

RESEARCH COMMUNICATION

Midwives Roles in Women's Improvement of Protective Behaviour against Breast Cancer Whether they have a Family History of Cancer or Not

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Abstract

Purpose: The aim of the study was to determine roles of midwives in helping women improve behavior for protection against breast cancer and towards early diagnosis whether they have a family history of cancer or not. **Materials and methods:** The study was planned in order to evaluate the efficacy of education about the risk factors of breast cancer and primary and secondary protection (early diagnosis) measures given to the women between the ages of 20-49, literate, married and who had or did not have cancer cases in their families. It was carried out in the region of Çamkule Levent Kara Health Care Center between March 2006 and April 2007. **Results:** Age, educational and economic status of the women with or without a cancer case in their families have been equivalent and a statistically significant difference has not been determined between both of the groups ($p>0.05$). The cancer risk perception of the women having a cancer case in their families (75.8%) was higher than in those without (62.8%) ($p<0.005$). Although they were also better informed about protection against cancer and early diagnosis, they do not participate to a greater extent in the practices of early diagnosis-scanning of breast cancer and they do not turn the information into attitude or behavior. **Conclusion:** The results of the study showed that midwives have significant responsibilities for directing all women towards protection against breast cancer and early diagnosis programs.

Keywords: Breast cancer - cancer case in the family - early diagnosis - midwife

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Introduction

Breast cancer is the most common type of cancer seen among women in developed and developing countries. Moreover, it is in the second place after lung cancer among the deaths from cancer. The risk of having breast cancer among women during their lifetime is 12.3 % and 22% of the women suffer from breast cancer and 15 % of them die of it among all the cancer types. In the world, every 3 minutes a woman is diagnosed with breast cancer and every 11 minutes a woman dies of breast cancer. In the U.S.A., one out of eight women suffers from breast cancer, yet in the European countries; this rate is one out of ten women (World Health Organization, 2000; International Agency for Research on Cancer, 2001). According to the 2004 statistics of the Department of Cancer Control-the Ministry of Health, breast cancer with an incidence of 34.73 per hundred thousand is the most frequently seen cancer type among the women in Turkey (TC Sağlık Bakanlığı Kanseri Savaş Dairesi Başkanlığı, 2004).

Although the exact reason for breast cancer is not known, it is thought that some risk factors are effective in the onset of the illness (Berkarda, 2000; Gross, 2000). Among the risk factors, having a cancer case in the family or in the other breast, the formation of a benign tumor, a

case of breast illness (mastitis, fibroadenom, mastalgia), early menstrual period, late menopause, the first delivery after 30, hormones, diet, obesity, alcohol, smoking and environmental factors take place.

Genetic transmission is one of the most important etiological factors which affect the incidence of breast cancer and, it is stated that the incidence of breast cancer increases twice for the women who have a cancer case in their first degree relatives (mother, sister, aunt), so firstly the women in high risk groups (risk approach) should be directed to the scanning programs (World Health Organization, 2000; 2002; Kara and Fesci, 2004). Yet, it is underscored by the studies that the women having a cancer case in their families stay away from those scanning programs and even the idea of having breast cancer causes them to experience a wide range of negative feelings such as anxiety, depression, anger, indecisiveness about future, hopelessness, social isolation, a decrease in self-respect, deformation of body image (Brain et al., 1999; Sammarco, 2001; Smith et al., 2003). Besides, it seems clear through the studies carried out that there is a lack of information and practice among the women about the protection against breast cancer and early diagnosis both in our country and in the world. Due to all these reasons, it is necessary to provide care to the patients with cancer

in a total approach way by also supporting the family. It is essential for breast cancer to be planned with the risk approach of early diagnosis and scanning programs, and midwives, who are in charge of women and work in prenatal clinics especially in primary step health services, have significant responsibilities. Women ought to be informed about the protection against breast cancer and early diagnosis in order to raise their awareness of breast cancer. Because of the fact that midwives are the first people to have contact with women during home visits, they should play the fundamental role in directing women towards early diagnosis programs (Breast Self Examination, clinic examination, mammography) by informing them who are especially at risk about the protection against breast cancer and early diagnosis. (Nahcivan and Seçginli, 2003; Çeber et al., 2005; Hansen et al., 2005; Kılıç et al., 2006).

