The Effect of Breast Cancer Fatalism Perception on Breast Cancer Health Beliefs of the Midwives and Nurses

Meme Kanseri Kadercilik Algısının Ebe ve Hemşirelerin Meme Kanseri Sağlık İnançlarına Etkisi

(Araştırma)

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ABSTRACT

Aim: This study was conducted to evaluate the effect of breast cancer fatalism perception and other factors on breast cancer health beliefs of the midwives and nurses.

Material and Methods: This cross-sectional and correlational study was carried with 327 midwives and nurses working at public hospitals in Zonguldak City Center. Information Form, Powe Fatalism Inventory and Champion's Health Belief Model Scale were used for data collection. Numerical and percentage values, Mann Whitney-U test, Kruskal-Wallis test, Spearman correlation analysis and Mann-Whitney U test with Bonferroni correction were used in data analyzing.

Results: It was found that seriousness, health motivation, breast self-examination benefits and breast self-examination self-efficacy perceptions of the midwives and nurses were moderate, and susceptibility, breast self-examination barriers and breast cancer fatalism perceptions were low. And also, it was determined that there was a negative and weak correlation between perception of breast cancer fatalism and breast self-examination benefits (r = -.151, p = .006).

Conclusion: Evaluating the factors affecting health beliefs of the midwives and nurses is important to increase the awareness for breast cancer.

Key Words: *Breast cancer, health beliefs, midwife, nurse, perception of fatalism*

ÖZ

Amaç: Bu çalışma, meme kanseri kadercilik algısının ve diğer faktörlerin ebe ve hemşirelerin meme kanseri sağlık inançları üzerindeki etkisini değerlendirmek amacıyla yapıldı.

Gereç ve Yöntem: Bu kesitsel-ilişkisel çalışma, Zonguldak İl Merkezindeki kamu hastanelerinde çalışan 327 ebe ve hemşireyle gerçekleştirildi. Verilerin toplanmasında Bilgi Formu, Powe Kadercilik Envanteri ve Champion Sağlık İnanç Modeli Ölçeği kullanıldı. Verilerin analizinde sayısal ve yüzdelik değerler, Mann Whitney-U testi, Kruskal-Wallis testi, Spearman korelasyon analizi ve Bonferroni düzeltmeli Mann-Whitney U testi kullanıldı.

Bulgular: Ebe ve hemşirelerin ciddiyet, sağlık motivasyonu, kendi kendine meme muayenesi yarar ve kendi kendine meme muayenesi öz etkililik algıları orta düzeyde, duyarlılık, kendi kendine meme muayenesi engel ve meme kanseri kadercilik algıları düşük düzeyde bulundu. Ayrıca, meme kanseri kadercilik algısı ile kendi kendine meme muayenesi yarar algısı arasında negatif ve zayıf bir ilişki olduğu belirlendi (r = -.151, p = .006).

Sonuç: Ebe ve hemşirelerin sağlık inançlarını etkileyen faktörlerin değerlendirilmesi, meme kanseri farkındalığını arttırmak için önemlidir.

Anahtar Kelimeler: *Ebe, hemşire, kadercilik algısı, meme kanseri, sağlık inançları*

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INTRODUCTION

Breast cancer is the most frequent cancer among women, and also causes the greatest number of cancer-related deaths among women all over the world. It approximately accounts for 15% of all cancer deaths[1]. It is also the most prevalent cancer accounting for 24.9% of all cancers diagnosed among Turkish women[2]; and it accounts for 15.7 % of all cancer deaths[3].

In order to improve breast cancer outcomes and survival, early diagnosis and screening are critical[4,5]. For early detection; it is recommended to have a breast self-examination (BSE) every month after the age of 20, a clinical breast examination (CBE) preferably every 3 years in 20-30's age, a CBE and an annual mammogram every year after the age of 40[6]. However, several research reports on breast cancer address the inadequacy of behaviours for early diagnosis[7-11]. Many factors such as cultural factors, health/disease beliefs, family and neighborhood support, knowledge about the disease, disease risk perception, self-efficacy and other psychosocial factors have effect on screening behaviours[5,9,12].

