# Cervical Cancer and Pap Smear Health Belief Level in Women Applying to Cancer Early Diagnosis Screening and Training Center

Kanser Erken Teşhis, Tarama ve Eğitim Merkezlerine Başvuran Kadınlarda Servikal Kanser ve Pap Smear Sağlık İnanç Düzeyi

## Aliye Bulut<sup>1</sup>, Gülay Çelik<sup>2</sup>, Çağla Yigitbaş<sup>3</sup>

<sup>1</sup> Gaziantep İslam Bilim ve Teknoloji Üniversitesi, Sağlık Bilimleri Fakültesi, Ebelik Bölümü, Gaziantep / Türkiye <sup>2</sup> Bingöl Üniversitesi, Sağlık Bilimleri Fakültesi, Hemşirelik Bölümü, Bingöl/Türkiye <sup>3</sup> Giresun Üniversitesi, Sağlık Bilimleri Fakültesi, Ebelik Bölümü, Giresun/Türkiye

> Yazışma Adresi / Correspondence: Aliye Bulut

Gaziantep İslam Bilim ve Teknoloji Üniversitesi, Sağlık Bilimleri Fakültesi, Ebelik Bölümü, Gaziantep / Türkiye T: **+90 505 817 31 13** E-mail **: aliyedemirok@yahoo.com** 

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Orcid :

Aliye Bulut https://orcid.org/0000-0002-4326-0000 Gülay Çelik https://orcid.org/0000-0003-1504-6792 Çağla Yigitbaş https://orcid.org/0000-0002-3789-1156

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Abstract	
Objective	This study was conducted to determine health belief levels of women who were living in a city center and applied to Cancer Early Diagnosis Screening and Training Center towards cervical cancer and pap smear tests and identify if the sociodemographic characteristics make a difference or not.
Materials and Methods	The population of the study consisted of women who applied to Cancer Early Diagnosis Screening and Training Center located in Bingöl city center for routine screening. The study was completed with 188 women. Personal Information Form and Health Belief Model Scale for Cervical Cancer and Pap Smear Test were used to collect the data of the study.
Results	According to the study results, it was determined that the women had the highest mean score in pap smear barriers subscale and the lowest mean score in the cancer sensitivity subscale among subscales of Health Belief Model Scale for Cervical Cancer and Pap Smear Test.
Conclusion	Most of the women participating in the study had not heard of HPV and pap smear test before, and never had a pap smear test. In addition, having heard of HPV before and knowing and having the pap smear test increased pap smear and cervical cancer benefit perception and decreased the barrier perception. In this context, the most important factor causing barrier perception towards pap smear test and cervical cancer is the lack of knowledge of women on this issue. Therefore, informing and providing counseling about pap smear test and cervical cancer by healthcare professionals is believed to be important.
Keywords	Cervical Cancer; pap smear; early diagnosis
Öz	
Amaç	Bu araştırma, bir şehir merkezinde yaşayan ve Kanser Erken Teşhis, Tarama ve Eğitim Merkezleri (KETEM) 'ne başvuran kadınların serviks kanseri ve pap smear testlerine yönelik sağlık inançlarının düzeyini belirlemek ve sosyodemografik özelliklerin fark oluşturup oluşturmadığını tespit etmek amacıyla yürütülmüştür.
Gereç ve Yöntemler	Araştırmanın evrenini, Bingöl il merkezinde bulunan KETEM'e rutin tarama için başvuran kadınlar oluşturmuştur. Araştırma 188 kadın ile tamamlanmıştır. Araştırma verilerinin toplan- masında; Kişisel Bilgi Formu ve Rahim Ağzı Kanseri ve Pap Smear Testi Sağlık İnanç Modeli Ölçeği kullanılmıştır.
Bulgular	Çalışma sonuçlarına göre kadınların Rahim Ağzı Kanseri ve Pap Smear Testi Sağlık İnanç Modeli Ölçeği alt boyutlarından, en yüksek puan ortalamasının pap smear engeller alt boyutunda olduğu, en düşük puan ortalamasının ise kanser duyarlılık boyutunda olduğu belirlenmiştir.
Sonuç	Çalışmaya katılan kadınların çoğunun daha önce HPV virüsünü ve pap smear testini duymadığı, hiç pap smear testi yaptırmadığı belirlenmiştir. Ayrıca HPV virüsünü daha önce duymuş olmanın ve pap smear testini bilme ve yaptırma durumunun pap smear ve serviks kanseri yarar algısını artırdığı, engel algısını ise azalttığı belirlenmiştir. Bu bağlamda pap smear testi ve serviks kanseri engel algısına neden olan en önemli faktör, kadınların bu konudaki bilgi eksikliğidir. Bu nedenle de sağlık personeli tarafından pap smear testi ve serviks kanseri bilgilendirme ve danışmalığının yapılmasının önemli olduğu düşünülmektedir.
Anahtar Kelimeler	Servikal kanser; pap smear; erken tanı

