RESEARCH COMMUNICATION

Knowledge, Facilitators and Perceived Barriers for Early Detection of Breast Cancer among Elderly Turkish Women

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Abstract

This article deals with elderly Turkish women's experiences with breast self examination, clinical breast examination and mammography screening, as well as perceived barriers and facilitators in the theoretical framework of the Health Belief Model and the Health Promotion Model. This is a qualitative study performed on 46 elderly women aged 60-75 years. Data were collected with focus group interviews and analyzed systematically with qualitative analysis techniques to determine themes concerning knowledge and facilitators of and perceived barriers to early detection of breast cancer among elderly women. Barriers to screening were insufficient knowledge, fear, neglect/postponement, embarrassment/religious beliefs, inability to make an appointment, lack of a physician's recommendation and health professionals' attitudes. Facilitating factors were being informed about screening, fear, awareness of cancer screening, familial history of breast cancer and social support, making an appointment, health professionals' communication and physicians' recommendations. Public health nurses and health professionals from other health disciplines should be aware of elderly women's need for knowledge about screening, understand elderly women's fear and worries about their health and know barriers to and facilitators of screening.

Keywords: Breast cancer - early detection - elderly Turkish women

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Introduction

Twenty-three percent of the women with cancer have breast cancer (Anderson and Jakesz, 2008) and about half of the women aged 65 years and older have breast cancer and 13% of them die (Mandelblatt and Yabroff, 2000). It has been reported from Turkey that the most frequent type of cancer among women is breast cancer, which appears in 34.73 out of every 100.000 women (http://www.saglik.gov.tr). The incidence of breast cancer is 20/100.000 in the eastern part of Turkey and 40-50/100.000 in the western part of Turkey. The difference between the regions is explained by education, financial reasons, opportunities for clinical breast examination and mammography, menopause clinics and people's priorities. The rate of the women diagnosed with early breast cancer is higher than 50% in İzmir, a city in the western part of Turkey (Özmen, 2006) and breast cancer is the most frequent cancer among women at all ages (about one fourths or 26.7% of the women) and among the women aged 65-74 years (Fidaner et al., 2001).

The most effective way of health promotion and decreasing mortality and morbidity in patients with breast cancer is early diagnosis of breast cancer. The disease can be diagnosed earlier with mammography, breast self examination (BSE) and clinical breast examination (CBE). Although BSE has not been shown to decrease mortality from breast cancer in the literature, women's awareness of breast cancer, BSE, CBE and mammography are considered health promotion activities which should not be separated, which help to make early diagnosis of the disease and which promote health (McCready et al., 2005). It is important to know why elderly women do not have breast cancer screening since it can be used to motivate them to adopt health promoting activities. In this context, Champion's Health Belief Model (HBM) and Pender's Health Promotion Model (HPM) can be effectively used to determine barriers to early detection of breast cancer among elderly women.

HBM was developed by Hochbaum and Rosenstock in the early 1950's to explain why the number of people participate in screening programs, which help prevent diseases and diagnose them early, is low (Champion and Skinner, 2008; Gasalberti, 2002). The model is used to explain changes in health behaviors, to maintain good health and to plan interventional studies about disease prevention behaviors. Key terms concerning HBM propose that if individuals perceive disease as susceptibility, believe in the outcomes concerning disease severity and are aware of both benefits of and barriers to screening and there are positive activators for screenings such as education, media and reminders for screening, relevant health behaviors will emerge. The most distinctive characteristic of the model is reported

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to be perceived barriers (Champion and Skinner, 2008; Gasalberti, 2002).

Pender's HPM, based on Social Learning Theory, was first developed in 1980 and revised in 1987 and 1996. It is a model which describes factors which have direct and indirect effects on health behavior and which basically focus on health promotion (Pender, 2006; Gasalberti, 2002). Cognitive-perceptive factors in HPM are importance placed on health, self-efficiency, perception of health control, perception of health status, perception of benefits of health promoting behaviors and perception of barriers to and facilitating health behaviors. Pender claims that perceived health and perceived barriers directly or indirectly affect maintenance of health behavior (Pender, 2006).