It is stated that fatalism is a psychosocial barrier for screening behaviors[4,7,12-15]. Fatalism is the belief that all events are fated to happen and that human beings have no control over their futures and are unable to change their outcomes[4,13,16]. Personal outcomes are controlled by external forces such as luck, destiny, powerful people, or divine intervention. In this context, death is inevitable when cancer is present[13,16]. Therefore, determining the fatalism and health beliefs about breast cancer may shed a light on future studies focusing on changing negative beliefs and increasing the efficiency of breast cancer-related education.

Midwives and nurses have a major role in diagnosing breast cancer, in detecting symptoms and findings of breast cancer, in identifying risk groups and in the education of society about the importance of early diagnostic methods. Therefore, midwives and nurses should have an extensive knowledge about breast cancer and should be skilled and experienced in implementing screening behaviors for breast cancer. In this context, it is important to determine health beliefs, attitudes and BSE-affecting behaviors of the midwives and nurses for breast cancer in terms of breast cancer early diagnosis behaviors of themselves as well as the women they provided service. When we examined the literature, we did not encounter the study in which breast cancer fatalism and health beliefs of midwives and nurses was evaluated together. Therefore, this current study was conducted to evaluate the effect of breast cancer fatalism perception and other factors on breast cancer health beliefs of the midwives and nurses.

MATERIAL and METHODS

Design and Sample

This cross-sectional and correlational study was conducted at public hospitals in Zonguldak City Center. A total of 369 female midwives and nurses were working in these three hospitals. The study was conducted with 327 female midwives and nurses who were not on annual leave (actively working) during the study.

Data Collection Instruments

Personal Information Form*:* In the form, there were open and close-ended questions evaluating the personal and family characteristics, health status, health behaviors and breast self-examination knowledge and practice of the midwives and nurses.

Powe Fatalism Inventory (PFI): The scale was developed by Powe[17]. A modified version of the scale was used because it was breast cancer specific[18]. The PFI consists of 11 items including yes or no responses with a 0-11 range of scores. "Yes" response is scored as one point, "no" response is scored as zero point. The increase in score obtained from the scale indicates that fatalism increases. Cronbach's alpha of the scale was calculated as .89[18]. Cronbach's alpha was calculated as .79 in Turkish adaptation[19] and it was found as .80 in this study.

Table1. Some characteristics of the midwives and nurses

Variables	n	%
Age		
20-39	**240**	**73.4**
40 and above	**87**	**26.6**
Profession		
Midwife	**36**	**11.0**
Nurse	**391**	**89.0**
Education level		
High / vocational school	**113**	**34.6**
Bachelor / postgraduate	**214**	**65.4**
Working year		
1-10	**168**	**51.4**
11-20	**104**	**31.8**
21 and above	**55**	**16.8**
Marital status		
Married	**219**	**67.0**
Single	**108**	**33.0**
Family type		
Core family	**275**	**84.1**
Other (large/broken)	**52**	**15.9**
Child status		
No child	**141**	**43.1**
Have a child	**186**	**56.9**
Income status		
Lower than expenses	**90**	**27.5**
Equal to expenses	**204**	**62.4**
More than expenses	**33**	**10.1**

Champion's Health Belief Model Scale (CHBMS): The scale was developed by Champion in 1984. Turkish form of CHBMS was used which was adapted by Gozum and Aydin[20]. This self-completed scale consisted of 36 items that were clustered into 6 subscales: susceptibility (3 items), seriousness (6 items), health motivation (5 items), BSE benefits (4 items), BSE barriers (8 items), and BSE self-efficacy (10 items). Participants answer items on a fivepoint Likert-type scale, ranging from 1 to 5 (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 =s trongly agree). Each domain of the scale is evaluated separately and they are not combined to obtain a total score. Thus, a score is acquired for each of the domains. The scores range from 3 to 15 for susceptibility, from 6 to 30 for seriousness, from 5 to 25 for health motivation, from 4 to 20 for BSE benefits, from 8 to 40 for BSE barriers, and from 10 to 50 for BSE self-efficacy. Higher scores indicate stronger feelings related to that construct. The Cronbach's alpha values ranged between .69 and .83[20]. In this study, the Cronbach's alpha values ranged between .87 and .93.