#### INTRODUCTION

The ever-increasing prevalence of cancer is a major public health problem for both the world and Turkey. If the increase in incidence rate of cancer continues, 27 million new cancers will be diagnosed each year around 2030 and the number of people living with cancer will increase to 75 million.<sup>1-2</sup>

Cervical Cancer (CC) has an important place among female cancers. CC is a cancer type that can be diagnosed early among the genital cancers. Since predisposing factors and risk factors are well known, their treatment is also quite possible. It has been determined that 50% of cancers seen in reproductive system of women are caused by cervix. Although CC is seen more frequently in women in the age group of 40-55, it has started to be seen in younger women. This is believed to be associated with the developments in early diagnosis methods.<sup>3</sup> While CC is ranked as ninth among cancers seen in women from all age groups in Turkey, it is the fourth most frequent cancer in women in the age group of 25-49 years.<sup>4</sup>

In the literature, it is stated that CC is a cancer type that is commonly seen in women, can be treated with earl diagnosis at the rate of 95%, and has mortality rate up to 50% for late diagnosis. Thanks to the use of screening methods, dysplasia can be caught at an early age before turning into cancer and can be easily treated.<sup>5</sup> The most effective method for early diagnosis of CC is to have a pap smear test.<sup>4</sup> Pap smear test is a cheap and easy to apply method.

Screenings for cervical cancer in Turkey are carried out by Cancer Early Diagnosis, Screening and Training Centers (KETEM). Screening services for cervical cancer with pap smear test for women aged between 30-65 are provided for free by KETEMs. Although early screening services are provided for CC, women's participation in screening programs is reported to be insufficient. Many personal, social, cultural and institutional factors affect women's participation in CC screening programs.<sup>6-7</sup> Determining the factors affecting the participation of women to cancer early screening programs is important in developing strategic activities to be conducted in this respect.<sup>8</sup>

The incidence of cervical cancer is expected to nearly double the current rate by 2025 and the disease is estimated to cause the death of approximately 270.000 women worldwide each year. Approximately 87% of these deaths are reported to be seen in developing countries, especially in rural areas.9 According to the recommendation of the American Gynecological& Obstetrical Society, CC screening should be initiated for all women when sexual activity begins or from 18 years of age. It has been reported that if women undergo CC screening three times with one-year interval and the results are not associated with cancer, this range can be increased to 2-3 years with the medical advice.<sup>10-11</sup> It has been determined in the studies conducted with developing countries including Turkey that frequency of CC screening has not been at the desired level, yet.<sup>12</sup> In the studies conducted in Turkey, it has been reported that women have never undergone CC screening tests in different rates (32.4%, 44.1%, and 82.8%).13

This study was conducted to determine health belief levels of women who were living in a city center and applied to KETEM towards cervical cancer and pap smear tests and identify if the sociodemographic characteristics make a difference or not.

## MATERIALS and METHODS Type of the Study

The study was conducted in a descriptive and cross-sectional type with quantitative design.