Although Pender's HPM has been reported to be used in a limited number of studies about early screenings for breast cancer (Dula, 1996; Gasalberti, 2002), HBM has been shown to be suitable in understanding breast cancer screening behaviors (Champion and Skinner, 2008; Sadler et al., 2007). Dula (1996) in a study on women aged 64 years and older revealed that the women not performing BSE experienced more barriers and had less self confidence and fewer perceived benefits than those performing BSE. Gasalberti (2002) did not find a relation between perceived health and performing BSE, but found a negative relation between perceived barriers and performing BSE. Among barriers to breast screening and seeing a doctor are lack of knowledge about practices of early diagnosis, transportation facilities, lack of social support from family, friends and spouses, lack of health insurance and beliefs (Nahcivan and Secginli 2007; Garbers et al., 2003; Lamyian et al., 2007; Zapka and Berkowitz, 1992; Kearney, 2006; Buki, Borrayo and Feigal, 2004), fear of removal of breasts, fear of death, fear of a change in body image, reluctance and shyness (Taplin et al., 2000; Borrayo et al., 2005; Ogedegbe et al., 2005; Young and Severson, 2005; Remennick, 2006; Park et al., 2007).

Although it is important to determine barriers to and facilitators of breast cancer screenings, there have been few qualitative studies about the issue among elderly women (Zapka and Berkowitz, 1992; Phillips et al., 2001; Borrayo et al., 2005; Ogedegbe et al., 2005; Coughlin et al., 2007). In Turkey, a quite low rate of the women had health behaviors concerning early detection of breast cancer and there is limited information about its causes (Nahcivan and Secginli, 2007). Karayurt in one study (2003) showed that as perceived barriers increased, the frequency of BSE decreased and that a higher rate of the women with high perceived susceptibility, perceived seriousness, perceived benefits, self-efficacy and health motivation performed BSE as recommended. Dündar et al. (2006) found a positive relation between knowledge of breast cancer and performing BSE, perceived benefits of BSE, motivation for BSE and perceived benefits of mammography. It has been reported that appropriate education programs can eliminate barriers to screenings and increase the rate of the women receiving screenings (Lee et al., 2007; Coughlin et al., 2007; Wood et al., 2002). However, to our knowledge, there have not been any studies on barriers to and facilitators of early detection of breast cancer in elderly women in Turkey. This study is important in that the results will reveal internal and external barriers to early detection of breast cancer in elderly women, guide education programs which will decrease the barriers and help elderly women benefit from screening programs. In addition, gaining insight into the factors which play a role in early detection of breast cancer among elderly women can increase the number of elderly women receiving screening.

The aim of this study was to investigate experiences of BSE, CBE and undergoing mammography and perceived barriers among elderly women aged 60-75 years in the theoretical framework of HBM and HPM. The research questions were as follows:- Why do not elderly women exhibit behaviors of early breast cancer detection sufficiently? What are the barriers to early breast cancer detection among elderly women? What facilitators of early breast cancer detection do elderly women expect?

Materials and Methods

Study Design

This is a qualitative study performed on elderly women aged 60-75 years to investigate perceived factors likely to affect early breast cancer screening behaviors in Balçova district of İzmir, Turkey. Data were collected with focus group interviews.

Study Setting and its Characteristics

By the time the study started, there had been seven "district homes" in Balçova, İzmir. They had been supported by the municipality for five years to help women to cope with a wide variety of issues including adapting to their social life and current living conditions. Focus group interviews were conducted in the "district homes". Participants were seated around a round or square table and the interviews were arranged by the investigator beforehand to avoid any interruptions.

Study Population and Sample

According to the WHO, chronological aging is divided into three: i.e. the elderly (60-74 years), the aged (75 years or older) and the very old (90 years or older) (Skeet, 1983). Therefore, the participants of this study, aged 60 years and older were considered as the elderly. The study population was composed of all elderly women aged 60-75 years and living in Balçova, İzmir. Purposeful sampling was used. A total of 46 elderly women were interviewed at six focus group interviews. The women not needing assistance in their daily living activities and those not diagnosed with dementia, Alzheimer's disease and cancer were included into the sample. Addresses of the women aged 60-75 years were obtained from Balçova Municipality and family physicians.

The women were asked questions about early breast cancer screening behaviors and barriers to and facilitators of screenings at focus group interviews. Based on HBM and HPM, the following standard questions were asked and other questions were added during interviews. To determine what elderly women know about breast

cancer, such questions as "What do you think of breast cancer?" and "What do you think of symptoms of breast cancer?", to determine elderly women's knowledge and awareness of breast cancer and mammography, BSE and CBE, such questions as "Is it possible to diagnose breast cancer in its early stages?" and "How can it be diagnosed?", to determine elderly women's knowledge of causes of breast cancer, the question "What are some causes of breast cancer in women?", to determine elderly women's knowledge of breast cancer screenings, the questions "Have you ever had a breast cancer screening?" and "How often do you think breast cancer screenings should be performed?" and to determine barriers to and facilitators of breast cancer screenings, such questions as "Could you please tell about your experiences with breast cancer screenings?" and "What has prevented you from receiving breast cancer screenings?" were asked. Expert opinions about the questions were requested from two nurse academicians specializing in qualitative research. In addition, a PhD proficiency jury of five academicians was requested to provide their opinions and recommendations.

