

Breast Self-Examination Knowledge and Practice Level of Female Health Care Professionals Who Work in Istanbul

İstanbul'da Bir Sağlık Kuruluşunda Çalışan Kadın Sağlık Profesyonellerinin Kendi Kendine Meme Muayenesini Bilme ve Uygulama Durumları

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Abstract Objective : This descriptive study conducted in a state hospital to understand female health care professionals' knowledge and practice level of Breast Self-Examination (BSE). **Materials and Methods:** Study sample was 76 voluntary women working in the hospital from July 9th to September 17th in 2009. Data of the study has been collected using a questionnaire developed by the researcher according to the literature. The participation was totally on the basis of voluntariness and the questionnaire has been filled up by the participants themselves. Evaluation of the data was done with computer. **Results:** Study found the 86.8% of them know how to perform BSE; 19.7% were doing it periodically each month. Signs and symptoms to observe through it were known between 32.9% - 60.5% and the awareness about the important points of it was between 30.3% - 77.6%. **Conclusion :** Research data analysis showed they know theoretically how to practice it but few performing it periodically and effectively and they have medium knowledge about what signs and symptoms to observe through breast self-examination.

Key words: Breast cancer, breast self-examination, early cancer diagnosis

Özet Amaç : Bu araştırma devlet hastanesinde çalışan kadın sağlık profesyonellerinin Kendi Kendine Meme Muayenesi (KKMM) ile ilgili bilgilerini ve uygulamalarını değerlendirmek amacıyla tanımlayıcı olarak yapıldı. **Materyal ve Metod :** Araştırmanın örneklemini araştırmaya katılmaya istekli ve 9 Temmuz – 17 Eylül 2009 tarihlerinde hastanede görevli olan 76 kadın sağlık profesyoneli oluşturdu. Veriler araştırmacı tarafından literatür bilgileri doğrultusunda geliştirilen bir anket formu ile toplandı. Katılım tamamen gönüllülük ilkesine dayalıydı ve anket katılımcıların kendileri tarafından dolduruldu. Verilerin değerlendirilmesinde bilgisayar ortamından yararlanıldı. **Bulgular :** Araştırmada katılımcıların %86.8'inin KKMM yapmasını bildiği ve %19.7'sinin düzenli her ay KKMM yaptığı belirlendi. Ayrıca katılımcıların %32.9 ile %60.5 arasında kendi kendine meme muayenesinde araştırılması gereken belirti ve bulguları bildiği, %30.3 ile %77.6 arasında KKMM yapılırken dikkat edilmesi gereken noktaları bildiği saptandı. **Sonuç :** Araştırma sonucunda kadın sağlık profesyonellerinin çoğunun KKMM'yi teorik olarak bildiği, fakat çok azının düzenli ve etkin olarak yaptığı ve katılımcıların orta düzeyde KKMM'de araştırılması gereken belirti ve bulguları bildiği saptandı.

Anahtar Kelimeler : Meme kanseri, kendi kendine meme muayenesi, erken kanser teşhisi

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Introduction

Breast cancer is the most common deadly disease in Turkey and in the world among women. It is in the first place between cancer types suffered by women with an incidence rate of 40.6/100.000 according to 2009 statistics of Health Ministry of Turkey.¹ In 2012, 1.7 million women were diagnosed with breast cancer and there were 6.3 million women alive who had been diagnosed with breast cancer in the previous five years.² Extension of average life time, changes on lifestyles, diagnostic tests together with screening programs and cancer feedbacks' increase cause the incidence rate of breast cancer to rise. Despite the all advancements in medicine, breast cancer still threatens lives of women. Since it is a common and deadly disease even healthy women are seriously anxious about it. Diminishing this threat is possible by each society itself deciding the breast cancer risks and groups at risk and by generalizing screening programs which includes Breast Self-Examination (BSE), mammography (MG) and clinical breast examination. Like most types of cancer, early diagnosis is the key element on treatment, life extension and chances of surgical attempts.³⁻⁶ In our country, every woman between the ages of 40-69 are tested by mammography (MG) every two years, and counseling is provided on BSE to every woman above the age of 20.⁷ 80-90% of breast masses is detectable by women themselves through BSE and 25.0% of these masses are malignant.^{6,8,9} Although BSE is not enough on cancer diagnosis by itself, it is still an important tool since increases women's responsibility over their own health and their familiarity with breast tissues. It also is an economic and easy tool which requires no special equipment and helps women to learn preventative health measures. Performing BSE regularly takes only 10 minutes each month and prevents women's privacy. Many health institutions all around the world recommend BSE to all women after

age 20 as an early diagnosis tool on breast cancer.^{3,5,9-14}

Female health care professionals have an indispensable role on breast cancer signs and symptoms detection and diagnosis, identification of the risk groups, informing the public on importance of early diagnosis methods. This role forces them to have comprehensive knowledge on breast cancer and be skilfully experienced on applying screening measures against it. The studies carried out on this issue make one to think that female health care professionals in Turkey are not having enough information and skills to play this role.