#### Place and Time of the Study

The data of the study were collected between 20 December 2019 and 20 March 2020 in KETEM operating in the city center of Bingöl.

#### Population and Sample of the Study

The study group of the study consisted of 800 women who applied to KETEM located in Bingöl city center between 20 December 2019 and 20 March 2020 for routine screening. The sample of the study consisted of women who met the inclusion criteria and were voluntary to participate in the study between the dates of the study. 105 women who did not comply with the research criteria and 507 who did not agree to participate in the study were excluded from the study. The study was completed with 188 women.

**Inclusion Criteria:** Women who had no communication problem, can speak Turkish, were voluntary to participate in the study, had sexual intercourse before or were sexually active were included in the study.

#### **Data Collection Tool**

Personal Information Form and Health Belief Model Scale for Cervical Cancer and Pap Smear Test were used to collect the data of the study.

Health Belief Model Scale for Cervical Cancer and Pap Smear Test was developed by Champion for breast cancer and mammography and later adapted for cervical cancer and pap smear test.<sup>14-15</sup> Its Turkish validity and reliability study was conducted by Güvenç, Akyüz and Açıkel in 2010. The scale consists of 35 items and five subscales. In the evaluation of the scale, five-point Likert type scaling method ranging from 1 to 5 ["I strongly disagree" (1), "I disagree" (29), "Undecided" (3), "I agree" (4), "I strongly agree" (5)] was used. The scale has five subscales as Pap Smear Benefit and Motivation Subscale (PSBMS), Pap Smear Barrier Subscale (PSBS), Cervical Cancer Importance/Severity Subscale (CCI/SS), Cervical Cancer Sensitivity Subscale (CCAS), and Cervical Cancer Health Subscale (CCHS). For Health Belief Model Scale for Cervical Cancer and Pap Smear Test, the total score is not calculated and each subscale is rated separately. Higher scores signify that sensitivity and importance and motivation increase, benefits for benefit perception and barriers for barrier perception are perceived high. Subscales except for PSBS is associated positively with pap smear screening behavior. High barrier perception score of an individual refers to high barriers about having pap smear test. The Cronbach's alpha coefficients in the original version of the scale were 0.86 for pap smear benefit and motivation; 0.82 for pap smear barriers, 0.78 for importance/severity; 0.78 for sensitivity; and 0.62 for health motivation.<sup>12</sup> The Cronbach's alpha coefficients were found as 0.92, 0.80, 0.87, 0.84, and 0.68, respectively for this study.

In the collection of the data, Personal Information Form was developed by the researchers upon the literature review.<sup>13-16</sup> This form is composed of a total of 13 questions containing information about sociodemographic characteristics of the mothers (9 questions), HPV, pap smear test and cervical cancer (4 questions).

#### **Ethical Considerations**

In order to conduct the study, written permission was obtained from Bingöl University Scientific Research and Publication Ethics Committee Presidency with the decision numbered E. 12341 and dated 19 June 2019.

#### Data Assessment

The data obtained from the study were evaluated with Statistical Program for Social Sciences-22 (SPSS). In the data analysis, descriptive statistics were given as number, percentage, minimum and maximum values, mean and standard deviation. In the data assessment, Kruskal Wallis and Mann-Whitney-U tests were conducted after Kolmogorov Smirnov analysis and post-Hoc analysis along with Spearman Correlation analysis were also performed. The value of p<0.05 was accepted as the significance level.

#### RESULTS

It was found that the mean age of the women participating in the study was 35.73±8.24 (min-Max=18-55; median:35) and education levels were university and higher and primary school (25.5%; 23.9%, respectively). The age at first marriage of the women was 20-24 and 84% of them gave birth between 1 and 4 (Table 1).