Data Collection

Focus group interviews are preferable to individual interviews in that they help to provide detailed information about attitudes, beliefs and behaviors and help to elicit additional comments which cannot be obtained at individual interviews (Yıldırım and Şimşek, 2006). In this qualitative study, based on HBM and HPM, focus group interviews and a semi-structured interview form were used to collect data about breast cancer screening behaviors from elderly women aged 60-75 years. Interview questions were open-ended and were prepared in such a way to have elderly women explain and give details in order to reveal knowledge of, barriers to and facilitators of breast cancer screening. Each interview was conducted at only one session and the stage where new knowledge was no longer elicited was considered as saturation and the interview ended.

Conduction of Focus Group Interviews

First, the women's addresses were determined and they were visited at their homes. The women giving informed consent were invited to the "district houses" at a predetermined time and date. The participants were called and reminded of time in the morning of the day when interviews would take place. They came to the "district houses" by themselves. Two PhD students writing their thesis at the time of the study were available at the interviews and they did not interrupt the participants as much as possible during the interviews and encouraged the participants to interact with each other. At the beginning of the interviews, the aim of the study was explained and oral informed consent was obtained from the participants to record the interviews. In addition, one research assistant as an observer wrote interactions. Six focus group interviews were conducted. Four to eleven participants attended each interview, which lasted for a mean of 45 min.

Analyses of Data

At interviews, a semi-structured interview form was used and additional questions were used. The questions did not have an order and were asked in accordance with responses from the participants. The researcher repeated and summarized what the participants said and thus prevented misunderstandings and checked whether the participants understood each other in order to achieve internal validity. Data recorded were transcribed by two researchers separately in one week. Recordings were played for the second time to ensure that transcribed data were complete and thus reliable data were obtained.

Crude data were analyzed and interpreted with content analysis. Transcribed data were coded in accordance with predetermined themes from the literature and emergent themes and subthemes (Yıldırım and Şimşek, 2006). An interview coding key including these themes and subthemes was prepared by two researchers separately. Data transcribed and the key prepared were compared and conflicting issues were discussed and a consensus was reached.

Data analyses included three steps, i.e. description, analysis and interpretation. First, themes were determined (description) and relationships between the themes were sought (analysis) and researcher's comments about them were added (interpretation). To increase internal validity and reliability of the research findings, comments made by the participants were quoted. Six participants were presented with the results of the study and they approved the results.

Characteristics of Focus Group Interviewees

This study included a total of 46 elderly women aged 60-75 years and assigned into 6 focus groups: Group 1 (n=5), Group 2 (n=4), Group 3 (n=8), Group 4 (n=9), Group 5 (n=11) and Group 6 (n=9). The mean age of the participants was 65.2 ± 4.16 years, the participants had a mean of 3 children, 52.2% of the participants had an income lower than their expenses, 13% of the participants were high school or university graduates, 39.1% of the participants never had mammography and 78.3% of the participants had at least one chronic disease (diabetes mellitus, hypertension and osteoporosis etc.). All but one had a health insurance and 39% had never undergone mammography.

Results

Qualitative data analyses revealed three main themes concerning facilitators of and barriers to early diagnosis of breast cancer: 1) Personal factors; 2) Cultural factors; 3) Offering health care. Table 1 shows themes and subthemes concerning facilitators of and barriers to early diagnosis of breast cancer based on qualitative data analyses.

Barriers to Early Breast Cancer Screening Behaviors

Personal Factors. The theme personal factors was categorized into sources of knowledge concerning elderly women's knowledge and awareness of breast cancer screening, symptoms and signs, etiology, risk factors, knowledge of diagnosis and treatment, times of screening, fear (possibility of having a tumor, diagnosis of cancer, removal of breast(s) and harmful effects of

Table 1. Barriers to and Facilitators of Early Breast Cancer Screening among Elderly Women