Data Collection

The data of the study were collected between April 16 and May 16, 2018. The study was conducted with midwives and nurses who were not on annual leave (actively working) during the study. Midwives and nurses were informed about the purpose and significance of the study. Data collection instruments were distributed to the midwives and nurses who were agreed to participate in study.

Data Analysis

The data analyzed by using SPSS 16.0 for Windows (SPSS Inc., Chicago, IL, USA). Numerical and percentage values were used for categorical variables. Kolmogorov Smirnov test was used for normality. Median, minimum and maximum values were used for numerical variables not showing normal distribution. Mann Whitney-U test, Kruskal-Wallis test, Spearman correlation analysis and Mann-Whitney U test with Bonferroni correction were used in data analyzing. Results were evaluated within 95% confidence interval and $p < .05$ was considered as statistically significant.

Table 2. Mean scores of Powe Fatalism Inventory and Champion's Health Belief Model Scale

Scales	Number of Items	Range of Score	Mean	Standard Deviation	Minimum Score	Maximum Score
Powe Fatalism Inventory	**11**	**0-11**	**2.24**	**2.26**	**0**	**11**
Champion's Health Belief Model Scale						
Susceptibility	**3**	**3-15**	**7.93**	**2.60**	**3**	**15**
Seriousness	**6**	**6-30**	**19.33**	**5.43**	**6**	**30**
Health motivation	**5**	**5-25**	**20.28**	**15.65**	**5**	**25**
BSE* benefits	**4**	**4-20**	**15.65**	**3.43**	**4**	**20**
BSE* barriers	**8**	**8-40**	**19.40**	**7.37**	**8**	**37**
BSE* self-efficacy	**10**	**10-50**	**37.96**	**8.05**	**10**	**50**
***BSE = Breast Self-Examination**						

Ethical Consideration

Written approvals were obtained from ethic committee of Bulent Ecevit University (2018/06-03/14/2018) and Zonguldak Provincial Health Directorate. Voluntary informed consent form was obtained from all midwives and nurses who participated in the study.

Limitations of the Study

The results depend upon on self-reported data and the results might not be readily generalized to all midwives and nurses in Turkey.

RESULTS

The mean age of the midwives and nurses was 34.06 ± 8.09 (Min. 20, Max. 58). It was determined that 89.0% of the participants was nurse, 65.4% of had completed bachelor / postgraduate degree, 51.4% of have been working between 1-10 years, 67.0% of were married, 84.1% of had a core family, 56.9% of had a child, economic incomes of 62.4% were equal to their expenses (Table 1).

Family of 30.6% of the midwives and nurses had a cancer history and of 12.8% had breast cancer history. It was found in the study that the incidence of breast cancer was 42.0% among all cancer types. Nearly 76.1% of the midwives and nurses were performing BSE and 44.2% of were performing BSE regularly, 12.5% of experienced problems about their breasts, 27.2% of went to hospital for breast examination and 29.2% of went to hospital for problems about their breasts and 70.8% of them went to hospital for routine breast control. 47.4% of the midwives and nurses have reported that they would experience shame during the breast examination performed by a healthcare professional, 20.8% have reported that they would experience fear/stress and 31.8% have reported that they would experience no feeling. Beside this, 52.0% of the midwives and nurses have indicated that the sex of the healthcare professional who will perform breast examination was important to them.