Table 1. Distribution of the women according to some descriptive characteristics (N=188)								
Descriptive Characteristics Number %								
Age ( ±SD=35.73±8.24) (Min-Max=18-55; Median:35 )								
	Illiterate	22	11.7					
	Literate	32	17					
Education Level	Primary school	45	23.9					
	High school	41	21.8					
	University and higher	48	25.5					
	Illiterate	6	3.2					
Partner's	Literate	26	13.8					
Education	Primary school	41	21.8					
Level	High school	41	21.8					
	University and higher	74	39.4					
Place of residence	City center	154	81.9					
	District	23	12.2					
	Village	11	5.9					
Moulting status	Employed	59	31.4					
Working status	Unemployed	129	68.6					
	Low	61	32.4					
Financial status	Moderate	105	55.9					
	High	22	11.7					
	15-19	63	33.5					
Age at first marriage	20-24	74	39.4					
	25-31	51	27.1					
	No birth	10	5.3					
Parity	1-4	159	84.7					
	5-8	19	10.1					

It was found that 69.7% of the women in this study did not know HPV, 45.2% had no knowledge about pap smear test and cervical cancer, 73.4% did not have any pap smear test, and 23.4% saw themselves risky in terms of cervical cancer (Table 2).

Table 2. Distribution of characteristics of the women regardingto pap smear test and cervical cancer (N=188)							
Characteristics	Number	%					
HPV	I know	57	30.3				
HPV	I do not know	131	69.7				
Pap smear test and cervical	Yes	103	54.8				
cancer information	No	85	45.2				
Status of having pap smear	Yes	50	26.6				
test	No	138	73.4				
Seeing yourself at risk for	Yes	44	23.4				
cervical cancer	No	144	76.6				

It was determined that among the subscales of Health Belief Model Scale for Cervical Cancer and Pap Smear Test, the women received the highest mean score from pap smear barriers subscale and the lowest mean score from the cancer sensitivity subscale and the subscales had high reliability (Table 3).

Table 3. Mean Scores of the Women from Health Belief Model Scale for Cervical Cancer and Pap Smear Test								
Subscales	Number of items	Mean±SD	Median	Min- Max	Cronbach's alpha			
Pap smear benefit and motivation	8	31.31±6.73	32	12-40	0.92			
Pap smear barriers	14	36.46±9.20	37	14-56	0.80			
Cancer importance/ severity	7	23.57±6.28	25	7-35	0.87			
Cancer sensitivity	3	7.54±2.64	8	3-15	0.84			
Cancer health motivation	3	9.28±2.97	9	3-15	0.68			

