2 (1.69)	16 (17.58) 28 (23.73)	73 (80.22) 88 (74.58)
	Chi –square 1.2023	df 2	P values 0.5482
	Does a mammography cost be a problem		
	Not a problem	A little problem	Not a problem
Yes (n %) No (n %)	42 (46.15) 27 (22.88)	33 (36.26) 38 (32.20)	16 (17.58) 53 (44.92)
	Chi –square 20.3044	df 2	P values 0.001
Variables	Anxiety about perceiving whether you have cancer or not		
	Not worried	A little worried	Very worried
Yes (n %) No (n %)	26 (28.57) 44 (37.29)	18 (19.78) 18 (15.25)	47 (51.65) 56 (47.46)
	Chi –square 1.9596	df 2	P values 0.3754
Variables	The feeling of shame/annoyance by mammography		
	Not ashamed/annoyed	Somewhat ashamed/ annoyance	A lot of shame/annoyance
Yes (n %) No (n %)	33 (36.26) 40 (33.90)	42 (46.15) 28 (23.73)	16 (17.58) 50 (42.37)
	Chi –square 20.3044	df 2	P values 0.001

Table 2: *The association between perceived efficacy of women and mammography.*

The association between perceived susceptibility of women and mammography use almost for all of the variables taken in the study in relation to this component of Health Belief Model is statistically significant (Table 3).

Variables	Number of mammograms made			
	0 time	1 time	2 times	3 times
Yes (n %) No (n %)	0 (1.10) 112 (94.92)	57(62.64) 5(4.24)	17(18.68) 1(0.85)	16(17.58) 0(0.00)
	Chi –square 182.4270	df 3		P values 0.001
Variables	It is difficult to get a mammogram			
	Not difficult	somewhat difficult	very difficult	
Yes (n %) No (n %)	46(50.55) 50(42.37)	36(39.56) 32(27.12)	9(9.89) 36(30.51)	
	Chi –square 13.3365	df 2	P values 0.0013	
	How worried you are about the pain during the examination			
	Not worried	A little worried	Very worried	
Yes (n %) No (n %)	20(21.98) 28(23.73)	23(25.27) 30(25.42)	48(52.75) 60(50.85)	
	Chi –square 0.1049	df 2	P values 0.9489	
Variables	How concerned are you about exposure to radiation during the examination			
	Not worried	A little worried	Very worried	
Yes (n %) No (n %)	19(20.88) 21(17.80)	30(32.97) 23(19.49)	42(46.15) 74(62.71)	
	Chi –square 6.4721	df 2	P values 0.0393	
Variables	How life-threatening is breast cancer			
	Not dangerous	Somewhat dangerous	Very dangerous	
Yes (n %) No (n %)	1(1.10) 1(0.85)	4 (4.40) 4(3.39)	86(94.51) 113(95.76)	
	Chi –square 0.1783	df 2	P values 0.9147	

Table 3: *The association between perceived susceptibility of women and mammography.*

The frequency of breast self-examination is very low, while 43.33% of women report they do not know how to do it. 67.14% of participants reported they have never performed clinical breast examination (Table 4). The relationship between the educational and employment status and breast self-examination was statistically significant, $p < 0.05$.

Variables	n	%	Cum. Percent	95% CI
How often do you perform breast self - examination?				
1 time per month	72	34.29	34.29	[27.89 - 41.13]
2 - 3 times a year	47	22.38	56.67	[16.93 - 28.63]
Never / I do not know how to do it	91	43.33	100.0	[36.53 - 50.33]
How often do you perform a breast clinical examination?				
Every year	29	13.81	32.86	[9.45 - 19.23]
2 - 3 times a year	40	19.05	19.05	[13.97 - 25.02]
Never	141	67.14	100.0	[60.34 - 73.45]

Table 4: *Self - examination of the breast and frequency of clinical examination.*

Discussion

The study showed the beliefs and attitudes of 210 women randomly selected about breast cancer and the use of mammograms. Predominant age group > 50 with 50.95% (n = 107). There have never been any mammograms 56.46% (n = 118) of women in the study, Table 1, while the guidelines recommend that women with average risk of age group 50 - 74 years old should perform mammography at least twice a year [12].

Table 1 shows a statistically significant correlation between age and use of mammography, women of age > 50 years of age were less examined, $p = 0.026$. Literature review study reported that extending mammography screening to younger age groups cannot be recommended [13]. But another study conducted in two cohorts (40 - 44 and 45 - 49 years old) found a similar incidences of screen-detected breast cancer (8.9%, 9.8%) by mammography, supporting a recommendation of annual screening mammography starting at age 40 [14].