According to Table 2, seriousness, health motivation, BSE benefits and BSE self-efficacy perceptions of the midwives and nurses were moderate, and susceptibility, BSE barriers and breast cancer fatalism perceptions were low.

Susceptibility and BSE barriers perceptions of the midwives and nurses in 20-39 age group were significantly higher than midwives and nurses in 40 years old and more ($p < .05$). Health motivation perception of the midwives and nurses who were 40 years old and more was significantly higher than midwives and nurses in 20-39 age group ($p < .05$). There was a significant difference between health motivation, BSE barriers and BSE self-efficacy perceptions of the midwives and nurses based on their education levels ($p < .05$). Health motivation and BSE self-efficacy perceptions of the midwives and nurses who had bachelor/postgraduate education level were significantly higher and their BSE barriers perception was lower than midwives and nurses who had high/vocational school education level ($p < .05$). Health motivation, BSE benefits and BSE self-efficacy perceptions of the midwives, and susceptibility and BSE barriers perceptions of the nurses were significantly higher than midwives ($p < .05$); susceptibility perception of the midwives and nurses who have been working for

11 years and more was significantly lower than midwives and nurses who have been working for 10 years and below ($p < .05$); health motivation perception of the single midwives and nurses was significantly lower than

Table 3. Comparison of some characteristics with mean scores of Champion's Health Belief Model Scale

Variables	Champion's Health Belief Model Scale					
	Susceptibility Mean ± SD	Seriousness Mean ± SD	Health motivation Mean ± SD	BSE* benefits Mean ± SD	BSE* barriers Mean ± SD	BSE* self-efficacy Mean ± SD
Age						
20-39	8.19±2.58	19.53±5.37	20.12±4.02	15.76±3.23	20.10±7.61	38.07±7.41
40 and above	7.20±2.55	18.77±5.62	20.70±4.83	15.32±3.93	17.47±6.30	37.66±9.64
MU/p	***-3.105/0.002***	***-1.063/0.288***	***-2.198/0.028***	***-0.258/0.796***	***-2.704/0.007***	***-0.385/0.700***
Education level						
High/vocational school	8.20±2.62	19.20±5.34	19.81±4.08	15.74±3.07	22.03±7.62	36.42±8.09
Bachelor/postgraduate	7.78±2.59	19.40±5.50	20.52±4.33	15.59±3.61	18.02±6.86	38.78±7.93
MU/p	***-1459/0.145***	***-0.337/0.736***	***-2.160/0.031***	***-0.339/0.734***	***-4.774/0.000***	***-2.637/0.008***
Profession						
Midwife	7.00±2.82	17.33±6.48	21.69±3.46	17.44±2.38	15.44±5.67	40.44±9.82
Nurse	8.04±2.56	19.58±5.26	20.10±4.31	15.42±3.48	19.89±7.42	37.65±7.72
MU/p	***-2.121/0.034***	***-1.711/0.087***	***-2.311/0.021***	***-3.464/0.001***	***-3.308/0.001***	***-2.590/0.010***
Working year						
10 and below	8.30±2.62	19.57±5.39	19.98±4.19	15.76±3.18	20.04±7.80	38.14±7.30
11 and above	7.53±2.54	19.08±5.50	20.59±4.31	15.52±3.69	18.73±6.85	37.77±8.80
MU/p	***-2.760/0.006***	***-0.766/0.444***	***-1.757/0.079***	***-0.020/0.984***	***-1.505/0.132***	***-0.185/0.853***
Marital status						
Married	7.75±2.64	19.09±5.51	20.59±4.21	15.72±3.50	19.11±7.56	38.05±8.61
Single	8.29±2.50	19.81±5.27	19.64±4.28	15.50±3.30	19.99±6.98	37.78±6.83
MU/p	***-1.631/0.103***	***-0.967/0.333***	***-2.187/0.029***	***-0.862/0.388***	***-1.237/0.216***	***-1.067/0.286***
Family type						
Core family	7.79±2.65	19.21±5.56	20.41±4.30	15.79±3.42	18.99±7.13	38.31±7.86
Other (large/broken)	8.63±2.21	19.94±4.75	19.54±3.94	14.88±3.45	21.62±8.28	36.10±8.88
MU/p	***-2.483/0.013***	***-0.676/0.499***	***-1.932/0.053***	***-2.019/0.044***	***-1.989/0.047***	***-1.536/0.125***
Child status						
No child	8.12±2.63	19.24±5.56	20.21±3.96	15.72±3.15	19.56±7.32	37.84±7.96
Have a child	7.78±2.58	19.40±5.36	20.32±4.47	15.59±3.64	19.28±7.43	38.05±8.14
MU/p	***-0.989/0.323***	***-0.382/0.703***	***-0.710/0.478***	***-0.197/0.844***	***-0.458/0.647***	***-0.556/0.578***
Income status						
Lower than expenses	7.43±2.55	18.86±5.04	20.22±4.64	15.73±3.63	19.12±7.24	36.71±9.39
Equal to expenses	8.15±2.66	19.37±5.65	20.18±4.26	15.50±3.42	19.74±7.52	38.76±7.30
More than expenses	7.91±2.30	20.36±5.10	21.00±2.87	16.30±2.92	18.09±6.85	36.42±8.14
KW/p	***4.227/0.121***	***2.783/0.249***	***0.759/0.684***	***1.564/0.457***	***1.552/0.460***	***2.816/0.245***