Materials and Methods

Participants

This study is a descriptive and educational intervention study. The universe of the research consisted of the women (N:330) who were between the ages of 20-49, literate, married and registered in Çamkule Levent Kara Health Care Center in Bornova - İzmir. The research sample was made up of the women registered in the health care center between the dates of March 2006 and June 2006, and between the ages of 20-49, literate and married. The women participating in the research were chosen through a stratified sampling method according to age by using a simple random number table. Data gathering was done by using face to face interview technique in the health care center and during home visits. The first data of the research were gathered between the dates of March 2006 and June 2006, and the second data were gathered between the dates of January 2007 and April 2007 after the women had been given education about the protection against breast cancer and early diagnosis. During the second visit which was realized nine months after the first one, 325 out of 330 women who answered the first questionnaire form and received education were able to be contacted with. Therefore, the research sample consisted of 161 women having a case of cancer in their families (between the ages of 20-49, literate, married) and 164 women not having a case of cancer in their families and having equal age, education and marital status.

Instruments

The process of gathering data was realized in Çamkule Levent Kara Health Care Center region in Bornova, İzmir by the researcher was conducted with face to face interview technique.

In gathering the research data 3 questionnaire forms, a questionnaire form during the education and an education guide were used. In the research, following data collecting instruments were used in order to determine the level of women about breast cancer risk factors and protection and to evaluate the efficacy of the education given.

The questionnaire form about the role of midwives in women's improving a protective behavior towards breast

cancer whether they have a family history of cancer or not consists of 47 questions including age, marital status, educational status, the number of children and their sex, socio-demographic features and the degree of closeness of their relatives with cancer. Women's risk perception was evaluated through the 47th question. In this question, a score scale between 0 and 100 was formed. Women were asked to mark on the scale the risk interval in which they feel themselves. It was observed that the more the mark increased, the more the women's risk perception of breast cancer increased.

Champion's Health Belief Model Scale (CHBMS):

Champion scale is a kind of scale formed with the dimensions about the concepts which are emphasized in the health belief model. The scale, which was developed by Victoria Champion in 1984 in order to measure the beliefs about breast cancer and BSE, is formed with 5 sub-dimensions and 43 items. Champion rearranged the 5 sub-dimensions of the scale and added confidence/self-efficacy sub-dimension to it. CHBMS was added two new sub-dimensions concerning mammography by rearranging the sub-dimension related to BSE in 1997 (mammography preventions and mammography benefits). The final edit was done in the dimensions of mammography and susceptibility in 1999. CHBMS was made up of 52 items in its latest version (Gozum et al., 2004; Seçginli and Nahcivan, 2004; Karayurt and Dramali, 2007). The scale has the dimensions including "susceptibility" which evaluates the individual's opinion about breast cancer and her general health, "consideration/seriousness" and "health motivation", "benefits" and "self-efficacy/confidence" of BSE, "benefits" and "preventions" of mammography. The scale can be applied in two ways which include the beliefs of mammography and the ones of BSE dimensions together or separately. As the women's early diagnosis-scanning attitudes towards and beliefs in breast cancer will be measured in this study, all the dimensions of the scale have been used (Gozum et al., 2004; Seçginli and Nahcivan, 2004; Karayurt and Dramali, 2007). 5 Likert scale measurements ranging from 1 to 5 have been used in the evaluation of the scale. The women's improving positive attitude towards breast cancer has been evaluated according to a score scale based on the results of the scores ranging from 1 to 5 including 'I completely disagree,' (Berkarda, 2000), 'I disagree' (Bilgiç et al., 2005), 'I am indecisive' (Brain et al., 1999), 'I agree' (Chalmers et al., 2001), 'I completely agree' (Cohen, 2006) (Karayurt, 2003; Nahcivan and Seçginli, 2003; Gozum et al., 2004). After the education through CHBMS, a decline is expected in the sub dimension average scores of "BSE prevention perception", "BSE seriousness perception" and "mammography obstacle perception" and an increase in the other dimensions. This is an indication of the positive change in women's beliefs in and attitudes towards the protection against breast cancer and early diagnosis. The minimum and maximum scores to be taken from the sub-dimensions of the scale are "susceptibility", "consideration/seriousness", "health motivation", "benefits", "self-efficacy/confidence", "prevention" dimensions considering BSE, and "benefits"

