

ORIGINAL PAPER

Determination of Breast Self-Examination Knowledge and Breast Self-Examination Practices among Women and Effects of Education on their Knowledge

Aysel Özdemir, MSc RN

Lecturer in Public Health Nursing, Uludağ University School of Health, Bursa, Turkey

Neriman Akansel, PhD, RN

Associate Professor in Surgical Nursing, Uludağ University School of Health, Bursa, Turkey

Gülseren Çitak Tunc, MSc, RN

Lecturer in Mental Health Nursing, Uludağ University School of Health, Bursa, Turkey

Nursel Aydin, PhD RN

Lecturer in Surgical Nursing, Uludağ University School of Health, Bursa, Turkey

Sonca Erdem, RN

Uludag University Medical Hospital, Bursa, Turkey

Correspondence: Neriman Akansel PhD,RN, Associate Professor in Surgical Nursing
Uludag University School of Health, Department of Nursing, Gorukle Campus, Bursa, Turkey
E-mail: nakansel@uludag.edu.tr, neriman.akansel@gmail.com

Abstract

Aim: The aim of this study is to determine the breast self-examination (BSE) knowledge and practices among women who were attending adult education center courses.

Materials and Methods: Data were collected from women (n=89) who were attending adult education courses in three different locations in city of Bursa in April 2007. Data collection form which is developed by researchers consisted of questions related to socio demographic variables, BSE knowledge and practices of women. After introducing a planned education on breast cancer and breast self-examination their knowledge were retested.

Results: The age of participants were ranging between 16-52 years. Close to half of the women (46.1%) were married. Some of the women reported having cancer in family members (20.2%) while none of them reported having breast cancer in close family member. Many of the participants (68.5%) were aware about Breast Self-Examination (BSE). TV (53.4%), journals-books (29.3%) were primary sources for women's knowledge.

Being young, not knowing how to perform BSE, not considering herself in a risk group and having a fear of finding something bad are some of the reasons for not performing BSE. Participants' knowledge regarding BSE and breast cancer has been improved after the introducing of the education.

Conclusions: Teaching the signs of breast cancer to women, considering the facts about it, using interactive methods and adopting surveillance programs are important.

Key words: Breast self-examination, breast cancer, education

INTRODUCTION

Breast Cancer is one of the most detected cancer types among women and cause of morbidity is notably high among all cancer types in Turkey. According to National Turkish Statistics (2012) data sources breast Ca prevalence is 45.1% (in 100.000) in year of 2011 (saglik.gov. tr.) According to recent research findings mean age of women diagnosed with ca is 48 years (Rızalar

& Altay 2010). Early diagnosis of breast cancer plays an important role in prognosis of the disease. For this reason in order to increase awareness about breast health breast self examination (BSE) practices among women who were in their twenties were highly recommended practice for years. Although BSE and clinical breast examination are not routinely suggested practices lately (Seçginli, 2011), BSE still remains an important practice since Turkey ranks

among developing countries with low income levels (Akyolcu & Uğraş, 2011) and access to healthcare is somehow limited for some of the population. Research studies show that BSE practices of women are not at level because lack of knowledge, not considering herself in risk group, not receiving any advice to perform BSE from health practitioners especially from physicians are some of the factors that are influential. According to Turkish National Statistical Database (2012) most of the women (80.4%) did not have mammography; women who perform BSE were as low as 10.1%.

MATERIALS AND METHODS

The aim of the study

The aim of this descriptive study is to determine the breast self-examination (BSE) knowledge and practices among women ($n=89$) who were attending adult education center courses during in April 2007 and comparing the effect of education given on their knowledge.

The procedure

Data collection form which is developed by researchers included 26 questions related to socio demographic variables, BSE knowledge and practices of women. Each participant asked to fill out the questionnaire before the education and put a nickname on it. After the education introduced to participants (included information on breast cancer, signs of breast cancer and BSE practice) same form included questions related to their knowledge about breast cancer and BSE (excluding demographic variables) were given. It was asked from participants to place the same nickname on the data collection form in order to match the data obtained before and after the education. Answering the questionnaire took 15 minutes for each participant. However since some of the forms were not completed by participants appropriately, data obtained from 89 participants were included.

Statistical Analysis

Statistical analyses were done using SPSS 20.0; results were given by numbers, percentages, means and standard deviations. Effects of education on participants BSE knowledge were (before and after education) were analyzed by Wilcoxon test and Paired t tests.