Main theme	Subthemes	Barriers	Facilitators
1. Personal factors	Knowledge and awareness		
	Source of information	Insufficient information	Being informed
	Media	Wrong information	
	Family and friends	Lack of information	
	Doctors		
	Information		
	Signs and symptoms		
	Etiology		
	Risk factors		
	Diagnosis and treatment		
	Time of screening		
	Fear	Having a mass	Fear (having breast cancer
		Being diagnosed with cancer	and metastasis to other
		Removal of breasts	organs, need for assistance
		Damage by mammography	in self-care)
			Positivity of cancer screening
	Neglect and Postponement	Absence of physical signs	Familial history of breast
		Feeling well	cancer and social support
		Discomfort due to mammography	
	Priorities in life	Cancer in a family member/relative	
		Presence of other problems	
		Having no time for oneself	
II. Cultural factors		Embarrassment	
		Religious beliefs	
III. Offering health care		Difficulties in making an appointment	Ease of making an appointment
		Overcrowded clinics	Health professionals'
		Long waiting hours	communication skills and
		Lack of physicians' recommendations	physicians' recommendations
		Health professionals' attitudes	

mammography), neglect (lack of physical signs, feeling well, discomfort due to mammography, lack of familial history of cancer), cultural factors (embarrassment and religious beliefs) and priorities (not having health problems and not having free time).

At all six focus group interviews, most of the women reported that they did not have knowledge of symptoms and signs, etiology, risk factors and screenings of breast cancer. They commented "I suppose breast cancer causes pain, doesn't it?", "What do you think causes cancer?"; "Most of us are not aware of it. Most of the women are not aware of it. They cannot receive care since they do not know how to get it", and "What causes breast cancer. What should we do?"

More than half of the elderly women reported that the most frequent source of knowledge of breast cancer and screening was the media followed by a relative or a friend and a doctor. Almost all of the women said that they did not receive knowledge from nurses. They attributed their limited knowledge about breast cancer to receiving knowledge and guidance from few health professionals. However, they commented that doctors started to talk to their patients about breast cancer more clearly in recent years. One woman said "My sister had mammography and she told me about breast cancer", another woman said, "Doctors talk about breast cancer on TV programs. There are many TV programs which encourage women to have clinical breast examination." Another woman said, "I received knowledge about breast cancer from my doctor". Most of the women admitted that they did not have knowledge about the signs of breast cancer. Few women, who talked about the signs of breast cancer, reported that breast cancer usually causes a mass, discharge, redness and nipple deformities.

Most of the women reported that breast cancer is caused by stress, eating habits and genetic transmission. One woman said, "There is only one cause of breast cancer; that is, stress". Another woman said, "We can only get fruit and vegetables grown through conventional agriculture. In other words, there is no organic food. All of it contains hormones". Another woman said, "Genetic transmission –familial history- is the leading cause of breast cancer". Several women emphasized that smoking, air pollution and wearing bras lead to breast cancer. While some women admitted that they did know causes of breast cancer, others were confused about them. Several women had wrong information about etiopathology of breast cancer. They thought that crashing, smashing, hitting and squeezing the breasts as well as plastic equipment used causes cancer. One woman talked about a woman with breast cancer and said, "The woman claimed that her husband squeezed her breasts and that she had breast cancer later. People say hitting and squeezing the breasts cause cancer".

Very few women commented about risks of breast cancer. Two women noted that breast cancer appeared at young ages. Several women commented that genetic transmission, breastfeeding and not giving birth were risk factors for breast feeding. Advanced age as a risk factor was not mentioned at none of the focus group interviews. Most of the women noted that breast cancer is curable, while several women said it is incurable. One woman said,

"I know many women with breast cancer who survive without any health problems". Another woman said, "As far as I know, there is no cure for cancer".

None of the women gave correct information about the times of breast screening. One woman told that mammography should be started at menopause. Another woman told that it should be started at teenage. Another woman said, "I think mammography should be performed once a month doesn't it? All women have to have clinical examination". Another woman said, "I have no idea about it."

Most of the women did not know exactly when, how and how often they should perform BSE. They explained "they performed BSE every day, every time they had a bath and every time they remembered it". Some women were worried that they failed to detect masses. One woman said "I don't know how to perform BSE. That's why I don't do it" and another woman said, "I can't find any masses. I mean I can't distinguish what is a mass and what is not". Almost none of the women had CBE or knowledge about CBE. One woman asked "what is CBE?" and added "I only have mammography. I didn't have CBE".

Most of the women perceive cancer as a dreadful disease. They attributed their inability to have early breast screening to fear of cancer. They were most frequently concerned about the likelihood to have a mass, followed by diagnosis of cancer, removal of their breasts and harmful effects of mammography. A few women believed that mammography was harmful to the breasts and caused cancer. Only one woman mentioned fear of death. One woman said "I don't have CBE for fear that I will have breast cancer", another woman said, "I fear that I may detect a lump", another woman said "It can be cured in its early stages, but when it is diagnosed in its late stages, I know that the breasts can be removed", another woman said "I don't have mammography since it may give harm to my breasts", another woman said "Radiation from mammography can be harmful", "The mammogram squeezes and smashes the breasts, which may even lead to cancer in some cases".