and "prevention" dimensions considering mammography.

The Evaluation Guide of Breast Self Examination (BSE):

An evaluation guide of breast self examination was applied to the women who took part in the research and agreed to self-examine their breasts with the aid of the education guide in order to evaluate their BSE skills (Bilgiç et al., 2005). The guide has been composed of the sub-headings, such as right stance, observation, the part to be examined and the examination technique. The minimum score taken out of the guide was evaluated as 20 and the maximum one was evaluated as 60. The higher the score was, the more the skills of BSE of the women were.

Education materials:

After the first application of the questionnaire forms, the education given to the women with or without a history of cancer in their families was given through the guide whose title is "Protection against and Early Diagnosis of Breast Cancer" which includes the incidence of breast cancer, the methods used to diagnose breast cancer earlier, the importance of breast self examination in the early diagnosis of breast cancer, and how to apply breast self examination. The women were given an education brochure called "Protection against and Early Diagnosis of Breast Cancer" after the education.

Analysis

The sample size (n: 330) has been calculated through the method (with 95 % confidence interval) used in the cases in which the number of population (n: 2688) is known but the incidence is not. The analysis of the data obtained at the end of the research has been made with the SPSS (Statistical Package for Social Science) 15-0 package program. In the analysis of the data; the socio-demographic features, the knowledge status of the protection against and early diagnosis (the application of BSE; having a mammogram, having a clinical breast examination) of breast cancer (pre-test / post-test) of the women who have or do not have a family history of breast cancer have been evaluated through chi-square analysis; the sub-dimension confidence of the Champion Health Belief Model Scale has been evaluated through Cronbach's alpha analysis; the sub-dimension averages of the Champion Health Belief Model Scale, the sub-dimension mean scores of the Champion Health Belief Model Scale of the women who have or do not have a family history of breast cancer have been evaluated through t-test in the dependent and independent groups before and after the education; their age and educational status and the sub-dimension mean scores of the Champion Health Belief Model Scale have been evaluated through versatile variance analysis (general linear model).

Procedures

In order to conduct the research, an approval of the Ethic Institute of Ege University Izmir Atatürk School of Health and a permission of Bornova Health Group Directorate and Çamkule Levent Kara Health Care Center of İzmir Provincial Health Directorate were obtained by having official correspondence with them. During the

first home visit, the researcher introduced himself to the women taking part in the research and showed them her academic staff identity card of Ege University. The women were explained the objective of the research, and their verbal and written permissions were obtained (the researcher got them sign a written consent form). Those not wanting to take part in the study were given the education brochure called "Protection against and Early Diagnosis of Breast Cancer" which had been prepared by the researcher.

Results

Sample Characteristics

The women who have a family history of breast cancer have been determined to have a mean age of 33.11 ± 8.05 , 50.3% of them are elementary school graduates, 77.7 % of them are housewives; most of them have middle income level and 49.1 % of them have a social security from Social Insurances Institution (SSK).