Ethical considerations

The permission was obtained from the management of the adult education courses. All of the women who were attending to adult education courses were verbally informed about the study only the ones who volunteered to participate were included.

RESULTS

Socio demographic variables of the participants

The age of participants were ranging between 16-52 years (mean: 29.13 ± 10.91). Ten percent point one of the women (10.1%) were literate, 27.0% of them were graduated from elementary school while 21.3% of them had intermediate degrees. The rest of the participants (41.6%) were high school and university degree holders. Close to half of the women (46.1%) were married. Some of the women reported having cancer in family members (20.2%) while none of them reported having breast cancer in close family member. Socio demographic variables related to participants were presented in table 1.

Participants' BSE knowledge and practices and effects of education

BSE knowledge and related practices of women were given table 2. Many of the participants (68.5%) were aware about BSE. TV (53.4%), journals-books (29.3%), primary care nurses/physicians (18%) and close friends/family members (14.8%) were primary sources for women's knowledge. Being young, not knowing how to perform BSE, not considering herself in a risk group and having a fear of finding something bad are some of the reasons for not performing BSE. While being women (39.3%) is considered as risk factor among participants, only 4.5% of the reported a male gender is also at risk. Most of the women indicated the lump in the breast (75.3%), inverted nipple (44.9%) and drainage from nipple (41.6%) as major signs of breast cancer. It has been determined that participants' knowledge regarding BSE and breast cancer has been improved according to statistical results. Scores obtained after the education has been significantly high than the scores obtained before the education (Table 3).

Table 1. Socio demographic variables of participants

	Mean± SD	
	n (number)	% (percentage)
Status of marriage		
Married	41	46.1
Single	48	53.9
Levels of education		
Literate	9	10.1
Elementary Level	24	27.0
Intermediate Level	19	21.3
High School Level	26	29.2
Vocational School/University Degree	11	12.4
Employment Status		
Employed	23	25.8
Unemployed	66	74.2
Income level		
Fair	29	32.6
Good	60	67.4
Health insurance		
Available	80	88.8
Not available	9	11.2
Cigarette smoking habit		
Smoker	18	20.2
Non smoker	71	79.8
Cancer in family members		
Yes	18	20.2
No	71	79.8
Breast Ca in close family member		
Yes	0	0.0
No	89	100.0
TOTAL	89	100.0

Table 2. BSE knowledge and practices of women

	n	%
Having knowlege about BSE		
Yes	61	68.5
No	28	31.5
Having breast examination done by physician		
Yes	18	20.2
No	71	79.8
Performing BSE by herself		
Yes	31	34.8
No	58	65.2
Reasons for not perfoming BSE		
Not knowing how to perform BSE	31	53.4
Being at young age	17	29.3
Not considering herself at risk	4	6.9
Being scared of finding something on the breast	6	10.3
Sources for BSE knowledge*		
Television	29	47.5
Radio	3	4.9
Journals/ written materials	22	36.1
Nurse/physician	11	18.0
Friends close family member	9	14.8
Other	38	62.3
Main risk factors described for breast cancer by women*		
Taking birth control pills for long time	41	46.1
Not breast feeding	56	62.9
Having mother/ aunt diagnosed with breast Ca	38	42.7
Having breast ca in other breast	18	20.2
Late pregnancy for the first child	33	37.1
Not delivering a baby	35	39.3
Being a female	4	4.5
Being male	10	11.2
Early menarche	9	10.1
Late menopause		
Signs of breast cancer described by women*		
Lump in breast	67	75.3
A drainage from nipple	37	41.6
Pain	23	25.8
Skin changes on breast	36	40.4
Inverted nipple	40	44.9
Any kind of discharge from nipple	30	36.0
TOTAL	89	100

*More than one answer was given

Table 3. Effects of education on participants' knowledge related to breast cancer (n=89)

