

BREAST CANCER SCREENING IN KOSOVO: WOMEN'S KNOWLEDGE AND BEHAVIOURS

PRESEJANJE ZA RAKA DOJKE NA KOSOVU: ZNANJE IN VEDENJE ŽENSK

Arbëresha Nela Turjaka¹, Merita Koçinaj Berisha¹, Lumturije Gashi Luci¹, Shefqet Lulaj¹

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Abstract

Background: Breast cancer is the most common cancer affecting women all over the world. It is estimated to account for around 25% of all malignancies in women, and its incidence shows a continuously increasing trend in many countries all over the world.

The aim of the study was to assess the knowledge of Kosovar women about methods for early detection of breast cancer and to determine the level of breast cancer screening.

Methods: This cross-sectional study included a sample of 303 women, aged 20-60 years, who were randomly selected in centres of family medicine and invited to complete a semi-structured questionnaire. The one-way ANOVA and the chi-square test were used for analysis.

Results: The results showed that 71.4% of women in urban areas and 52.7% of rural women were familiar with the methods used for breast cancer detection (p value <0.01). They reported knowledge of the following screening methods: clinical breast examination (24.8%), breast self-examination (12.6%), mammography and breast ultrasound (5.0%), and other methods (23.4%); 34.2% of the women surveyed admitted that they knew no breast cancer screening method. The results of the study indicated that a very low percentage of women in the sample made use of the tools for early breast cancer detection.

Conclusion: There were differences in the level of knowledge about the methods of breast cancer screening: women in urban areas, those with higher level of education and employed women had higher levels of knowledge about breast cancer screening compared to rural women, less educated women and unemployed women. In general, however, the levels of breast cancer screening are very low in both, urban and rural settings.

Key words: breast cancer, early detection, screening, mammography

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Izvleček

Uvod: Rak dojke je najpogostejši rak, za katerim obolevajo ženske po vsem svetu. Ocenjujemo, da predstavlja približno 25 odstotkov vseh rakavih obolenj pri ženskah. V mnogih državah sveta incidenca raka dojke še narašča. V raziskavi smo ugotavljali, kakšno je znanje žensk na Kosovu o preiskavah za zgodnje odkrivanje raka dojke in kakšen je obseg presejanja za to bolezen.

Metode: V presečno raziskavo je bil vključen vzorec 303 žensk, starih 20 do 60 let, ki smo jih naključno izbrali med obiskovalkami centrov za družinsko medicino ter jih povabili, da izpolnijo delno strukturirane vprašalnike. Za analizo smo uporabili enosmerno ANOVO in hi-kvadratni test.

Rezultati: Ugotovili smo, da metode za ugotavljanje raka dojke pozna 71,4 % odstotka žensk iz mestnih okolij in 52,7 % žensk, ki živijo zunaj mest ($p < 0,01$). Poznale so naslednje presejalne metode: klinično preiskavo dojke (24,8 %), samopregledovanje dojke (12,6 %), mamografijo in ultrazvočno preiskavo (5,0 %) ter druge metode (23,4 %); 34,2 % žensk v raziskavi je izjavilo, da ne poznajo nobene presejalne preiskave. Izsledki te raziskave kažejo, da le majhen delež žensk uporablja metode za zgodnje odkrivanje raka dojke.

¹Medical Faculty, Family Medicine, 10000 Pristina, Kosovo
Correspondence to: e-mail: arberesha2@yahoo.com

Zaključek: Ugotovili smo razlike v poznavanju presejalnih metod za raka dojk: ženske v mestnih okoljih, ženske z višjo stopnjo izobrazbe in zaposlene ženske so imele boljše znanje o preiskavah za zgodnje odkrivanje raka kot ženske z ruralnih področij, manj izobražene in nezaposlene ženske. Na splošno je bil obseg presejanja za raka dojke nizek tako v urbanih kot tudi v ruralnih okoljih.

Ključne besede: rak dojke, zgodnje odkrivanje, presejanje, mamografija

1 INTRODUCTION

Breast cancer is the most common cancer diagnosed in women all over the world and the most common cause of death from cancers. According to the International Agency for Research in Cancer (IARC), the highest global burden of breast cancer was documented in 2002, when there were approximately 1.15 million new cases and 411.000 deaths (1).

Among over a quarter of a million people in the UK diagnosed with cancer every year, there are over 35,000 new cases of female breast cancer. It is the most common malignancy affecting women and is diagnosed in around one to two cases per 2,000 population; approximately 3% - 5% are diagnosed with breast cancer before age 40 years, and around 2% before they reach the age of 35 years (2,3).

The incidence is increasing whereas the mortality rate is decreasing. The five-year standardized survival is 66% (2,3).

