

## RESEARCH COMMUNICATION

# Comparison of Knowledge and Practices of Breast Self Examination (BSE): A Pilot Study in Turkey

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### Abstract

**Objectives:** The aim of this descriptive study was to determine breast self examination (BSE) knowledge and practice of middle-aged females. **Methodology:** The study population comprised over 40 year old women (n=252) and nurses (n=29) working in a total of seven family health centers in Bolu, Turkey. Data were obtained through face to face interviews from September 2007 to January 2008. **Results:** A highly significant relation was identified between increasing age in women and lack of BSE and improper practice of BSE steps ( $p<0.05$ ), and between a higher degrees of education and presence of breast cancer in the family and knowledge and practice of BSE ( $p<0.05$ ). On the other hand, it was found that 93.1% of the nurses involved in the study practiced BSE. **Conclusions:** The findings from this study revealed that educational programs aimed at increasing older women's knowledge level of BSE are required and nurses, as medical professionals meeting women in various environments, can play a key role in increasing women's awareness about breast health.

**Keywords:** Breast cancer - prevention - breast self examination

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### Introduction

In addition to being the most common type of cancer among women, breast cancer is the leading cause among deaths from cancer. Although mortality data vary a lot, there has been an increase in breast cancer incidence over the last years in developing countries and it is estimated that yearly breast cancer incidence all around the world will be over a million (Budakoğlu, 2003; Ministry of Health, 2005). According to the data from the Ministry of Health of Turkey-Cancer Control Department, breast cancer ranks second among cancer deaths (Ministry of Health, 2004; 2007a; 2008).

Breast cancer is distinguished from other types of cancer by the fact that it occurs in a visible organ, it can be detected at an early stage and it can be treated easily in case of an early detection (Avcı et al., 2008). Research has shown that Breast Self Examination (BSE) play a significant role in the early detection and treatment of breast cancer and increased life expectancy (Akyolcu, 1985; Ministry of Health, 2007b).

Though not effective alone in early detection of breast cancer, breast self examination matters a lot since it will be influential in making women adopt the idea of being responsible for their own health and learning about the breast tissue and protective health behaviors (Attia et al., 1997). A number of health organizations all around the world recommend self examination to promote early detection of breast cancer (American Cancer Society, 2007). BSE is a simple, inexpensive, safe examination

method which requires no invasive intervention or any apparatus and which protects women's privacy and can be done comfortably alone at home (Nahcivan and Secginli, 2003; Kılıç et al., 2006).

Nurses and nurse-midwives are major members of health personnel in meeting women's needs for knowledge about protection against breast cancer and early detection (Çiçeklioğlu et al., 2005). Considering the prevalence and number of the primary care (first level in Turkey) health institutions and nurses/midwives working at these institutions, it is projected that investigating whether are informed about BSE and breast cancer and the extent to which nurses/midwives have knowledge about the issue will be helpful in increasing the percentage by which women perform BSE or expanding it.

### Methodology

This is a descriptive study designed to determine and compare breast self examination knowledge and practice of nurses who work in a total of seven Family Health Center in Bolu city center and over 40 years old women who consulted these centers.

The number of over 40 years old women registered in the seven Family Health Centers, where the study was conducted, is 19.012. The research universe comprised the women consulting the Family Health Centers No 1, 2, 3, 4, 5, 6, and 7 in Bolu and all of the nurses/midwives working in these centers. The sample size was determined as 252 by using the sampling formula with known-

population”. While choosing the study sample, Bolu City Health Department provided statistical data about which Family Health Centers the participant women consult. The number of people to be chosen from each health center was determined by using proportional sampling method. Bolu City Health Department also gave information about the number of health personnel. All of the nurses/ midwives working in the seven Family Health Centers (n: 29) participated in the study.

The research data were collected through face-to-face interview technique by using the data collection form designed by the researcher examining the relevant literature. The data collection form consisted of two separate parts: questionnaire form for the participating women and questionnaire form for the participating nurses. The questionnaire form, designed by the researcher based on the literature review, was conducted with a group of participants chosen with simple random sampling method: 15 women consulting Family Health Center No 6 and 3 nurses working in this center. The questionnaire form took its final form based on several revisions in the light of this initial application. Having been informed about the aim of the study, the participants were given the questionnaire forms after their consents were granted and they answered the questions in average time of 25 minutes. The data from this part were coded and transferred into computer environment and then were assessed by using a statistical program. Descriptive statistics tools such as percentage, mean, X<sup>2</sup> and standard deviation were

employed in data assessment procedure.