*BSE = Breast Self-Examination

married midwives and nurses ($p < .05$). And also, BSE benefits and BSE self-efficacy perceptions of the midwives and nurses who had a core family were significantly higher and their susceptibility and BSE barriers perceptions were lower than midwives and nurses who had other family type ($p < .05$). However, there were no significant differences between mean CHBMS subdimensional perceptions of the midwives and nurses based on their status of having children and based on their economic status ($p > .05$) (Table 3).

Health motivation, BSE benefits and BSE self-efficacy perceptions of the midwives and nurses who were performing BSE were significantly higher and their mean BSE barriers score was lower than midwives and nurses who were not performing BSE ($p < .05$). It was determined that mean BSE self-efficacy perception of the midwives and nurses who were performing BSE regularly was significantly higher than midwives and nurses who were not performing BSE regularly ($p < .05$). Health motivation and BSE benefits perceptions of the midwives and nurses who had a problem with breast were significantly higher than midwives and nurses who had no problem with breast ($p < .05$); BSE benefits and BSE self-efficacy perceptions of the midwives and nurses who had a breast examination in hospital were significantly higher and their BSE barriers perception was lower than midwives and nurses who had no breast examination in hospital ($p < .05$). Significant differences were found between BSE barriers and BSE self-efficacy perceptions of the midwives and nurses based on their feelings during breast examination by healthcare professionals ($p < .05$). In advanced analyses, it was detected that the difference in BSE barriers perception was between the individuals who declared no feelings and who declared a sense of shame; and BSE barriers perceptions of the ones who reported no feelings were lower ($p<0.0167$). It was determined that the difference in BSE self-efficacy perception was derived from the ones who reported no

feelings; and their perceptions of BSE self-efficacy were found to be significantly higher than other groups ($p < .0167$). There were no significant differences between CHBMS subdimensional perceptions of the midwives and nurses based on family history of cancer, family history of breast cancer, the reason for applying to the hospital and the sex of healthcare professional for breast examination ($p > .05$) (Table 4).

It was found that breast cancer fatalism had a negative and weak correlation with BSE benefits ($r = -.151$, $p = .006$) and it did not have any correlation with susceptibility, seriousness, health motivation, BSE barriers and BSE self-efficacy ($p > .05$).