The women who do not have a family history of breast cancer have been determined to have a mean age of 33.06 ± 7.94 ; 43.3% of them are elementary school graduates, 80.5% of them are housewives, most of them have middle income level and 48.2 % of them have a social security from Social Insurances Institution. The age, mean age, educational and economic status of the women who have or do not have a family history of cancer are equal, and the difference between both of the groups has statistically not been found significant, as well ($p > 0.05$).

When the relation status of the women with the relative with cancer has been analyzed, it has been determined that most of the people with cancer (90.8 %) are the first degree relatives, and among the first five cancer types are lung, stomach, breast, liver and intestine cancers (Table 1).

It has been determined that 34.2 % of the women who have a family history of cancer have applied BSE at least once and 10.6 % of them apply BSE regularly. Among the women who do not apply BSE, 37.2 % of them have expressed that they do not know how to apply it and 28.6 % of them do not apply it just because they are afraid. 6.2 % of women have had a mammogram. All the women have said that they will consult a health care center in the case of feeling a mass in their breasts. 13.1 % of the

Table 1. Women with Family History of Cancer Types and Family Relationship Status

People with Cancer Relationship Status *(N: 173)	(%)	
First-Degree Relatives	157	90.8
Second-Degree Relatives	16	9.2
Types of Cancer		
Lung Cancer	44	25.4
Stomach Cancer	39	22.5
Breast Cancer	29	16.8
Liver Cancer	21	12.1
Intestinal Cancer	13	7.5
Cervix Cancer	12	6.9
Lenf Cancer	5	2.9
Throat Cancer	4	2.3
Brain Cancer	4	2.3
Oral Cancer	2	1.3

* If more than one relative is in the cancer story: $n > 161$

Table 2. Early Diagnosis of Breast Cancer in Women and Browsing on Knowledge and Attitudes

Knowledge and Attitudes of Women	Family History of Cancer				x ² (sd)	*p
	Yes (N:161)		No (N: 164)			
	N	%	N	%		
Status of information					0.61 (1)	0.43
Yes	34	21.1	29	17.7		
No	127	78.9	135	82.3		
Breast Self Examination					12.47 (1)	*0.00
Yes	55	34.2	28	17.1		
No	106	65.8	136	82.9		
Mammography						
Yes	10	6.2	-	-		
No	151	93.8	-	-		
Clinical Breast Examination					6.66 (1)	*0.01
Yes	21	13.0	8	4.9		
No	140	87.0	156	95.1		

*p<0.05

Table 3. Women’s Breast Cancer Detection and Related Risk Score Ranges

Regarding Breast Cancer Risk Perception Score Ranges	Family History of Cancer			
	Yes (N:161)		No (N: 164)	
	N	%	N	%
0-10	17	10.6	28	17.1
10-20	34	21.1	35	21.3
20-30	25	15.5	20	12.2
30-40	18	11.2	23	14.0
40-50	14	8.7	19	11.6
50-60	20	12.4	15	9.1
60-70	12	7.5	10	6.1
80-90	14	8.7	6	3.7
90-100	7	4.3	8	4.9

women have had a clinical breast examination. It has been determined that 17.1 % of the women who do not have a family history of cancer have applied BSE at least once. 1.8 % of them apply BSE regularly. Among the women who do not apply BSE 61% of them have expressed that they do not know how to apply it, and 21.9% of them have said that they are afraid. None of them have had a mammogram 97.6% of them have said that they will

consult a health care center in the case of feeling a mass in their breasts (Table 2) 4.9% of them have had a clinical breast examination.

It has been determined that the difference between gaining information about the early diagnosis and scanning of breast cancer of the women who have or do not have a family history of breast cancer is not statistically significant (p>0.05), but it has been determined that the difference among the status of BSE application, having a mammogram, and having a clinical breast examination has statistically found to be significant, as well (p<0.05). The level of knowledge and attitudes of the women who have a family history of cancer about early diagnosis-scanning of breast cancer is higher than the ones who do not have a family history of cancer.