Another most frequently mentioned barrier to early breast screenings was neglect which results in postponement of the screening. The women noted that they did not have early breast cancer screening behavior since there were no physical signs of the disease and since they had good health. Although a few women reported that they were encouraged by their friends and relatives, they neglected mammography. One woman said, "I prefer to go to the doctor whenever the signs of the disease appear", another woman said "I have realized that I had not had mammography for the last four years. My daughter is telling me to have mammography. I am neglectful" and another woman said "I think I'm healthy and I don't live in fear of having breast cancer".

Mammography related discomfort was discussed in focus group interviews. Most of the women emphasized that they themselves and other women felt pain and had ache during mammography and therefore they did not want to undergo mammography. A few participants recommended development of a new mammography system. One woman said "I had mammography years ago. It hurt. I no longer had it", another woman said "I swear it's true that mammography squeezes the breasts. No way. It should be eliminated. Women having mammography feel pain. For this reason, I didn't undergo mammography".

Several women reported that lack of familial history of breast cancer was a barrier to early breast screening. One woman said "None of my relatives had breast cancer or any other type of cancer. Therefore, I never think about it".

Several women noted that health problems and having no time for themselves due to their roles were barriers to breast screening. One woman said "I haven't had mammography for the last three years. I've had other health problems, which were more important than having mammography. Therefore, I haven't undergone mammography", another woman said "At present women are so busy. I have to do all household chores. This is true for my neighbors as well. Our husbands just have a rest and watch TV at home. We are always in a rush. We don't have time to take care of ourselves. This is true for all the women I know. I have done nothing for myself so far. I have always looked after my children, husband and grandchildren. We have no time of taking care of ourselves".

Cultural Factors. The women frequently mentioned cultural factors as barriers to breast screening. Several women noted that the female body and the breasts are taboo subjects in Turkish culture and according to religious beliefs in the society and therefore that women feel embarrassed to have breast screening. Several women suggested that female doctors encourage women to have breast screening. However, several women noted that they did not mind whether physicians were male or female. In addition, several elderly women believed that having breast cancer was decided by God. One woman said "Female physicians should examine patients, which is acceptable in Turkish culture", another woman said "Most of the women do not have breast screening since they are embarrassed". However, another woman said "There is not a relation between privacy and physicians' gender". Another woman said "We had diseases if God decided it".

Offering Health Care. Concerning provision of health care services, inability to make an appointment, long waiting times, lack of physicians' recommendations and health staff's attitudes were considered as barriers to breast screening.

At four focus group interviews out of six interviews, the problems inability to make an appointment and waiting long for appointments due to the high number of patients were frequently mentioned. Several women said "They gave me an appointment at a time one year later. In the end, my cousin, who is a doctor, made an earlier appointment for me. I'll take the results of mammography to my doctor. It is impossible to make an appointment at an earlier time. If anything bad happened, it might be too late to intervene" and one woman said "The reason why we don't want to go to hospital is that we have to wait in a long queue".

Many women reported that lack of physicians'

recommendations were a barrier to breast screening. One woman said "None of the doctors has told me to have mammography so far, so I haven't had mammography". Another woman said "I went to the doctor for pain in my armpit. The doctor explained there was nothing wrong and the pain was due to a boil. He told me not to watch programs about cancer, not to read news about cancer and not to listen to people talking about cancer. He told me to take it easy. Fortunately, neither I have had mammography for ten years nor the doctor told me to have mammography".

The quality of relationships between patients and physicians and other health staff is important. Several women noted that their experiences with health staff's attitudes were barriers to breast screening. One woman said "When I first had mammography, the mammographer were giving me orders and pulling and pushing me since I didn't know how to approach the device", another woman said "Patients are not treated gently. The tone of voice is important. Patients are already stressed out. Impolite treatment prevents people from going to hospital" and another woman said "I would like doctors to treat us politely as in European countries and to take care of us well".

Facilitators of Early Diagnosis of Breast Cancer Behavior

Personal Factors. Personal factors concerning facilitators of breast cancer screening were found to involve being informed about breast cancer and breast cancer screening behavior, fear (having breast cancer and its spread to the body and needing assistance), perception of cancer screening, familial history of breast cancer and social support.

Several women thought that few women had breast cancer screening since women did not have sufficient information about breast cancer and screening. The women recommended that informing women through education, pamphlets and the media and information provided by health professionals might encourage women to have screening. One woman said, "If you explain clearly, we will probably learn about breast cancer and screening. We don't know exactly how screening is performed", another woman said "There should be TV programs about breast cancer and screening and health professionals could provide large groups of people with information" and another woman said, "Brochures with pictures should be distributed and women should be encouraged to post them in their home so that they always remember it".