Researches made in Turkey between female health care professionals reveal that 81.3% to 40.6% of them perform BSE irregularly; 58% to 15% perform it regularly each month; 68% to %8 never performed it.^{8,11,13,15,16} As the researches reveal, most of the female health care professionals do not make BSE a part of their lives, so it was necessary to conduct a research on this area to decide what kind of strategy is needed to improve the status of this important tool.

Method

Study design: This study was designed as a descriptive to assess the knowledge and skill level towards BSE of female health professionals working in Istanbul.

Setting and sample: Population of the study were 107 female health care professionals (technicians, nurses, doctors, pharmacists, laboratory assistants) working in the hospital. The sample of the study was 76 female health care professionals who were working in the hospital at the mentioned dates and willing to participate in the study. The participation rate of the study is low because the dates (July 9th to September 17th in 2009) the research has been conducted are traditionally the season of annual leaves and the hospital assigns some of its employees in two different district polyclinics.

Ethical consideration: Istanbul Health Directorate's written permission from the

institutional ethical committee was taken before starting the study. The researcher received verbally informed concerning of participants. The participation was totally on the basis of voluntariness and the questionnaire has been filled up by the participants themselves.

Measurements/Instruments: Data of the study was collected using a questionnaire developed by the researcher according to the literature.^{5,8,9,11-14,16,17} Questionnaire is composed of 19 questions concerning female health care professionals' socio-demographic characteristics, presence of family member(s) with breast cancer, BSE knowledge, practice and practicing frequency.

Data collection/Procedure: Data collection was took approximately 3 months from July 9th to September 17th in 2009 at the Hospital of Istanbul province. The researcher was

applied questionnaire at hospital. Participants who agree to take part in the stuffy were taken into interview rooms and questionnaire were filled with face-to-face interview method at 10 minutes.

Data analysis: Evaluation of the data obtained in this study was done with statistics package program. Frequency, ratio values were used in analysis of the data.

Results

52.6% of health care professionals were between 26-35 years old; 75.0% had at least bachelor's degrees with some also possessing master's degrees (Table 1). The research revealed that 86.8% of the participant health care professionals know how to perform BSE, 19.7% were performing it periodically, 32.9% know when to perform according to menstruation cycle, 26.3% know at what age to start performing BSE (Table 2).

Table 1. Socio-demographic Characteristics

Socio-demographic Characteristics		N	%
Age	18-25	21	27.6
	26-35	40	52.6
	36 and over	15	19.7
Education	High School	19	25.0
	Bachelor's Degree + Master's Degree	57	75.0
Job	Other Health Care Professionals	22	28.9
	Nurse	47	61.8
	Doctor	7	9.2
Total		76	100.0

Table 2: Health care professionals' knowledge and practice level of Breast Self-Examination (BSE)

Knowledge and practice level of Breast Self-Examination (BSE)	Yes		No		Total	
	n	%	n	%	n	%
Participants who know how to perform BSE	66	86.8	10	13.2	76	100.0
Participants who perform BSE every month	15	19.7	61	80.3	76	100.0
Participants who know when to perform according to menstruation cycle	25	32.9	51	67.1	76	100.0
Participants who know at what age to start performing BSE	20	26.3	56	73.7	76	100.0

For the visual examination stage of the three different levels of BSE assessment, 36.8% of health care professionals know to observe “redness, purpleness on the breast skin”, “nipple abnormality”, “fluid coming out of nipples”; for the examination of the breasts using hands while lied down, 60.5% of health care professionals know to observe “lumps or solidity”; for the examination of breast using hands while standing up 51.3% know to observe for “swellings on the breasts” (Table 3). When important points

need to be known to perform an efficient BSE criteria is looked for, 77.6% of them know to “perform it in the shower when their skin is wet and slippery”, 30.3% know to “use pads of three middle fingers”, 43.4% know where to examine which is “from the outside of the breast (under the armpit) toward the middle of the chest, up to the collarbone and down to the bottom of the ribcage”, 32.9% know to “use different levels of pressure - light, medium, and firm - to feel each part of the breasts” (Table 3).