Regarding breast cancer risk perception score ranges of the women with a family history of cancer has been analyzed, it has been determined that 21.1 % of them have a risk perception score at 10-20 intervals, 15.5 % of them have it at 20-30 intervals, and 12.4 % of them have it at 50-60 intervals.

Regarding breast cancer risk perception score ranges of the women without a family history of cancer has been

Table 4. Education of women before and after the Champion Health Belief Model Scale Score average of Sub-Dimensions

Champion Health Belief Model Scale Sub-Dimensions (Minimum-Maximum Scores of Scale Sub-Dimensions)		Family History of Cancer				t	*p
		Yes (N=161)		No (N=164)			
		M	SD	M	SD		
1. Susceptibility of BSE (3-15)	Pre test	8.00	3.38	8.60	5.05	-3.36	*0.00
	Post test	12.21	0.79	12.74	1.30	-4.39	*0.00
2. Seriousness of BSE (6-30)	Pre test	28.10	1.52	28.30	1.06	-1.91	0.57
	Post test	19.04	2.20	19.75	3.81	-2.03	*0.04
3. Benefits of BSE (4-20)	Pre test	10.64	3.32	11.78	1.10	-6.59	*0.00
	Post test	16.70	1.13	18.85	1.05	-5.43	*0.00
4. Barriers to BSE (8-40)	Pre test	31.80	8.02	30.21	7.66	1.39	0.16
	Post test	18.83	1.70	16.91	1.70	10.05	*0.00
5. Confidence of BSE (10-50)	Pre test	23.71	10.84	31.29	12.71	-5.78	*0.00
	Post test	46.23	2.43	46.42	2.08	-5.34	*0.00
6. Health Motivation (5-25)	Pre test	20.49	3.81	22.18	1.80	-5.89	*0.00
	Post test	23.59	1.08	23.73	1.11	-8.98	*0.00
7. Benefits of Mammography (5-25)	Pre test	18.05	4.47	20.81	3.30	-6.29	*0.00
	Post test	24.00	0.15	23.70	1.18	3.20	*0.00
8. Barriers to Mammography (11-55)	Pre test	33.64	5.08	31.17	10.55	2.69	*0.00
	Post test	15.20	0.68	15.14	1.23	0.53	0.59

*p<0.05

Table 5. Champion Health Belief Model Scale Score of the Sub-Dimensions with average of all women experiencing the presence of BSE Practice to be Compared Before Education

Champion Health Belief Model Scale Sub-Dimensions	Application Status of BSE				t	*p
	Yes (N: 83)		No (N: 242)			
	M	SD	M	SD		
Susceptibility of BSE	10.98	3.47	8.28	1.06	-1.31	0,19
Seriousness of BSE	28.04	1.35	28.31	1.32	-1.40	0.16
Benefits of BSE	13.04	3.02	9.81	4.95	-1.61	0.10
Barriers to BSE	30.94	4.11	34.18	5.56	0.18	0.85
Confidence of BSE	28.05	12.40	23.07	12.34	-1.25	0.20
Health Motivation	23.96	1.97	20.14	2.03	-1.61	0.10
Benefits of Mammography	19.57	4.08	19.09	4.39	-0.89	0.37
Barriers to Mammography	32.47	8.39	35.18	8.42	-0.27	0.78

*p<0.05

analyzed, it has been determined that 21.3 % of them have a risk perception score at 10-20 intervals, 17.1 % of them have it at 0-10 intervals, and 14.0 % of them have it at 30-40 intervals.