Table 4: Comparison of breast cancer history and behaviors with mean scores of Champion's Health Belief Model Scale

Variables	Champion's Health Belief Model Scale					
	Susceptibility Mean ± SD	Seriousness Mean ± SD	Health motivation Mean ± SD	BSE* benefits Mean ± SD	BSE* barriers Mean ± SD	BSE* self-efficacy Mean ± SD
Family history of cancer						
Yes	8.05±2.98	19.28±5.62	20.74±3.92	15.86±3.42	18.57±6.84	38.97±8.83
No	7.87±2.43	19.35±5.37	20.07±4.38	15.55±3.44	19.77±7.58	37.52±7.66
MU/p	***-0.693/0.488***	***-0.171/0.864***	***-1.473/0.141***	***-1.208/0.227***	***-1.232/0.218***	***-1.681/0.093***
Family history of breast cancer						
Yes	8.31±2.94	19.81±4.67	20.17±4.33	15.64±3.53	19.76±5.53	37.29±8.39
No	7.87±2.55	19.26±5.55	20.29±4.25	15.65±3.42	19.35±7.61	38.06±8.01
MU/p	***-0.980/0.327***	***-0.166/0.868***	***-0.095/0.924***	***-0.202/0.840***	***-0.627/0.531***	***-0.230/0.818***
Performing of BSE*						
Yes	8.02±2.63	19.35±5.61	20.49±4.28	15.95±3.35	18.34±7.21	38.64±8.00
No	7.64±2.52	19.27±4.90	19.58±4.10	14.68±3.52	22.79±6.87	35.79±7.88
MU/p	***-1.200/0.230***	***-0.518/0.605***	***-2.336/0.020***	***-2.989/0.003***	***-4.733/0.000***	***-2.679/0.007***
Frequency of BSE* performing						
Regular	7.95±2.69	19.85±5.65	20.35±5.04	16.06±3.63	18.09±7.58	40.14±7.59
Irregular	8.07±2.59	18.96±5.56	20.61±3.58	15.86±3.12	18.54±6.93	37.45±8.15
MU/p	***-0.425/0.671***	***-1.163/0.245***	***-0.738/0.461***	***-0.748/0.454***	***-0.732/0.464***	***-2.364/0.018***
Having a problem with breast						
Yes	7.90±2.55	19.54±5.52	21.51±3.107	16.61±3.18	17.24±6.42	39.59±6.67
No	7.93±2.62	19.30±5.44	20.10±4.37	15.51±3.45	19.71±7.46	37.73±8.22
MU/p	***-0.014/0.989***	***-0.033/0.974***	***-1.994/0.046***	***-2.122/0.034***	***-1.928/0.054***	***-1.249/0.212***
Having a breast examination in hospital						
Yes	8.12±2.66	20.15±5.31	20.65±4.39	16.28±3.48	17.85±6.74	39.91±7.38
No	7.85±2.59	19.03±5.46	20.13±4.20	15.41±3.39	19.98±7.53	37.23±8.19
MU/p	***-0.969/0.332***	***-1.810/0.070***	***-1.513/0.130***	***-2.388/0.017***	***-2.236/0.025***	***-2.705/0.007***
The reason for applying to the hospital						
Problem with breast	8.12±2.57	20.42±5.01	20.85±3.72	17.04±3.26	17.46±6.31	38.69±7.20
Rutin control of breast	8.13±2.71	20.03±5.47	20.57±4.66	15.97±3.54	18.02±6.95	40.41±7.45
MU/p	***-0.135/0.893***	***-0.023/0.982***	***-0.023/0.982***	***-1.451/0.147***	***-0.240/0.811***	***-1.081/0.280***
Feeling during breast examination by healthcare professional						
No feeling	7.98±2.64	18.94±5.26	20.55±4.22	16.07±3.53	17.94±7.48	40.17±6.92
Shame	7.79±2.49	19.80±5.57	20.43±4.31	15.61±3.31	20.41±7.30	37.70±8.06
Fear/stress	8.16±2.82	18.85±5.40	19.51±4.13	15.07±3.53	19.35±7.10	35.18±8.78
KW/p	***0.777/0.678***	***2.976/0.226***	***4.569/0.102***	***5.506/0.064***	***9.026/0.011***	***16.470/0.000***
Sex of healthcare professional for breast examination						
Important	7.74±2.49	19.46±5.45	20.63±3.74	15.49±3.41	19.22±6.72	37.48±8.28
Not important	8.13±2.71	19.18±5.44	19.89±4.72	15.82±3.46	19.60±8.04	38.48±7.79
MU/p	***-1.022/0.307***	***-0.589/0.556***	***-0.890/0.373***	***-1.185/0.236***	***-0.023/0.982***	***-1.066/0.286***