Table 3. What to observe and important points knowledge level while performing Breast Self-Examination (BSE) (N=76)*

		Know	%
Symptoms to observe during visual examination stage of BSE	Redness and purpleness on breast skin	28	36.8
	Abnormality on the nipples	28	36.8
	Nipple discharge	28	36.8
	Breasts that are not evenly shaped with visible distortion	25	32.9
	One of the breasts being bigger, smaller or contracted than the usual size	25	32.9
Symptoms to observe in BSE during hand examination while lied down	Lumps or solidity in the breast	46	60.5
Symptoms to observe in BSE during hand examination while standing up	Swelling on the breast (its size, shape, borders, solidity and mobility)	39	51.3
Level of knowledge towards important points of BSE	Performing BSE under shower when the skin is wet and slippery	59	77.6
	Using pads of three middle fingers	23	30.3
	The area to examine on the breast	33	43.4
	Applying three different levels of pressure (light, medium and firm)	25	32.9

* More than one option has been chosen. Most chosen options have been placed in the questionnaire.

Discussion

Studies conducted both domestically and internationally concerning health care professionals' knowledge, practice and skill level of BSE do not reveal any similarities

depending on age and the educational background but they do reveal similarities depending on the jobs of health care professionals.^{8,13,16,17}

A study conducted between women drawn from normal population in Turkey show that while 13.4% of the women perform BSE regularly each month, 38.8% do not do so.⁹ Another research stresses that 86.2% of the women never performed BSE in their lives, 13.8% perform it sometimes and none of them regularly perform it.¹⁸ An international study how that 68.3% of women are not aware of BSE, 18.1% who perform BSE are mainly between the age 50-59 and quite a few of them are under age 30.¹⁹

Researches made in Turkey between female health care professionals show that 81.3% to 40.6% of them perform BSE irregularly; 58.0% to 10.2% perform it regularly each month; 68.0% to %8.0 never performed it.^{7,8,11,13,15,16} Additionally Cavdar et al.'s (2007) study indicates 40.0% of the nurses and 38.0% of doctors who perform BSE do it between 5th-7th days of their menstruation cycle. Another study shows that 60.9% of nurses who perform BSE were aware of the right time for it.¹¹

Madanat and Merrill's (2002) study in Jordan show that 67.9% of nurses know that BSE should be performed each month regularly and 63.35% know the right age to start performing it. Another study carried on public health nurses showed that 93.0% of them were performing BSE and the rest never done it before. Ones who don't perform BSE states that they are either too busy or forget to do it.²¹

Participants of the study are health care professionals with high educational backgrounds and study indicates that this increases the level of knowledge towards BSE but it has no affect on the practice level of BSE (Table 2). Different studies list female health care professionals' reasons for not to perform BSE regularly are as follows; forgetting, having no time, not considering BSE as necessary, having no sufficient knowledge and skills, not being able to form it as a habit, not believing to be in the risk group and the most effective reason which creates a strong reluctance is being afraid of finding a lump in the breasts.^{13,14,16}

Participant health care professionals received information concerning early diagnosis methods of breast cancer during their formal vocational educations and Health Ministry organizes on-the-job trainings at intervals about breast cancer. When these two facts taken into consideration, the rate of participants who perform BSE regularly with the right method is thought to be very low. A female health care professional who doesn't perform BSE can fail to create awareness towards it in the people she serves.

Many studies reveal that lumps in the women who perform BSE regularly are smaller and more localized than ones who don't perform it regularly and 80-90% of lumps are found during BSE or incidentally by women themselves.^{6,8,9} Additionally, literature shows that when BSE is performed regularly, breast cancer mortality rate would fell and survival rates would increase.¹⁴

Koc and Saglam's (2009) study shows that women in the normal population have no sufficient knowledge and skills prior to their formal education and after it a statistically significant difference occurs when compared with before.

When female health care professionals' knowledge of BSE technique is investigated in Turkey, it's found that 25.0% to 52.2% of them know the right technique exactly, 14.9% to 39.4% know it inadequately and 8.4% know nothing about it.^{15,16} This study findings were similar to the literature (Table 2, Table 3).