Sociodemographic Characteristics	l Mean Rank	Test value*	2 Mean Rank	Test value*	3 Mean Rank	Test value*	4 Mean Rank	Test value*	5 Mean Rank	Test value*
Age range				1						
Between 18-30 years	91.26	KW=1.021	107.08	KW=5.720	107.26a	KW=8.619	94.93	KW=0.009	101.83	KW=2.977
Between 31 43 years	93.20	p=0.600	91.96	p=0.057	82.02a	p=0.013	94.49	p=0.996	94.95	p=0.226
44 and over	101.79		81.73		101.83		93.90		83.11	
Education level				1						
Illiterate	79.25ª		97.52ª		97.80ª		106.00		64.20ª	
Literate	67.02 <sup>b,c</sup>	KW=15.697	125.05 <sup>b,d,e</sup>	KW=23.771	74.14 <sup>b,e,f</sup>	KW=14.397	95.11	KW=7.002	69.64 <sup>b,c</sup>	KW=30.466
Primary school	103.63 <sup>b</sup>	p=0.003	91.27 <sup>d,f</sup>	p=0.001	92.09 <sup>c,e,g</sup>	p=0.006	89.56	p=0.136	85.88 <sup>c,d</sup>	p=0.001
Secondary school	94.73°		104.49 <sup>c,e,</sup>		119.77 <sup>d,f,g,h</sup>		108.41		105.54 <sup>c,d</sup>	
University and higher	111.05ª		67.25 <sup>a,b,c,f</sup>		87.24 <sup>a,b,c,d,h</sup>		81.57		123.61 <sup>a,b,c</sup>	
Where they lived most		I		1	1			1	1	1
City	95.94ª		87.57a		91.72		90.99		95.13	
District	86.00ª	KW=0.693	128.48	KW=13.992	111.57	KW=2.715	101.57	KW=5.493	93.63	KW=0.211
Village	92.18	p=0.707	120.45a	p=0.001	97.77	p=0.257	128.27	p=0.064	87.50	p=0.900
Occupation		I		1	1			1	1	1
Housewife	86.62ª	KW=8.877	105.86 <sup>a,b</sup>	KW=19.135	97.23	KW=2.891	95.55	KW=4.034	83.88 <sup>a,b,c</sup>	KW=15.902
Education staff	117.71	p=0.031	74.21ª	p=0.001	107.54	p=0.409	86.00	p=0.258	117.29ª	p=0.001
Healthcare personnel	110.93ª		62.00 <sup>b</sup>		84.07		86.31		118.90 <sup>b</sup>	
Civil servant and self-employed	109.06		78.97		83.03		77.17		116.11°	
Marriage age		I		I	J			J		1
18 and younger	91.95	U=3403.50	98.52	U=3327.00	83.09	U=2942.50	94.33	U=3527.00	68.63	U=2191.00
19 and older	95.47	p=0.690	92.96	p=0.531	98.86	p=0.075	94.57	p=0.978	104.39	p=0.001
Parity										
2 and less	100.35	U=3826.00	95.79	U=4278.00	92.18	U=4176.00	83.22	U=3288.50	105.18	U=3348.00
3 and more	87.99	p=0.119	93.07	p=0.732	97.08	p=0.537	107.05	p=0.002	82.62	p=0.004
Income level perception										
More income	68.07 <sup>a,b</sup>	KW=21.492	106.80	KW=4.636	81.50	KW=5.251	95.91	KW=0.575	72.78 <sup>a,b</sup>	KW=15.998
Equal income and expenses	106.63ª	p=0.001	88.83	p=0.098	101.36	p=0.072	95.38	p=0.750	102.32ª	p=0.001
More expenses	109.86 <sup>b</sup>		87.43		97.80		86.41		117.39 <sup>b</sup>	
Having heard of HPV								,		
Yes	115.89	U=2514.00	70.74	U=2379.00	96.76	U=3604.50	95.50	U=3676.50	112.83	U=2688,50
No	85.19	p=0.001	104.84	p=0.001	93.52	p=0.706	94.06	p=0.866	86.52	p=0.002
Knowing the Pap smear test										
Yes	104.37	U=3360.50	74.91	U=2359.50	89.19	U=3831.00	96.52	U=4169.00	106.81	U=3110.00
No	82.54	p=0.006	118.24	p=0.001	100.93	p=0.140	92.05	p=0.567	79.59	p=0.001
Having the test before										
Yes	120.21	U=2164.00	69.46	U=2198.00	91.06	U=3278.00	94.44	U=3447.00	97.77	U=3286.50
No	85.18	p=0.001	103.57	p=0.001	95.75	p=0.601	94.52	p=0.993	93.32	p=0.618
Seeing yourself at risk										
Yes	94.86	U=3152.00	87.47	U=2858.50	113.65	U=2325.50	121.18	U=1994.00	105.82	U=2670.00
		1		1	1			1		1

As seen in Table 4, in terms of Subscale Scores of Health Belief Model for Cervical Cancer and Pap Smear Test, sociodemographic characteristics made a difference. Benefit and motivation scores were higher in those who had high education level, were working as a healthcare professional, perceived their incomes equal to their expenses, had heard of HPV, knew pap smear test, and had pap-smear test before (p>0.05). The mean ranks in terms of seeing barriers as high were higher in those who were not literature, spent most of their lives outside the city, were housewives, had not heard about HPV virus, and did not know pap smear test (p>0.05). The mean ranks for cervical cancer importance or severity subscale were higher in those who were in young age group, had high education levels and saw themselves at risk for cervical cancer (p>0.05). The mean ranks for cervical cancer sensitivity subscale were higher in those who had 3 or more deliveries and saw themselves at risk in terms of cervical cancer (p>0.05). The mean ranks for the cervical cancer health subscale were higher in those who had high education level, were working as educators or healthcare professionals, got married after the age of 19, had 2 or less number of births, saw their expenses equal to and higher than their income, had heard of HPV and knew about pap smear test (p>0.05).