The pre-education and post-education Champion Health Belief Model Scale (CHBMS) sub-dimension mean scores of the women who have or do not have a family history of cancer have compared. The sub-dimension mean scores of both of the groups have been found to be similar, yet before the education, the difference in the sub-dimension mean scores between "BSE prevention perception" and "BSE seriousness perception" of the scale has not been found statistically significant ($p>0.05$). However, the sub-dimension mean scores of the control group concerning "confidence, benefit and health motivation" have been found to be higher than the ones of the phenomenon group, the sub-dimension mean scores of the phenomenon group concerning "mammography prevention perception" and "BSE prevention perception" have been found to be higher. The difference between the sub-dimension mean scores of both of the groups has statistically been found significant, as well ($p<0.05$).

After the education, the sub-dimension mean scores of the "mammography prevention perception" have decreased in both of the groups, and the difference between the sub-dimension mean scores of both of the groups has statistically not been found significant ($p>0,05$). After the education, a decrease has been determined in the sub-dimension mean scores of "BSE prevention perception", "BSE seriousness perception" and "mammography prevention perception", and an increase in the other dimensions. After the education, a dramatic increase has been determined in the sub-dimension mean scores of "BSE confidence perception" and "BSE benefit perception". The difference found in the other sub-dimension mean scores is also statistically significant ($p<0.05$) (Table 4).

The sub-dimension mean scores of the CHBMS have been determined to be higher among the women who apply BSE. Yet, the difference between both of the groups is not statistically significant ($p<0.05$). According to the CHBMS, the sub-dimension mean scores of "BSE prevention perception" and "mammography prevention perception" of the women who apply BSE have been lower than the ones who do not apply it; the sub-dimension mean scores of "BSE benefit perception", "health motivation",

"BSE confidence perception" and "BSE susceptibility perception" of the women who apply it have been found higher than the ones who do not apply it.

Moreover, two-way analysis of variance has been made to determine whether there is a relation between the sub-dimension mean scores of the CHBMS and age groups of the women who have or do not have a family history of cancer. Yet, it has not taken part in the table because there has not been a statistically significant difference (Table 5).

Discussion

Through this study, the socio-demographic features and fertility status of the women, the status of the closeness of the people with cancer to the family, having suffered from breast cancer, the knowledge of and behavior and attitudes towards the protection against and early diagnosis of breast cancer (the application of BSE, having a mammogram, having a clinical breast examination) have been defined in order to search the role of midwives in women's improving a protective behavior towards breast cancer whether they have (n: 161) a family history of cancer or not (n: 164). With the average score obtained from pre- and post-education given by the midwife (pre-test / post-test) and the factors having an effect on the sub dimensions of the average scores of CHBMS have been determined.

It is stated that the risk of the formation of cancer is related to the degree of closeness of the relative with cancer and the risk is the highest for the first degree relatives. Yet, it is also stated that the average risk during one's lifetime does not exceed 30% even in the first degree relatives (Gross, 2000; Chalmers et al., 2001; Onat and Bařanar, 2003). It is known that the incidence of breast and lung cancer is high in the world and in our country (World Health Organization, 2002; Parkin et al., 2005). This study like many other studies has shown that urogenital system cancer along with breast and lung cancer is frequently seen among women with a family history of cancer. These results highlight the necessity of being more sensitive about the protection against and early diagnosis of especially breast and urogenital cancer.

It is stated in lots of studies carried out that in the early diagnosis of breast cancer, BSE is of great importance and approximately 90 % of the women with breast cancer have felt a mass in their breasts while taking a shower

and/or through BSE (Smith and Mett, 2001; Nahcivan and Seçginli 2003; Onat and Başanar, 2003; Karayurt and Dramalı, 2007). Moreover, it has been determined through a lot of studies done that those who have a family history of cancer are much more sensitive about BSE (Lee *et al.*, 2002; Cohen, 2006; Dişciğil *et al.*, 2007). Also in this study, the BSE application, having a mammography, having a clinical breast examination of the women who have or do not have a family history of cancer have been analyzed and the difference between both of the groups have statistically been found significant ($p < 0.05$). This difference results from the fact of susceptibility of the women with a family history of cancer. However, it has been determined that the women in both of the groups are not sensitive about the application of BSE, and they do not often apply it because of fear. Women's not applying BSE because of fear shows similarity with the results of other studies (Sammarco, 2001; Gençtürk, 2004; Kara and Fesci, 2004; Cohen, 2006). These results show that women must be supported with health education that will provide them to be more sensitive about BSE application besides their being informed about breast cancer and early diagnosis of it (Karayurt, 2003; Gençtürk, 2004; Cohen, 2006).