To be able to get to know the breast tissue and detect the possible changes in it, BSE should be performed regularly individuals should be willing to perform it and also should know the technique well; feel responsibility to practice it and should assess the signs and symptoms obtained through BSE effectively.⁶

Altuncan et al.'s (2008) research on women drawn from normal population show that higher educational background and family history of breast cancer are connected with BSE practice ($p < 0.05$). Another study conducted on Nigerian women drawn from

normal population reveals that women with a university degree possess higher degree of knowledge about BSE ($p=0.045$) and employs it much higher than women with elementary education.¹⁹

Conclusion

Research data analysis showed that female health care professionals know how to practice it but few of them performing it periodically and effectively and they have average knowledge about what signs and symptoms to observe through the examination. Additionally, study found, nurses' and doctors' level of knowledge of BSE than other health care professionals is statistically meaningful when compared.

Under the light of these results, it's decent to say BSE should have more of a place in formal vocational and on-the-job trainings of female health care professionals and demonstrative means should be installed to teach it better. Also, before and after every training activity necessary tests should be applied to participants to measure the efficiency of trainings.

To increase the level of health care professionals' right and efficient use of BSE, breast health initiatives should be prepared by taking into account socio-cultural structures and characteristics.

However, BSE is a very suitable method for developing countries like Turkey since it's a cheap and easy way of breast cancer early diagnosis.

Conflict of Interest

The authors declare no conflicts of interest.

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References

1. TC Sağlık Bakanlığı. Türkiye Halk Sağlığı Kurumu. Kanser Daire Başkanlığı [Health Ministry of Turkey. Public Health Agency of Turkey. Cancer Departments]. Available from : [http://kanser.gov.tr/daire-](http://kanser.gov.tr/daire-faaliyetleri/kanser-istatistikleri/922-2009-kanser-insidanslar%C4%B1.html)

[faaliyetleri/kanser-istatistikleri/922-2009-kanser-insidanslar%C4%B1.html](http://kanser-istatistikleri/922-2009-kanser-insidanslar%C4%B1.html) (Access Date: 13.03.2015)

2. International Agency for Research on Cancer. Latest world cancer statistics Global cancer burden rises to 14.1 million new cases in 2012: Marked increase in breast cancers must be addressed. http://www.iarc.fr/en/media-centre/pr/2013/pdfs/pr223_E.pdf (Access Date: 20.05.2015)
3. İğci A, Asoğlu O. Meme Kanserinin Erken Tanısında Tarama Yöntemleri [Early Diagnosis of Breast Cancer Screening Methods]. In Topuz E, Aydın A, Dinçer M (Eds), Meme Kanseri [Breast Cancer]. Istanbul: Nobel Medical Bookstores; 2003. p.113-123.
4. Gençtürk N. Meme kanserinde korunma [Protection of breast cancer]. Atatürk Üniversitesi Hemşirelik Yüksekokulu Dergisi [Journal of Anatolia Nursing and Health Sciences] 2007; 10(4): 72-82.
5. Kılıç D, Sağlam R, Kara Ö. Üniversite öğrencilerinde meme kanseri farkındalığını etkileyen faktörlerin incelenmesi [The examination of the factors affecting the awareness of breast cancer in college students]. Meme Sağlığı Dergisi [The Journal of Breast Health] 2009; 5(4): 195-199.
6. Akyolcu N, Altuğ Uğraş G. Kendi kendine meme muayenesi erken tanı ne kadar önemli? [Breast self-examination: How important is it in early diagnosis?]. Meme Sağlığı Dergisi [The Journal of Breast Health] 2011; 7(1): 10-14.
7. Isik Andsoy I, Gul A. Breast, cervix and colorectal cancer knowledge among nurses in Turkey. *Asian Pasific Journal of Cancer Prevention* 2014; 15(5): 2267-2272
8. Cavdar I, Akyolcu N, Ozbas A, Oztekin D, Ayoglu T, Akyuz N. Determining female physicians' and nurses' practices and attitudes toward breast self-examination in Istanbul, Turkey. *Oncology Nursing Forum* 2007; 34(6): 1218-1221.