Because of the very favorable survival rates in the affluent developed countries and poor survival in some of the least affluent developing countries, much greater differences exist between countries in mortality rates than in the incidence of breast cancer. With its high incidence and relatively good prognosis breast cancer is the most prevalent cancer in the world today; there are an estimated 4.4 million women alive diagnosed with breast cancer within the last five years (compared with only 1.4 million survivors, male and female, with lung cancer). It has been estimated that 1.5% of the US female population are survivors of breast cancer (2,3).

Genetic factors, including the major susceptibility genes (BRCA1, BRCA2), may account for up to 10% of breast cancer cases in developed countries (4), but their prevalence is too low to completely explain the international variation in risk. The majority must therefore be a consequence of different environmental exposures.

Incidence rates of breast cancer have been increasing in most countries, this increase being highest in areas where previous rates were low. Since 1990, there has been an overall increase in incidence rates of about 0.5% annually. At this rate of growth, there would be around 1.4 million new cases in 2010 (5).

A study of cancer incidence in Kosova which focused on breast cancer during the period 1999 – 2004, showed the latter to be the most common cancer in Kosova. The incidence shows an upward trend, increasing at a rate of 4.35%. In 2004, the incidence was 120 newly diagnosed cases per year (6).

Randomized studies dealing with screening mammography showed that mortality rates decrease in women aged 50 years and older. In the UK, the screening programme has been implemented since 1988. Its goal is to reduce breast cancer mortality in the female population screened for breast cancer to 25%. Other screening examinations include breast self-examination (BSE), clinical breast examinations (CBE), breast ultrasound, breast biopsy, tumor markers, magnetic resonance imaging (MRI) and others.

The aim of the study was to assess the level of knowledge women have about the methods for early detection of breast cancer, and to determine the attendance rate for screening in Kosova.

2 METHODS

This cross-sectional study was conducted during the period January 2007- April 2008. The instrument used for data collection was a structured questionnaire developed by the author for the purpose of the study. The questionnaire was previously piloted and modified accordingly. Informed consent was obtained from all patients. A randomly selected sample consisted of women aged 20 to 60 years who attended family medicine centers in Prishtina (urban), capital of Kosova, in Kastriot (urban) and in Ajvali (rural), irrespective of the reason for consultation. Four previously trained research assistants (family doctors) were involved in filling the questionnaires for the selected sample.

Women with a previous history of the disease, and health professionals were not selected to participate in the study.

Parametric data were analysed using the one-way ANOVA, and nonparametric data by the chi-square test. P values of <0.05 and <0.01 were considered significant.

3 RESULTS

Out of the 320 women invited, 312 participated in the survey. A total of 303 questionnaires (97.1%) were eligible for analysis. The average age of interviewed women was 38.3 years. A detailed description of respondents is presented in Table 1.

Key findings showed that 97.6% of urban women and 81.7% of women living in rural settings knew that breast cancer is a serious disease; 71.4% of urban and 52.7% of rural women reported knowing about

the methods for early detection of breast cancer. They reportedly knew or have heard about the following methods: clinical breast examination (24.8%), BSE (12.6%), mammography and breast ultrasound (5.0%) and other methods (23.4%); 34.2% of the respondents admitted they knew no such method.

The question "Have you ever performed breast self-examination?" was answered affirmatively by 48.6% of urban women and by only 26.9% of rural women ($p < 0.01$). Belief that breast cancer can be self-detected was shared by 56.7% of urban and 28.0% of rural women ($p < 0.01$).

Table 1. *Characteristics of the interviewed sample.*
Tabela 1. *Značilnosti vprašanega vzorca*

Modalities Značilnosti		N	%	Average age \pm SD Poprečna starost
Sample size Velikost vzorca		303	100.0	38.3 \pm 10.6
Place of residence Kraj bivanja	urban mesto	210	69.3	38.7 \pm 11.5
	rural dežela	93	30.7	37.5 \pm 10.8
Marital status Zakonski stan	single samska	76	25.1	29.8 \pm 7.7
	married poročena	214	70.6	40.7 \pm 9.7
	widow vdova	13	4.3	48.2 \pm 11.9
	no education brez izobrazbe	20	6.6	39.3 \pm 10.2
Level of education Izobrazba	elementary school osnovna šola	65	21.5	41.9 \pm 11.8
	secondary school srednja šola	113	37.3	37.7 \pm 10.1
	high level of education višja, visoka šola	105	34.7	36.5 \pm 10.1
Employment Zaposlena	yes da	143	47.2	38.2 \pm 10.6
	no ne	160	52.8	38.4 \pm 10.5
	unemployed nezaposlena	118	38.9	39.9 \pm 10.2
Occupation Poklic	administration administracija	19	6.3	39.5 \pm 11.8
	education izobraževanje	62	20.5	34.9 \pm 10.0
	student študentka	24	7.9	40.2 \pm 11.1
	economy/law ekonomija/pravo	26	8.6	35.9 \pm 11.2
	other drugo	54	17.8	38.6 \pm 10.7

The question "Have you ever had clinical breast examination?" was answered affirmatively by 25.2% of women living in urban areas and by 10.8% of women living in rural settings.