The low level of education and the unemployment status of the women in the study represent a screening barrier for breast cancer, Table 1. Demographic factors as well as factors such as educational status, with impact in women knowledge on early diagnosis of breast cancer could affect the barrier perception [15]. Inequalities in the performance of mammograms and low reporting of this examination in women with low educational level are evidenced in other studies [16-18].

It is found a strong statistical link, p = 0.0003 between health insurance and mammography, as women with health insurance were those who had been examined, Table 1.

The lack of organized programs screening serves as a barrier to the participation of women in the examination, as most of these programs offer coverage for mammography and health education related to breast cancer [9].

Referring to Table 1, about 70% of women, p= 0.00003 report that they did not have a physician 's recommendation for performing a mammogram. This is explained by the fact that some of the women who had mammograms had benefited from the "Check-up" program for early screening of breast cancer [19]. In addition, the recommendation by the physician has a direct impact on the performance of mammography by women [20].

Table 2 shows the association between perceived efficacy of women and mammography use. The perceived efficacy of women appears lower, as 34.75% of women who did not perform mammography have indicated that breast cancer diagnosis with mammograms is somewhat possible.

The cost of mammography p = 0.001, anxiety about perceiving whether have cancer or not, the feeling of shame/annoyance by mammography, p = 0.001 are the main barriers of women's participation in screening. Studies have shown that women with family history of cancer and those classified with high risk are more available for performing mammography. The fewer the perceived barriers to mammography, the higher the frequency of participation by women [21].

Even in, studies involving women who with no personal history of breast cancer highlighted that in particular perceived barriers, were the strongest predictors of non-attendance to first invitation for participation in breast cancer screening [8].

Table 3 shows the association between perceived susceptibility of women and mammography use. The perceived susceptibility of women to breast cancer screening for most of the variables appears statistically significant. Even though 94.51% of women consider breast cancer very dangerous/ life-threatening, this is not reflected in the number of mammograms performed, p = 0.001.

The difficulty in access to get a mammography, p = 0.0013 the perception of the examination as painful, as 50.85 % of women who have never had a mammogram perceive it as painful and the concerned of women in the study about the exposure to radiation during the examination were barriers that influenced the participation of women in screening. A study based on health beliefs of women highlighted that the susceptibility factor was significant in influencing women's behavior to breast cancer screening [22].

Also, in other studies it has been noted that women who never having had a mammogram were those who perceived fewer benefits and more barriers to mammography screening, had more negative emotional representations of breast cancer, and had no health insurance coverage [23].

Table 4 presents the frequency of breast self-examination and the frequency of clinical examination of the women in the study. Only 34.29% of women report to perform breast self-examination 1 time per month, while 43.33% of them report that never have made a breast self-examination and that they do not know how to do it. According to international recommendations on breast cancer prevention, breast self-examination should be done at least once a month [5].

In addition to the health belief model scales, women performing self-breast examination were determined to have higher susceptibility [24].

Also, a study found that the perceived barriers were lower among women who had performed breast self-examination [25].

Studies have shown that the status of performing regular breast self-examination was significantly higher in women who had knowledge about this practice and the level of education and lack of adequate information about breast cancer screening are barriers against implementation of breast cancer screening methods [26].

67.14% of women reported that never had a breast clinical examination. Clinical breast examination helps in early detection of changes in breast, to refer in time for further testing [27].

Conclusion and Recommendations

Women's health beliefs related to breast cancer affect their participation in screening.

It is noticed that the perceived efficacy is very low, which is reflected in the low prevalence of breast self-examination and mammography, especially in women with low education status and unemployed.

The results of the study emphasize the importance for future research of conducting a population-based studies in this population groupto reinforce results. The study outlines the importance of reducing the real and perceived barriers of women in relation to breast cancer, in order to have increased participation of women in mammography screening.

Addressing the right preventive programs based on the health belief model are very important to detect breast cancer early and reduce women`s mortality from this type of cancer.