*Ethical Considerations*

Before initiating the research, while establishing the study universe and population, Bolu City Health Department was asked for their approval since a total of seven Family Health Centers would be involved in the study and verbal consent was granted from midwives and nurses working in health centers. Having introduced themselves to the participating women and nurses, the researchers provided them with information about the study to be conducted, stated that participation in the study was voluntary and the information to be given by the participants would only be used for the study without mentioning their names and asked them to fill in “the Informed Consent Form”.

**Results**

When the findings about the women’s practice of BSE steps were analyzed, it was found that the majority of the 60-year age group did not follow BSE steps. A highly significant relationship was determined between increasing age and lack of practicing BSE steps (p<0.05). The data concerning the distribution of the nurses’ breast self examination knowledge and practice revealed that 94.1% of the over 30 years old group did BSE and 72.7% of the 26-30 age group knew when to perform BSE while 63.7% did know about the frequency of BSE.

**Table 1. Distribution of the Percentages of the Participating Women’s BSE Knowledge and Practice with regard to Age (n:252)**

BSE Knowledge	Age Groups								X <sup>2</sup> P value
	40- 49 Ag		50- 59 Age		≥60		Total		
	No	%	No	%	No	%	No	%	
Hearing about BSE									
Yes	79	79.0	5	71.6	32	41.0	164	65.1	X <sup>2</sup> : 29.779
No	21	21.0	21	28.4	46	59.0	88	34.9	0.000*
Knowing BSE									
Knows	59	59.0	35	47.	15	19.2	109	43.3	X <sup>2</sup> : 28.934
Doesn’t know	41	41.0	39	52.7	63	80.8	143	56.7	0.000*
Performing BSE									
Yes	55	55.0	38	51.4	13	17.9	106	42.1	X <sup>2</sup> : 27.078
No	45	45.0	36	48.6	65	82.1	146	57.9	0.000*
Total	100	100.0	74	100.0	78	100.0	252	100.0	

\*p<0.05

**Table 2. Distribution of the Percentages of the Participating Women’s BSE Knowledge and Practice with regard to Educational Background (n:252)**

BSE Knowledge	Educational Background								X <sup>2</sup> P value		
	Illiterate		Secondary-school		High-school		University graduate			Total	
	No	%	No	%	No	%	No	%		No	%
Hearing about BSE											
Yes	7	16.7	132	71.7	21	95.5	4	100.0	164	65.1	X <sup>2</sup> :57.984
No	35	83.3	52	28.3	1	4.5	-	-	88	34.9	0.000*
Knowing BSE											
Knows	4	9.5	84	45.7	17	77.3	4	100.0	109	43.3	X <sup>2</sup> : 35.520
Doesn’t know	38	90.5	100	54.3	5	22.7	-	-	143	56.7	0.000*
Performing BSE											
Yes	4	9.5	82	44.6	16	72.7	4	100.0	106	42.1	X <sup>2</sup> : 32.718
No	38	90.5	102	55.4	6	27.3	-	-	146	57.9	0.000*
Total	42	100.0	184	100.0	22	100.0	4	100.0	252	100.0	

\*p<0.05

According to the distribution of the women's knowledge and practice of BSE, the vast majority of the illiterate women group in the study had never heard about nor done BSE; 71.7% of the secondary-school graduates had heard about BSE, 54.3% of them did not know how to perform BSE and 84.1% of them did not know timing and frequency of BSE, 95.5% of the high-school graduates had heard about BSE and 72.7% did BSE; and the majority of the university graduates had heard about and done BSE. A highly significant relationship was identified between higher levels of education and BSE knowledge and practice among the participating women ( $p < 0.05$ ).

Data about the participants' educational background showed that all of the high school graduate nurses did BSE and 78.6% knew BSE timing. Also, 58.3% of the college (two-year) graduate nurses knew BSE timing while 50.0% of the university graduate nurses practiced BSE.

Another highly significant relationship was determined between higher levels of education and practicing BSE ( $p < 0.05$ ). The vast majority of the university graduate nurses in the study BSE steps did apply BSE steps.