	Before education		After education		Probability
	n	%	n	%	
What are the signs of breast cancer?					
Lump in the breast		75.3	69	77.5	
Drainage from nipple		41,6	63	70.8	t=-5.706
Skin changes on breast		25.8	44	49.4	p=0.000**
Pain		40.4	53	59.6	
Inverted nipple		44.9	71	79.8	
Any discharge from nipple		36.0	62	69.7	
Number of right answers	Mean± SD 2.64±1.83		Mean± SD 4.06±1.75		
Risks for developing breast cancer described women					
Long term use of birth control pills	10	11.2	19	21.3	
Not breast feeding	41	46.1	58	65.2	t=-5.650
Having mother/aunt diagnosed with breast cancer	56	62.9	78	87.6	p=0.000**
Breast cancer in one breast	38	42.7	59	66.3	
Delivery of first child in advanced age	9	10.1	21	23.6	
Delivery of the first child in early age	33	37.1	45	50.6	
Not delivering a child	35	39.3	49	55.1	
Being female	4	4.5	10	11.2	
Being male	17	19.1	26	29.2	
Being overweight	10	11.2	20	22.5	
Early menarche	9	10.1	14	15.7	
Late menopause					
Number of right answers	Mean± SD 3.00±2.24		Mean± SD 4.50±2.50		
BSE should start at 20 years of age					
Incorrect	24	77.4	4	12.9	Wilcoxon=276.000
Correct	7	22.6	27	87.1	Test=4.796
					p=0.000***
BSE should be done after menstruation is over					
Incorrect	27	87.1	1	3.2	Wilcoxon=276.000
Correct	4	12.9	30	96.8	Test=4.796
					p=0.000***

More than one answer was given **Paired t test ***Wilcoxon test

Discussion

Sources for BSE knowledge are reported as health care professionals, newspapers, TV's according to research studies (Aydemir 2009; Dişçigil et al, 2007; Göçgeldi et al 2008; Koç & Sağlam, 2009; Kum et al, 2004) and other visual materials and close family members (Kılıç et al 2006). On the other site usage of written materials are at very low level (Dişçigil et al, 2007). As it is in other studies TV is the most common way for getting information regarding BSE in our study. According to Gucuk & Uyeturk's study (2013) women primarily source for BSE is health practitioners which is quite different from the results of our study where health care professionals (nurses and physicians) reported as a source of BSE knowledge at very low level. Only 20.2% of the women reported seeing physician and examined by him/her. According to these results it can be said that women are not able to go to physicians even for routine controls and their access to health care system is fairly poor. Another reason for not having breast examination done by physicians could be health beliefs and practices of women. The concept of health is dynamic process where people adapt to changes occur both their inside and outside environment and maintain their well being and these health behaviors are being affected by beliefs, worth and attitudes (Bayat, 2012). According to studies done in Turkey BSE practices of women range between 16.2%-63.8% (Çevik et al 2005; Çınar Yücel et al,2013; Dişçigil et al;2007; Göçgeldi et al,2008; Kılıç et al, 2006; Kum et al,2004; Rızalar & Altay 2010; Yılmazel,2013). In our study more than half of the participants reported knowing to perform BSE (68.5%) however women actually doing BSE in regular basis are as low as 34.8%. Being afraid of detecting something in their breast, being at young age, not considering themselves at risk could link to women's personal beliefs and values. Similarly in one study embarrassment, being afraid of experiencing pain and fear of detecting something bad are common reasons for not performing BSE (Koç & Sağlam, 2009). Although some factors such as higher education level positively correlates with health beliefs and attitudes (Göçgeldi et al 2008; Kılıç et al,2006; Norlaili et al,2013; Yılmazel, 2013), one study reported even having a family member diagnosed with breast cancer does not have an effect on women's BSE practices (Gucuk & Uyeturk, 2013). According to these findings it

can be said that having knowledge about health practices are not enough to improve people's behavior solitarily. However by planned training programs related to breast health practices, repeating them on regular basis can increase the awareness of women related to this issue and also will help detecting breast cancer at early stages. Yan-Qiong Ouyang & Xiaoyan Hu (2014) states that planned education contributes with women's BSE practices, accuracy and frequency of it. Our results also support that the education given to women related to breast cancer and BSE improved their knowledge. Finding a mass reported as major sign of cancer by our participants (%74.4) which is consistent with other research studies (Boulos & Ghali, 2013; Çevik et al. 2005; Kum et al,2004; Ranasinghe et al, 2013; Yılmaz et al.2013) however answers given by participant show that they are not aware of all the signs of breast cancer. BSE examination thought by health care professional is more affective in improving BSE practices of women rather than learning it from other sources such as internet, television etc (Gucuk & Uyeturk, 2013). Performing BSE on regular basis is very low although women reported having knowledge about it. This results show that having knowledge is not affective in transforming theory to practice itself. Especially not showing health care professionals as source of their knowledge represents that education related to improving practices on BSE are not sufficient. Teaching the signs of breast cancer to women, considering the facts about it, using interactive methods and adopting surveillance programs will help in both improving their knowledge and practices about breast health.