There are studies underlining the fact that the women with a family history of cancer are on average twice at the risk of breast cancer and thus especially such women must be directed to scanning programs (World Health Organization, 2000; International Agency for Research on Cancer (In press), 2001; Kara and Fesci, 2004). Though that the women who have a family history of cancer have more knowledge of the protection against breast cancer and early diagnosis is higher than the ones who do not have relatives with cancer, it is observed that they do not turn this knowledge into attitude and behavior. In this study in the pre-education period, the mean scores of the "benefit, susceptibility, confidence perception, health motivation" sub-dimensions of CHBMS have been found to be low among women with a family history of cancer.

These results make us think that the women stay away from the applications of the protection against and early diagnosis of breast cancer and are afraid of being diagnosed with breast cancer as they perceive the fact of having a family history of cancer as a risk. Besides, the fact that "mammography prevention perception" of the women is higher than "BSE obstacle perception" makes us think that the women are not adequately informed about mammography. After the education, that the increase in the mean scores of the "benefit, susceptibility, confidence perception, health motivation" sub-dimensions of the CHBMS among the women with a family history of cancer shows that the sensitivity increasing through education stems from their improving protective behavior towards the protection against breast cancer and early diagnosis of it.

The beliefs of people affect the behavior and attitudes towards health. The results of the different studies carried out in Western countries also show that there are important relations between the behavior and attitudes towards early diagnosis and health beliefs. Especially in the case of breast cancer, the rate of staying alive of the individuals is increased with early diagnosis thanks to people's healthy

behavior and attitudes. The behavior and attitudes of the individuals are measured through Health Belief Model that is frequently used in breast cancer scanning programs. According to this, the women being sensitive about breast cancer and perceiving it as something serious are supposed to make BSE, and participate in the applications of clinical examination and mammography. The researches done have showed that it can be effective to know the beliefs of women about BSE and other breast cancer scanning programs in order to teach and get them internalize their applications. According to the CHBMS, the women with high health motivation and confidence perception are to have a higher tendency to apply BSE, to have a mammogram and clinical breast examination (Karayurt, 2003; Nahcivan and Seçginli, 2003; Gozum *et al.*, 2004). The researches done show that generally there is not a difference between both of the groups' sub-dimension mean scores, the women in our country are insensitive to early diagnosis-scanning programs, they do not care about protective behavior and attitudes, and health staff has important responsibilities towards this matter (Brain *et al.*, 1999; Sammarco, 2001; Cohen, 2006).

In conclusion, it has been determined through this study that although the knowledge of protection against breast cancer of the women with a family history of cancer is higher, they don't participate in early diagnosis-scanning applications of breast cancer because they worry about having breast cancer and they don't turn this knowledge into attitude and behavior. Therefore, the most important attempt in the early diagnosis of breast cancer, which is frequently seen among women, is the development of health education programs and their regular applications which can provide them to participate in the scanning programs.

Since midwives are the closest health care staff to women, they can help women to participate in the breast cancer scanning programs, to apply breast self examination, to be directed to clinical breast treatment and mammography, and to improve protective health behaviors through health education.

In order to evaluate the role of midwives in women's improving a protective behavior against breast cancer whether they have a family history of cancer or not, it can be suggested by looking at these results that: 1) within the content of the protective health services, protection against and early diagnosis of cancer should be added to midwives' area of duty and responsibility; 2) women should be taught to be more sensitive about the protection against the cancer types mostly seen among women and early diagnosis.

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