It was found that 92.3% of the group of those participants with presence of breast cancer history in the family had heard about BSE and 76.9% of this group knew and practiced BSE while 63.6% of the group without a breast cancer history in the family had heard about BSE but 58.6% of this latter group did not know how to perform BSE. A highly significant relationship was identified between presence of breast cancer history in the family and BSE knowledge and practice ( $p < 0.05$ ). The findings revealed that 60.0% of the group with breast cancer history in the family did not know BSE timing and frequency while 83.3% of the group without breast cancer history in the family did not know BSE timing and frequency. When the nurses' data about practicing BSE were analyzed, on the other hand, it was determined that all of the group with breast cancer history in the family did BSE and knew BSE timing and frequency (100%) while 92.6% of the group without breast cancer history in the family did BSE but 68.0% of them did not know BSE timing and 56.0% of them did not know BSE frequency

It was also determined that the vast majority of the group with breast cancer history in the family did apply BSE steps while the vast majority of the group without breast cancer history in the family did not apply BSE steps. A highly significant relationship was found between breast cancer history in the family and practicing BSE steps ( $p < 0.05$ ). It was determined that the entire group with breast cancer history in the family (100%) followed BSE steps while the vast majority of the group without a breast cancer history in the family applied.

## Discussion

This study also determined that 65.1% of the women participating had heard about BSE expression before. Among the relevant research, Zincir's study (1999), for example, described BSE as a method which 54.1% of the women involved in that study had heard about. In Atlı's study (2002), 83.1% of the women stated that they had heard about BSE method before. Similarly, Çevik et

al.'s study (2005) 64.5% of the women had heard about the expression BSE. Zincir (1999), on the other hand, reported that 63.1% of the women aged 40-49 had heard about BSE, 42.9% of the women aged 50-59 and 43.1% of the women aged 60-69 had heard about it. In parallel with this latter study, our study determined that 79.0% of the participating women aged 40-49, 71.6% of the women aged 50-59 and 41.0% of those aged over 60 had heard about BSE and identified a highly significant relationship.

Examining practicing BSE with regard to educational background levels, Akyolcu (1985) identified a lower level of BSE practice among those with lower educational background level but, conversely, a higher level of BSE practice among those with higher educational background levels. Our study yielded similar results in this respect to the results from that study.

According to Zincir's study (1999), 67.9% of the women with a breast cancer history in their family and 38.0% of the women without a breast cancer history in their family had heard about BSE before. In our study, 92.3% of the women with a breast cancer history in their family and 63.6% of the women without a breast cancer history in their family had heard about BSE before.

It was determined in our study that 93.1% of the participating nurses performed BSE. In his study conducted with nursing students in Saudi Arabia, Alsaif (2004) found that 66.0% of them performed BSE. In their study conducted with 163 nurses and 178 teachers, Madanat et al. (2002) reported that the nurses involved were more careful than the teachers about protecting from breast cancer. Similarly, in a Turkish study conducted with 125 nurses and 164 teachers, it was determined that the nurses' knowledge level of BSE was higher than that of the teachers and 81.5% of the nurses against 41.5% of the teachers performed BSE (Demirkıran et al., 2007). Karayurt et al.'s study (2008) reported that 32% of the nurses regularly performed BSE every month. Kabcıoğlu et al.'s study (2004) found in their study conducted with mid-wives and nurses that 82.1% of the mid-wives/nurses knew how to do BSE and had performed it at least once. Research also indicated a relatively higher rate of BSE among those who were over 30 years old, married, employed for 10 years or longer, working in primary care health centers and given in-service training. Mahmoodi et al.'s study (2002) found a relatively higher rate of BSE practice among the nurses over 30 years old. Aktan et al.'s study (2002) reported that 99.5% of the nurses knew BSE, 86.8% of them had performed BSE at least once, 49.1% of them regularly performed BSE every month and 87% of them had never had mammograms before.

Kabcıoğlu et al., (2004) reported that those midwives and nurses who were over 30 years old or older and employed in primary care health centers performed BSE by significantly higher percentages. Similarly, our study identified a higher rate of BSE practice among those nurses over 30 years old.

Aktan et al., (2005) found a statistically significant difference among the nurses' educational background with respect to their knowledge of BSE. In parallel with this study, our study identified a high level of BSE practice among college (two-year) graduate nurses.

This study determined in conclusion that hearing about, knowledge and practice of BSE and proper application of BSE steps came down among the participating women with the increasing age while BSE practice went up among the nurses with the increasing age; hearing about, knowledge and practice of BSE went up among the women with the increasing age while no significant difference emerged among the nurses in terms of performing BSE with regard to increasing level of educational background; hearing about, knowledge and practice of BSE went up among both the women and the nurses with regard to having a breast cancer history in their family. It could be suggested in the light of these findings from this study that educational programs aimed at increasing over 60 years old women's knowledge level of BSE be required and nurses, as medical professionals getting to meet women in various environments, play a key role in increasing women's awareness about breast health.

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