The proportion of affirmative responses to the question "Have you ever heard about breast ultrasound?" was 73.8% for urban women and 46.2% for those from rural areas ($p < 0.01$).

The question "Have you ever had this examination?" relating to ultrasound screening was answered affirmatively by 11.9% of women living in urban areas and by only 5.4% of rural women.

Significant differences ($p < 0.01$) were found between urban and rural women, as well as between better educated and less educated and between employed and unemployed women concerning mammography as a breast cancer screening method (Table 2.)

Table 3 indicates the answers to the question "Why do women hesitate to have a breast examination?". Fear was reported as a major barrier to any kind of breast

cancer screening, with 23.8 % of the respondents stating that they would be frightened or hesitant to attend for such an examination. The reasons given included: fear of being diagnosed with breast cancer (72;20.8%); "It is better not to know" (37;12.2%); "There is no need to do the investigative procedures since there is no pain" 36(11.9%).

4 DISCUSSION

This study investigated knowledge and behaviours about early breast cancer detection, with special emphasis on mammography as an important testing tool. The rate of mammography screening was determined in a sample randomly selected in one rural and two urban areas of Kosovo. The results obtained were compared with the findings of the following similar studies: "Breast cancer – knowledge, attitudes and practices – early detection and screening in South

Table 2. Answers to the question "Do you think breast cancer could be detected through mammography?" in different population groups according to background variables

Tabela 2. Odgovori na vprašanje "Menite, da mamografija lahko odkrije raka dojke?" v različnih skupinah prebivalstva glede na izhodiščne spremenljivke

Modalities	Yes		No		Don't know		Total	P
	N	%	N	%	N	%		
Sample size	119	39.3	14	4.6	170	56.1	303	
Average age (\pm SD)	38.9 \pm 9.8		41.2 \pm 12.4		37.6 \pm 11.0		38.3 \pm 10.6	$P > 0,05$
Living place	urban	97	46.2	8	3.8	105	50.0	$P < 0.01$
	rural	22	23.7	6	6.5	65	69.9	
Marital status	un married	25	32.9	3	3.9	48	63.2	$P < 0.01$
	married	89	41.6	10	4.7	115	53.7	
	widow	5	38.5	1	7.7	7	53.8	
Level of education	no education	4	20.0	1	5.0	15	75.0	$P < 0.01$
	elementary school	7	10.8	8	12.3	50	76.9	
	secondary school	47	41.6	3	2.7	63	55.8	
	high level of education	61	58.1	2	1.9	42	40.0	
Employment	yes	74	51.7	4	2.8	65	45.5	$P < 0.01$
	no	45	28.1	10	6.3	105	65.6	
	unemployed	48	40.7	7	5.9	63	53.4	
Occupation	administration	3	15.8		0.0	16	84.2	$P < 0.01$
	education	30	48.4	5	8.1	27	43.5	
	student	7	29.2		0.0	17	70.8	
	economy/law	8	30.8	2	7.7	16	61.5	
	others	23	42.6		0.0	31	57.4	

Table 3. *Answers to the question “Why do women hesitate to have a breast examination?”*
 Tabela 3. *Odgovori na vprašanje “Zakaj ženske oklevajo, preden gredo na pregled dojk?”*

	N	%
Overall number of interviewed women	303	100.0
Skupno število vprašanih		
Fear from cancer detection	72	23.8
Strah pred odkritjem raka		
It is better not to know anything	37	12.2
Bolje je nič vedeti.		
Very expensive examinations	9	3
Preiskave so zelo drage.		
Don't know nothing about that	10	1
O tem nič ne vem.		
Nobody told me to do breast testing	9	3
Nihče mi ni rekel, naj grem na pregled dojk.		
These examinations are painful	4	1.3
Pregledi so boleči.		
I don't feel any pain in my breast, it's not worth having them	36	11.9
Dojke me ne bolijo, zato nima smisla iti na pregled.		
Nothing could be done even if cancer is detected	11	3.6
Nič se ne da storiti, tudi če najdejo raka.		

Africa” by Krombein IW et al. (7); “*Knowledge of breast cancer and its early detection measures among rural women in Akinyele Local Government Area, Ibadan, Nigeria*” by O Abimbola Oluwatosin and Oladimeji Oladepo (8), and “*The knowledge and attitudes of breast self-examination and mammography in a group of women in rural area in western Turkey*” by Pinar Erbay Dünder et al. (9).