*BSE = Breast Self-Examination

DISCUSSION

Breast cancer is the most frequent cancer among women, and also causes the greatest number of cancer-related deaths among women all over the world. In order to improve breast cancer outcomes and survival, early diagnosis and screening are critical[4,5]. In this study, it was found that nearly 76.1% of midwives and nurses were performing BSE and 44.2% of them were performing BSE regularly. Studies conducted with female healthcare professionals indicated that regular BSE performance rates of 5.0%-91.1%[21-25]. Studies from Turkey on professionals determined monthly regular BSE rate of 15.0%-56.1%[26-30]. The result of this current study is consistent with the results of other studies in Turkey. However, this current study as well as other studies performed in Turkey showed that BSE rates were not at a desirable level among healthcare professionals. As already known, healthcare professionals are given theoretical information about breast cancer and screening

behaviors as part of their education. The results of the studies showed that education is not sufficient alone in providing behavioral change. For that reason, evaluating the knowledge and behaviours of midwives and nurses about BSE, and determining the barriers which are effective in performing these behaviours are very important.

In this study, it was found that seriousness, health motivation, BSE benefits and BSE self-efficacy perceptions of midwives and nurses were moderate, their perperceptions of susceptibility and BSE barriers were low. This result is consistent with the results of other studies conducted with health professionals[26,28,30,31]. Practicing the early diagnostic behaviors is related to perceptions of risk, benefit and barriers associated with personal and social attitudes and influences. Study results show that health professionals are ready for early diagostic behaviors for breast cancer; but there may be a lack of adoption and practice of early diagnostic behaviors for breast cancer.

The transformation from knowledge to protective health behaviors is related with social influences as well as personal emotions such as attitudes and health beliefs in preventive behaviors[30]. Fatalistic approach is an important factor that is effective on attitudes and health beliefs in preventive behaviors for early diagnosis[12,32]. In the study, cancer fatalism perception of midwives and nurses was low. In the literature, we could not find any study evaluating breast cancer fatalism among healthcare professionals, particularly in midwives and nurses. When relevant studies with different population were examined, it was found that fatalism perception was low in some studies[9,33,34], whereas it was found high in some others[12,35,36]. In this current study, there was a negative and weak correlation with BSE benefits. It was also reported in other studies that cancer fatalism was related with health beliefs and early diagnostic behaviors of breast cancer[9,33,35,37]. As seen in the studies, fatalism perception is important in behavioral change. For this reason, it is important to evaluate fatalism perception of all women who were health care profesional or not, and to plan education programs by considering fatalism perceptions in order to create changes in positive attitudes and behaviors.

In this study, health beliefs of midwives and nurses were affected by age, education level, profession, working year, marital status, family type, and were not affected by having a child and income status. Similarly, a study conducted with nurses reported that health beliefs of nurses were affected by age, educational level, marital status, having a child and breast cancer in the family history[28]. When relevant studies with different population were examined, similar as well as different results were observed[9,38,39]. The differences obtained were considered to be derived from distinct sample groups and distinct cultures included in the studies. As already known, the socio-demographic and cultural characteristics of individuals can directly influence their attitude and indirectly affect health-related behavior[28]. Therefore, it is important to keep in mind that individual and cultural characteristics should be considered in professional education of healthcare professionals as well as in community-based health educations.