Bibliography

1. World Health Organization. "Breast cancer: prevention and control" (2013).
2. "Cancer on the Global Stage: Incidence and Cancer-Related Mortality in Albania". Global Cancer care. Amanda McIntyre, BS, and Chandrakanth (2016).
3. Sullivan T., *et al*. «Screening for Cancer: Considerations for Low- and Middle-Income Countries". In: Gelband H, Jha P, Sankaranarayanan R, Horton S, editors. Cancer: Disease Control Priorities, Third Edition. Washington (DC): The International Bank for Reconstruction and Development/The World Bank 3 (2015).
4. National Cancer Institute. "Breast Cancer Screening (PDQ®)– Health Professional Version" (2014).
5. National Breast cancer, Breast –self exam (2016).
6. O'Mahony M., *et al*. "Interventions for raising breast cancer awareness in women". *Cochrane Database of Systematic Reviews* 2 (2017): CD011396.
7. Abu-Helalah MA., *et al*. "Knowledge, barriers and attitudes towards breast cancer mammography screening in Jordan". *Asian Pacific Journal of Cancer Prevention* 16.9 (2015): 3981-3990.
8. Marmarà D., *et al*. "Health beliefs, illness perceptions and determinants of breast screening uptake in Malta: a cross-sectional survey". *BMC Public Health* 17.1 (2017): 416.

9. Martinez KA., *et al*. "Factors Associated with Routine Recommendation of Mammography for Women Aged 40-49: Provider Characteristics and Screening Influences". *Southern Medical Journal* 110.2 (2017): 129-135.

10. Ersin F., *et al*. "Determining the health beliefs and breast cancer fear levels of women regarding mammography". *Turkish Journal of Medical Sciences* 45.4 (2015): 775-781.

11. Tuzcu A., *et al*. "Effects of Interventions Based on Health Behavior Models on Breast Cancer Screening Behaviors of Migrant Women in Turkey". *Cancer Nursing* 39.2 (2016): E40-E50.

12. Centers for Disease Control and Prevention. Breast Cancer (2016).

13. Van den Ende C., *et al*. "Benefits and harms of breast cancer screening with mammography in women aged 40-49 years: A systematic review". *International Journal of Cancer* (2017).

14. Pitman JA., *et al*. "Screening Mammography for Women in Their 40s: The Potential Impact of the American Cancer Society and U.S. Preventive Services Task Force Breast Cancer Screening Recommendations". *American Journal of Roentgenology* 15 (2017): 1-6.

15. Ersin F and Polat P. "Examination of factors affecting women's barrier perception to participate in breast cancer screenings in a region affiliated with a family health center in Turkey". *Turkish Journal of Medical Sciences* 1746.5 (2016): 1393-1400.

16. Ozmen T., *et al*. "Comparison of Barriers Against Mammography Screening in Socioeconomically Very Low and Very High Populations". *Cureus* 148.7 (2016): e690.

17. Naoum P., *et al*. "Factors associated with the utilization of mammographic screening in Greece". *European Journal of Cancer Prevention* (2016).

18. Mlikotic R., *et al*. "Assessing the Effects of Participant Preference and Demographics in the Usage of Web-based Survey Questionnaires by Women Attending Screening Mammography in British Columbia". *Journal of Medical Internet Research* 2218.3 (2016): e70.

19. Ministra e Shëndetësisë. Kontributi i Ministrise se Shendetesise per Nenkomitetin " Tregu i brendshem dhe Konkurenca" Bruksel (2015).

20. Moshki M., *et al*. "Relationship Between Perceived Risk and Physician Recommendation and Repeat Mammography in the Female Populationin Tehran, Iran". *Asian Pacific Journal of Cancer Prevention* 17 (2016): 161-166.

21. VanDyke SD and Shell MD. "Health Beliefs and Breast Cancer Screening in Rural Appalachia: An Evaluation of the Health Belief Model". *Journal of Rural Health* (2016).

22. Petro-Nustas W., *et al*. "Health beliefs and practice of breast self-examination among young Cypriot women". *Journal of Transcultural Nursing* 24.2 (2013): 180-188.

23. Anagnostopoulos F., *et al*. "Health beliefs and illness perceptions as related to mammography uptake in randomly selected women in Greece". *Journal of Clinical Psychology in Medical Settings* 19.2 (2012): 147-164.

24. Berkiten A., *et al*. "Meta-analysis of studies about breast self-examination between 2000-2009 in Turkey". *Asian Pacific Journal of Cancer Prevention* 13.7 (2012): 3389-3397.

25. Tavafian SS., *et al*. "Prediction of breast self-examination in a sample of Iranian women: an application of the Health Belief Model". *BMC Womens Health* 9 (2009): 37.

26. Aksoy YE., *et al*. "Barriers on Breast Cancer Early Detection Methods". *Journal of Breast Health (2013)* 11.1 (2015): 26-30.

27. American Cancer Society. "Breast Cancer Facts and Figures 2013-2014". Atlanta: American Cancer Society, Inc. (2013).

Volume 4 Issue 6 June 2017