Most of the women claimed fear was not only a barrier to but also a facilitator of screening. They mentioned likelihood to have breast cancer and its spread to the body if its diagnosis is delayed, resultant pain and need for assistance in taking care of themselves as sources of fear. Several women commented that they did not fear that their breasts are removed and attributed this to their old age. Some elderly women recommended that fear of breast cancer can be used as a facilitator for screening. One woman said, "If treatment fails, cancer invades the whole body. Suffering due to this invasion is dreadful. Seeking for help from doctors and need for relatives' assistance. I don't care about removal of my breasts at this old age." Another woman said, "I'm only worried that it can spread the whole body, which is dangerous. No way"

Although most women including educated ones mentioned being misinformed about breast cancer screening, lack of physicians' advice to have screening and insufficient knowledge and awareness of breast cancer screening, many women thought early diagnosis was important. Positivity of perceived cancer screening is thought to facilitate having screening. However, the results of this study revealed that few women turned out to have regular screening although most of the women knew that they had to have regular screening. One woman said, "We should have regular screening despite lack of suspicion of cancer." Another woman said, "Based on what we heard, it is true that women should have regular breast cancer screening".

History of breast cancer in a family member is an important factor in receiving early breast cancer screening. Several women commented that familial history of breast cancer was a motivating factor for having mammography. One woman said, "Women thinking that they might have breast cancer should undergo mammography. My daughter-in-law had mammography every six months since her mother had breast cancer." Another woman said, "My uncle's daughter had cancer and her breast was removed. To be frank, I feel uneasy. I check my breasts. Women with a family member with breast cancer should have regular screening."

Social support encouraged a few women to receive early breast screening. In addition, during discussions, the women undergoing mammography encouraged women not undergoing mammography to receive screening. One woman said to another, "You must have mammography!" Another woman said, "It is worth suffering from pain. Once you have mammography, you get rid of suspicion of having breast cancer." Another woman said, "My daughter-in-law goes to undergo mammography with her aunt every six months." Another woman said, "My son used to tell me to have mammography. He is a doctor. He often forced me to receive mammography. However, I haven't had it for the last three years when my son moved to another city. I gave it up."

Offering Health Care. Under the theme of offering health care, the subthemes ease of making an appointment, health professionals' communication skills and physicians' advice turned out to be facilitators of receiving screening. Several women reported that ease of making an appointment and being telephoned were facilitating factors. One woman noted, "Inviting through letters increase the number of women having screening abroad". Many elderly women recommended letters of reminder, ease of making an appointment and telephoning to increase mammography rates. Some women said, "It was difficult to make an appointment for mammography. However, when I went to have mammography one year later, I found out that the records about my condition were prepared. Then, I understood that they take their job serious and I felt that I had to go to receive screening regularly." Another woman said, "Why don't family practitioners call us or send us a letter to remind our appointments?" Another woman

said, "It can be easy to make an appointment if physicians refer us to centers specializing in mammography. Then everyone can be more eager to receive screening since they do not have to join the queue."

The women emphasized that effective communication between patients and physicians and other health professionals and physicians' recommendations can play a role in receiving screening. One woman said, "If a doctor had told me to have mammography, I would have had it without doubt", another woman said, "I like my doctor much. He performs a detailed physical examination and offers guidance and I do what he tells me to do", another woman said, "The doctor told me to have BSE and check my breasts every month and see him even if I have a small lump. He also told that if they had found a lump, we would have asked you to have more frequent screenings. He told me to have screening every two years since I did not have any suspicious lumps. When I went to see the doctor after I got retired, he told me to receive yearly screening."

Discussion

Consistent with the results of other studies, the results of this study about knowledge and awareness of breast cancer and screening revealed that the elderly women had insufficient knowledge of breast cancer and screening which they received from the media, friends and relatives (Coughlin et al., 2007; Dişçigil et al., 2007; Park et al., 2007; Sadler et al., 2007). However, in a study by Zapka and Berkowitz (1992), the women noted that they received the knowledge they had from their doctors. Dişçigil et al. (2007) reported that a higher rate of the women informed by their doctors utilized all screening methods. Grunfeld et al. (2002) recommended that elderly women who have insufficient knowledge of breast cancer and therefore present for screening late and higher risk of breast cancer should be given priority in terms education and screening programs of breast cancer. Elderly women's insufficient and wrong information might have decreased the perception of disease, susceptibility and seriousness and therefore formed a barrier to breast cancer screening. This may support HBM. Elderly women's obtaining knowledge from the media instead of health professionals underlines the idea that health professionals' attitudes towards preventive medicine should be investigated. In fact, none of the women participating in the study had CBE and were eager to learn about breast cancer from health professionals. Although receiving knowledge from the media, friends and relatives are considered as activators of behaviors in HBM (Champion and Skinner, 2008), this study revealed that most of the women received knowledge from these sources but did not have regular screening. This suggests that receiving knowledge from the media, friends and relatives failed to motivate the elderly women to exhibit regular screening habits and that there were more barriers than motivators. However, the frequency of the elderly women's exposure to motivators might have also played a role.