In this study, most of the midwives and nurses were relatively young, did not have a breast problem and a family history of breast cancer. And also, there were not statistically significant differences between health beliefs of midwives and nurses in terms of family history of cancer and family history of breast cancer. Based on this results, it may be concluded that midwives and nurses do not think the possibility of being breast cancer since they are health professional and they take precautions against cancer such as having healthy life behaviors. Therefore; it is necessary to make midwives and nurses believe that this disease may exist more or less in their lives. Contrary to this current study, previous studies have reported that women suffering from breast cancer in their families view themselves at risk of developing breast cancer, perceive the consequences of the disease as a serious threat and become more susceptible to breast cancer[9,38,39].

According to the Health Belief Model (HBM), health motivation represents general intention and wish state for generation of preventive health behaviors in the promotion and maintenance of health. Benefit perception represents positive aspects perceived in the generation of preventive behavior, and self-efficacy perception represents individual competence in the implementation of healthcare behavior. For this reason, women who have high perception of BSE benefits and BSE self-efficacy and low perception of BSE barriers are more likely to perform BSE[40]. The finding of this current study, stating that health motivation, BSE benefits and BSE self-efficacy perceptions of midwives and nurses who were performing BSE were high and their perception of BSE barriers was low, was complying with the conceptual structure of HBM. Similarly, Yilmaz and Durmus[30] reported that health motivation, BSE benefits and BSE self efficacy perceptions of female health professionals who were performing BSE were high and their perception of BSE barriers was low. When other relevant studies were examined, similar results were obtained with this current study[9,26,31,41,42].

In this study, perceptions of health motivation and BSE benefits of the midwives and nurses who experienced a problem with breast were high. This finding suggests that breast problems increase risk perception of the midwives and nurses and they are effective in the development of positive beliefs for early diagnostic behaviors.

The finding of the study, stating that BSE benefits and BSE self-efficacy perceptions of the midwives and nurses who underwent breast examination were high and their BSE barriers perception was low, supports our idea. When other relevant studies were examined, it was found in some studies that status of experiencing breast problems have affected health beliefs of the women[6,9,41] whereas it did not affect in some others[33].
In this study, more than half of the midwives and nurses have reported that they would experience shame and fear/stress during breast examination by a healthcare professional. More than half of midwives and nurses have also stated that the sex of healthcare professional who performed breast examination was important. Due to cultural beliefs of Turkish society, breasts are considered as a confidential body part and examination of breast by another person, especially by a man is regarded as an uncomfortable situation. Therefore, many Turkish women do not go to hospital for routine control as long as they do not experience an important problem, and they may delay it even they experience a problem[9]. Although the midwives and nurses are healthcare professionals, the results of this study showed the attitudes of the women who were raised in Turkish culture regarding this topic. The findings of the study, indicating that BSE barriers perception of midwives and nurses who have reported that they would experience no feeling during breast examination by healthcare professional was low and their BSE self-efficacy perception was high, supports our idea. Similar results were obtained in the study by Kulakci et al.[9] which was performed with Turkish women.

CONCLUSION

The main conclusion of this current study was that seriousness, health motivation, BSE benefits and BSE self-efficacy perceptions of the midwives and nurses were moderate, and susceptibility, BSE barriers and breast cancer fatalism perceptions were low. Furthermore, health beliefs of breast cancer of the midwives and nurses was affected by breast cancer fatalism, age, education level, profession, working year, marital status, family type, performing of BSE, frequency of BSE performing, having a problem with breast, having a breast examination in hospital and feeling during breast examination by healthcare professional ($p < .05$). As a result, evaluating the effect of factors on breast cancer health beliefs of the midwives and nurses is important to increase the awareness for breast cancer, provide early diagnosis behaviors and to arrange education programs in this direction during their professional lives as well as in-service trainings following graduation.

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