Limitations of the study

Although testing the participants' knowledge level of the right after the education can be considered as disadvantage for this study, the results of this study is important to show the effectiveness of the education on improving knowledge.

REFERENCES

- Akyolcu N, Uğraş GA (2011) Breast Self-Examination: How important is it in early diagnosis? The Journal of Breast Health,7(1):10-14.
- Aydemir G (1990) Knowledge level of married women between 15-49 years about BSE. Ege University Nursing School Journal, 6: 5-8.

- Bayat M (2012) Health and Illness (Editors: Seviğ Ü & Tanrıverdi G: in Transcultural Nursing) İstanbul Medical Bookstores, İstanbul. pp. 9-18.
- Boulos DN, Ghali RR (2013) Awareness of breast cancer among female students at Ain Shams University. Egypt J Health Science 4,6(1):154-61.
- Çevik C, Akbulut G, Erkal S (2005). Effects of knowledge levels of women related to BSE on recognizing mass in their breast. Nursing Forum (Article in Turkish) 6: 4-8.
- Çınar Yücel S, Orgun F, Tokem Y, Unsal Avdal E, Demir M(2013) Determining the Factors that Affect Breast Cancer and Self Breast Examination Beliefs of Turkish Nurses in Academia, Asian Pacific Journal of Cancer Prevention,15:1275-1280.
- Dişçigil G, Sensoy N, Tekin N, Söylemez A(2007) Breast Health: Knowledge, Behaviour And Performance in a Group of Women Living in the Aegean Region, Marmara Medical Journal, 20(1):29-36.
- Göçgeldi E, Açıkel CH, Hasde, M, Aygut G, Çelik S, Gündüz İ, Karadeniz Y, Ayas R, Şahin E, Deniz C (2008) Investigation of Attitudes and Behaviors of a Group of Women on Breast Self-Examination, who live in Ankara Gölbaşı Region, Fırat Medical Journal, 13(4):261-265.
- Gucuk S & Uyeturk U (2013) Effects of Direct Education on Breast Self-Examination Awarness and Practice among women in Bolu, Turkey, Asian Pacific Journal of Cancer Prevention, 14:7707-7711.
- Kılıç S, Uçar M, Seymen E, İnce S, Ergüvenli Ö, Yıldırım A, Portakal N, Kuru N (2006) Determination of the knowledge and practice level of breast self-examination among the nurses of the GATA hospital, the students of the GATA nursing school and some female patients, Gülhane Medical Journal,48:200-204.
- Koç Z, Sağlam Z (2009) Determination of women's knowledge regarding breast cancer, preventive measures and practices related to BSE and effects of education, Breast Health Journal, 5:25-33.
- Kum S, Göksu Alp U, Kelkitli E, Yücel İ (2004) The prevalence of the risk factors effecting the breast self-examination in Middle Black Sea Region, Turkish Oncology Journal, 19(1):24-27.
- Norlaili A.A., Fatihah MA, Daliana NFN, Maznah D (2013) Breast Cancer Awareness of Rural Women in Malesia: is it the same as in the cities? Asian Pacific Journal of Cancer Prevention, 14:7161-7164.
- Ranasinghe HM, Ranasinghe N, Rodrigo C, Seneviratne Rde A, Rajapakse S (2013) Awareness of breast cancer among adolescent girls in Colombo, Sri Lanka: a school based study. BMC Public Health, December Issue,1-7.
- Rızalar S & Altay B (2010) Early Diagnosis Applications of Women With Breast Cancer,
- Fırat Sağlık Hizmetleri Dergisi, 5(14):73-86. Seçginli, S (2011) Meme kanseri taraması: Son yenilikler neler? TAF Preventive Medicine Bulletin 10(2):193-200.
- Seçginli, S (2011) Breast Cancer Surveillance: Last developments? TAF Preventive Medicine Bulletin 10(2):193-200.
- Turkish Health Administitory Statistics (Türkiye Sağlık Bakanlığı İstatistikleri) www.sağlık.gov.tr, reached on April 2014.
- Yan-Qiong O, Xiaoyan H (2014).The Effect of Breast Cancer Health Education on The Knowledge, Attitudes, and Practice: A Community Health Center Catchment Area, Journal of Cancer Education (published ahead of print).
- Yılmazel G (2013) Determining Practising of Breast Self-Exam and Breast Cancer Risk Factors in Women Aged Twenty Years and Over Living in a Rural Area of Corum, The Journal of Breast Health, 9:82-7.