Consistent with the literature, this study showed that fear of breast cancer was both a facilitator of and barrier to screening (Ogedegbe et al., 2005; Lamyian et al., 2007; Borrayo, Buki and Feigal, 2005; Buki, Borrayo and Feigal, 2004; Kwok, Cant and Sullivan, 2005). While some women mentioned fear of lumps and cancer as a barrier to screening, other women noted that they received screening for fear that they might have been diagnose as breast cancer, which would metastasize, and had to ask help with their health care. In fact, fear might have been a barrier to screening in some women since it might have created the feeling of inability to cope with disease outcomes while it might have encourage some women to have screening since it might have increased the perception of disease, susceptibility and seriousness. According to HBM, the perception of susceptibility and seriousness create the perception of threats. Women aware of seriousness of breast cancer and considering that they are at risk more frequently have BSE, CBE and mammography than other women at the same age (Champion and Skinner, 2008; Nahcivan and Seçginli, 2003).

Compatible with the literature, this study indicated that discomfort caused by mammography, failure to have screening before symptoms arise and perception of good health are among the causes of neglect and postponement (Kwok, Cant and Sullivan, 2005; Ogedegbe et al., 2005). Montazeri et al. (2003) found that about 25% of the patients with symptoms of breast cancer had a three-month delay in their presentation to a health center. Ogedegbe et al. (2005) reported that presence of disease symptoms motivated having screening, but that perception of good health, insufficient knowledge of breast cancer screening and fear of screening tests were barriers to screening. Borrayo, Buki and Feigal (2005) reported that fear of being diagnosed as cancer, perception of good health and absence of symptoms of breast cancer were barriers to screening. The elderly women participating in this study might not have received screening since they thought that they had good health and were worried that their health would become poor if they were diagnosed with cancer (lose of a positive perception). The elderly women's belief that they may have breast cancer only if they have overt symptoms of the disease and their perception of good health give a hint about their perception of disease. Pender explained that importance placed by individuals on their health directly influence their health behaviors. She underlined that how individuals define health plays a role in their health promoting behaviors and that individuals are aware of the importance of health only when they become ill or suffer fear of death (Pender, 2006). However, Walter, Lindquist and Covinsky (2004) did not find a significant difference in receiving mammography between differing age groups of women having perception of poor health although aging caused a decrease in mammography rates.

Consistent with the results of several studies, this study showed that familial history of breast cancer is of importance in terms of receiving screening (Lee et al., 2007; Zapka and Berkowitz, 1992; Lamyian et al., 2007; Dişçigil et al., 2007). In the present study, 28 women had familial history of cancer. Out of 28 women, 19 had had mammography. Consistent with HBM and HPM, this high rate of women having mammography might have been due to their increased perception of susceptibility and seriousness depending on the presence of familial

history of breast cancer (Pender, 2006; Champion and Skinner, 2008).

Congruent with the results of a number of studies, this study found that embarrassment, which belongs to the main theme of cultural factors, was a barrier (Borrayo, Buki and Feigal, 2005; Ogedegbe et al., 2005; Kwok, Cant and Sullivan, 2005). While one study showed that religious beliefs discouraged women from having breast cancer screening (Borrayo, Buki and Feigal, 2005), several studies showed the opposite (Lamyian et al., 2007; Phillips, Cohen and Tarzian, 2001; Lee et al., 2007). Despite ongoing changes in Turkish culture, elderly women may depend on social values and religion more than other age groups. Therefore, they may have some taboos. It may be that embarrassment was one of the most frequent barriers. Since women are not willing to have physical examination, there may be a delay in their presentation for screening even if they have symptoms of breast cancer. In this study, several participants noted that they had few screenings and they believed that disease were caused by the God and added that even healthy women receiving screening had the disease. Fatalism in Islam suggests that people do not have control over their health, which may have discouraged the women from receiving screening. This should be taken into account in health promotion education programs.