Our results revealed differences between women living in urban areas and those living in rural areas as concerns their use of clinical breast examination ($p < 0.01$), due to the fact that urban women have better access to health services and greater awareness of the importance of early screening for breast cancer compared to women living in rural areas. The percentage of employed women who underwent clinical breast examination was 31.5% versus 11.3% for women living in rural areas, the difference between the two groups being statistically significant ($p < 0.01$). No significant difference between interviewed women was found in terms of their occupation. Compared with the similar study in western Turkey (9), where a total of 59.1% of the participants indicated they had never performed BSE and 25.0% of the study group stated they had had clinical breast examination. Only 10.2%

of the participants reported practicing BSE on a regular monthly basis and 29.5% stated that they examined themselves irregularly.

This study showed a very low rate of affirmative responses to the question asking about mammographic examinations: only 5.9% had ever had mammography, and only 9.2% were referred for the examination by their family doctor or a gynecologist, or were examined on their own initiative. In their study, Krombein IW et al. (7) reported that only 32% of the women interviewed had heard about mammography; 11% of them had had mammography once, and only 3% underwent mammography in the previous year. As regards clinical breast examination, 62% of the women reported they had had this exam, and 29% said they had undergone the examination in the previous year; 38% respondents admitted they had never had clinical breast examination because they felt ashamed to get undressed in the doctor's surgery. In the study conducted in western Turkey (9), no statistically significant association was found between the respondents' age and the rate of BSE. According to the women's responses, 27% of them had no knowledge about mammography, and only 5.1% of them had had annual mammography over a

period of two years. In the Nigerian study (8), none of the respondents acknowledged mammography as an early breast cancer detection tool; such results were expected since mammography is not readily available to that population. The study also showed that clinical examination recommended once a year is not popular among women. The respondents were better informed about breast cancer than about BSE.

The results of our study indicate that women, especially those living in rural areas, lack proper information about the importance of screening for early detection of breast cancer. Overall, 23.8% of women in our sample responded that "they are afraid they will be diagnosed with cancer", as an excuse for not attending regular examinations; 12.2% said "it is better no to know anything", and 11.9% declared "they don't feel any pain in the breast therefore it's not worth doing the testing". In the study of women in the western Turkey (9), the motivation was found to be a significant factor in the decision to undergo mammography. Confidence was another significant factor affecting both BSE and mammography practice. In the Nigerian study (8), none of the respondents identified mammography as an early breast cancer detection tool.

The results of our study stress the need for raising awareness of early breast cancer detection methods among the Kosovar female population. Women should be alerted to risk factors and encouraged to attend for breast cancer screening. An important impetus to breast cancer screening would be provided by assuring women that they will get health care whenever they need it, by offering them additional information about specific issues and an easy access to appropriate diagnostic services. Primary health care teams play an important role in encouraging women to attend for screening and help by offering information, advice and other forms of support at all stages of screening procedures.

The specific beliefs and behaviors regarding breast cancer described in the study may be useful in developing specific intervention strategies aimed at improving cancer screening behaviors among Kosovar women. The information about breast cancer, based on the study findings, will be easily acceptable to women, if it takes into consideration their knowledge, beliefs and practices. It should improve their awareness of the importance of regular examinations and other screening tests for early breast detection.

The purpose of the intervention based on the findings of this study is to increase survival rates and reduce mortality in breast cancer patients.

5 CONCLUSIONS

It has been shown that women in urban settings, women with higher level of education and employed women have higher levels of knowledge about breast cancer compared to women living in rural areas, less educated women and unemployed women. In general, Kosovar women are well-informed about the methods for early breast cancer detection, yet the use of breast screening procedures among women is very low, both in urban and rural areas.

In countries, such as Kosova, where the programme of breast cancer screening cannot be implemented in the entire women population, testing should be started in high-risk or target groups. An ideal approach would be to design a pilot programme in an attempt to improve the accessibility of screening for these women. For the programme to be successful, it needs to attract participation of all health professionals caring for age groups at increased risk for developing breast cancer, i.e. mostly family doctors who represent the first contact in the health care system, but also other primary health care professionals.

Awareness of the importance of early diagnosis testing should be promoted among all women. Depending on the availability of financial means and human resources, effective training programmes relating to clinical breast testing of symptomatic and asymptomatic women should be conducted for healthcare givers, whereas women should be offered education in BSE and basic clinical examinations. Family doctors should be encouraged to assume a more proactive role in health promotion and health education programmes aimed at disease prevention, and thereby increase women's awareness of the importance of their participation in screening programmes.

It is hoped that these interventions will help reduce morbidity and mortality associated with breast cancer.

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