9. Ekici E, Utkualp N. Kadın öğretim elemanlarının meme kanserine yönelik davranışları [Women instructors behaviors towards breast cancer]. *Meme Sağlığı Dergisi [The Journal of Breast Health]* 2007; 3(3): 136-139.
10. Gençtürk N. Meme kanserinde risk faktörleri [Risk factors in breast cancer]. *Hemşirelik Forumu Dergisi [Nursing Forum]* 2006; July-August, May-June: 106-112.
11. Kılıç S, Uçar M, Seymen E, İnce S, Ergüvenli Ö, Yıldırım A, Portakal N, Kuru N. Kendi kendine meme muayenesi bilgi ve uygulamasının GATA Eğitim Hastanesinde görevli hemşire, hemşirelik öğrencileri ve hastaneye müracaat eden kadın hastalarda araştırılması [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 Tıp Dergisi [Gulhane Medical Journal]* 2006; 48(4): 200-204.
12. Aydın Avcı İ, Altay B, Kocatürk B. Ebe öğrencilerin kendi kendine meme muayenesine yönelik sağlık inançları [Midwifery students' health beliefs intended for breast self examination]. *Meme Sağlığı Dergisi [The Journal of Breast Health]* 2008; 4(1): 25-28.
13. Karayurt Ö, Coşkun A, Cerit K. Hemşirelerin meme kanseri ve kendi kendine meme muayenesine ilişkin inançları ve uygulama durumu [Nurses' beliefs about breast cancer and breast self examination and their breast self examination performance]. *Meme Sağlığı Dergisi [The Journal of Breast Health]* 2008; 4(1): 15-20.
14. Koç Z, Sağlam S. Kadınların meme kanseri, koruyucu önlemler ve kendi kendine meme muayenesi ilgili bilgi ve uygulamalarının belirlenmesi ve eğitimin etkinliği [Determination of the knowledge and the practice of female patients about breast cancer, preventive measures and breast self-examination and effectiveness of education]. *Meme Sağlığı Dergisi [The Journal of Breast Health]* 2009; 5(1): 25-33.
15. Canbulat N. Sağlık çalışanlarının meme kanseri, kendi kendine meme muayenesi ve mamografiye ilişkin sağlık inançlarının belirlenmesi [The examination of health workers' health beliefs on breast cancer, breast self examination and mammography]. TC Atatürk Üniversitesi Sağlık Bilimler Enstitüsü Cerrahi Hastalıkları Hemşireliği Anabilim Dalı Yüksek Lisans Tezi [TC Atatürk University, Institute of Health Sciences, Department of Surgical Nursing, Master's Thesis], Erzurum, Turkey, 2006. (<http://www.belgeler.com/blg/u83/saglik-calisanlarinin-meme-kanseri-kendi-kendine-meme-muayenesi-ve-mamografiye-iliskin-saglik-inanclarinin-incelemesi-examination-of-health-workers-health-beliefs-on-breast-cancer-breast-self-examination-and-mammography>) (Access Date 31.07.2014)
16. Uncu F, Bilgin N. Birinci basamak sağlık hizmetlerinde çalışan ebe ve hemşirelerin meme kanseri erken tanı uygulamaları konusunda bilgi, tutum ve davranışları [Knowledge, attitude and behavior of midwives and nurses working in primary health services on breast cancer early diagnosis practices]. *Meme Sağlığı Dergisi [The Journal of Breast Health]* 2011; 7(3): 167-175.
17. Ibrahim NA, Odusanya OO. Knowledge of risk factors, beliefs and practices of female healthcare professionals towards breast cancer in a tertiary institution in Lagos, Nigeria. *BMC Cancer* 2009; 9-76: 1-8.
18. Altuncan H, Akın B, Ege E. 20-60 yaş arası kadınların kendi kendine meme muayenesi (KKMM) uygulama davranışları ve farkındalık düzeyleri [Awareness and practice of breast self examination (BSE) among 20-60 years women]. *Meme Sağlığı Dergisi [The*

- Journal of Breast Health] 2008; 4(2): 84-91.
19. Balogun MO, Owoaje ET. Knowledge and practice of breast self-examination among female traders in Ibadan, Nigeria. *Annals of Ibadan Postgraduate Medicine* 2005; 3(2): 52-56.
20. Madanat H, Merrill RM. Breast cancer risk factor and screening awareness among women nurses and teachers in Amman, Jordan. *Cancer Nursing* 2002; 25(4): 276-282.
21. Chong PN, Krishnan M, Hong CY, Swash TS. Knowledge and practice of breast cancer screening amongst public health nurses in Singapore. *Singapore Med J* 2002; 43(10): 509-516.