In the present study, how health care is offered in Turkey turned out to be a barrier to the elderly women's receiving screening. Difficulties in making an appointment, lack of physicians' advice for screening and health professionals' attitudes were the most frequently expressed barriers. However, costs and difficulties in transportation were not frequently mentioned barriers, consistent with several studies (Young and Severson, 2005; Wu and Bancroft, 2006; Zapka and Berkowitz, 1992). It may be that the elderly women participating in the study had health insurance and that the municipalities helped them with their transportation fees. Besides, the hospitals were not too far to go.

Compatible with the literature, physicians' advice to have screening and health professionals' effective communicative skills were found to be facilitators of having screening (Lamyian et al., 2007; Phillips, Cohen and Tarzian, 2001; Coughlin et al., 2007; Young and Severson, 2005; Borrayo, Buki and Feigal, 2005; Dişçigil et al., 2007). Based on the results of this study, it is clear that physicians' guidance enabled the women to have screening earlier and that the women expected the physicians to provide them with guidance. It can be suggested that the quality of health care as an external factor should be investigated and that deficiencies, if present, should be eliminated to increase rates of screening.

The results of this study are consistent with the results of the studies about attitudes towards breast cancer screening in other age groups. In a qualitative study by Park et al. (2007), on Korean women aged 28-60 years, lack of knowledge, awareness of breast cancer and time were reported to be barriers to BSE. Paskett et al. (2006) in their randomized controlled study on women aged over 40 reported lack of a belief of having regular mammography (87%), lack of a person encouraging receiving mammography (45%) and having had to wait for long to have mammography (41%) to be barriers to having mammography. Maxwell et al. (2003) found that high costs of mammography fear of exposure to radiation, likelihood of being diagnosed as cancer, pain felt during the procedure and shyness were barriers to having mammography among Philiphino-American women aged over 40. This suggests that women from different cultures may experience similar barriers independent of age.

Consistent with the results of a longitudinal randomized controlled study by Taplin et al. (2000) the participants of this study recommended that women should be telephoned and sent letters to remind them the time of screening. Kwok, Cant and Sullivan (2005) also noted that written invitations were facilitators of having screening.

Consistent with both HBM and HPM, the results of this study revealed that perceived barriers were important variables in terms of exhibition of breast cancer screening behaviors. In both models, it is postulated that breast cancer screening behaviors appear when perceived susceptibility, seriousness and benefits decrease the effects of perceived barriers (Champion and Skinner, 2008; Pender, 2006). Gasalberti (2002) found a negative relation between complete fulfillment of BSE and perceived barriers and reported that this finding supported HPM. Karayurt (2003) also found that as perceived barriers increased, the frequency of BSE decreased and that a higher rate of the women with higher perceived susceptibility, seriousness and benefits performed BSE as recommended. In the present study, the elderly women discussed barriers rather than facilitators. This may explain why the rate of women having screening is low.

The results of the present study give hints about barriers and facilitators of breast cancer screening among elderly women to health professionals. One-thirds of the participants reported that they never had mammography and most of the rest did not have regular screening for breast screening. Professionals from different health disciplines (physicians, radiologists, midwives, etc.), especially public health nurses should know these tips since they may play a role in disease prevention and health promotion in elderly women. Health professionals, using pamphlets, visual aids and breast manikins, should provide elderly women with education to compensate their insufficient knowledge and revise their wrong information, to increase the number of women receiving screening, to make early diagnosis of cancer and to offer effective treatment. Health professionals should also be aware that fear can be both facilitator and barrier. In addition, elderly women's relationships with health professionals may either facilitate or discourage having screening. Therefore, it is of great importance that health professionals should be thoughtful and trustworthy and respect women. Elderly women may also feel disturbed since they have to reveal their breasts. In order to eliminate this disturbance, physicians and other health professionals should take appropriate precautions to avoid violation of privacy and make appropriate explanations to encourage women to have CBE and mammography. Furthermore, concerning effects of religious beliefs on screening, responsibilities

for good health given to individuals by religions can be included into education. Further studies using face to face extensive interviews are needed to investigate how perceived health status and religious beliefs influence having screening.

The limitation of the present study is that early breast screening behaviors might not have been discussed extensively since the women were more eager to talk about their current problems such as their chronic diseases during focus group interviews. In addition, since purposeful sampling was used, the results of the study cannot be generalized to other contexts.

In conclusion, public health nurses and other health professionals should be aware of elderly women's insufficient knowledge of having screening, understand their worries and fears and know facilitators of and barriers to screening. The results of this study can be utilized in planning and writing the content of education programs directed towards increasing early screening and diagnosis of breast cancer. The most important strength of this study is that the results can be used in practice and for research purposes.

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