		1	2	3	4	5	Age	Marriage age	Parity
_	Rho	1							
1	р	-							
_	Rho	-0.419**	1						
2	р	0.001	-						
3	Rho	0.246**	0.216**	1					
	р	0.001	0.003	-					
	Rho	-0.270	0.295**	0.206**	1				
4	р	0.001	0.001	0.005	-				
_	Rho	0.227**	-0.070	0.121	0.018	1			
5	р	0.002	0.338	0.099	0.807	-			
Age	Rho	0.011	-0.149*	-0.93	-0.008	-0.164*	1		
	р	0.878	0.041	0.206	0.913	0.024	-		
Marriage age	Rho	-0.017	-0.034	0.037	-0.005	0.337**	-0.164*	1	
	р	0.817	0.645	0.618	0.94	0.001	0.024	-	
Parity	Rho	-0.075	0.003	0.076	0.218**	-0.234**	0.635**	-0,482**	1
	р	0.308	0.966	0.299	0.003	0.001	0.001	0-001	-

1. Pap Smear Benefit and Motivation Subscale, 2: Pap Smear Barrier Subscale, 3: Cervical Cancer Importance/Severity Subscale, 4: Cervical Cancer Sensitivity Subscale, 5: Cervical Cancer Health Subscale \* Spearman correlation analysis was performed.

As seen in Table 5, there was a negative correlation between barrier subscale and benefit and motivation subscale, a positive correlation between the importance/severity subscale and both benefit and motivation subscale and barrier subscale, a negative correlation between cervical cancer sensitivity subscale and both benefit and motivation subscale, a positive correlation between cervical cancer health subscale and pap smear benefit and motivation subscale, a positive correlation between the parity and cervical cancer sensitivity subscale and a negative correlation between the parity and cervical cancer health subscale (p>0.05).

#### DISCUSSION

It was determined that 69.7% of women participating in the study did not know HPV, 45.2% had no knowledge about pap smear test and cervical cancer, 73.4% did not have any pap smear test, and 23.4% saw themselves at risk in terms of cervical cancer (Table 2). Considering these results, it can be said that the women had low knowledge levels about HPV, pap smear test and cervical cancer. It was reported in a study that 19.4% of the women had the pap smear test.<sup>17</sup> In the study conducted by<sup>18</sup>, 82.6% of the women were found to know cervical cancer, while Duran reported in his study that majority of the women did not know how to protect themselves against cervical cancer.<sup>19</sup> In another study conducted with 508 women to investigate their knowledge levels about cervical cancer, it was seen that 62.6% of the women had low knowledge levels about cervical cancer.<sup>20</sup> Similar to the literature, in the present study, it was observed that women had low knowledge levels about cervical cancer and pap smear test and the rate of having pap smear test was not at the desired level.

It was determined that the women participating in the study had the highest score from pap smear barrier subscale and the lowest score from cancer sensitivity subscale among subscales of Health Belief Model Scale for Cervical Cancer and Pap Smear Test (Table 3).

It was observed that the women participating in the pres-

ent study had higher scores from benefit subscale and lower scores from barrier subscale decreased as they got older (Table 4). With increasing age, the fear of getting sick and death may increase, which may have increased the benefit and motivation of cervical cancer and may have reduced the barriers.

In the present study, it was determined that housewives had lower pap smear benefit and motivation perceptions and higher barrier perceptions than those who were healthcare professional and education staff (Table 4). In the literature, it was found while cervical cancer and health motivation and sensitivity scores of employed women were higher than unemployed women, their perceived barrier scores were higher than unemployed women.<sup>21</sup> Similarly, in the present study, high benefit perceptions of employed women may be caused by their economic freedoms and high education levels.

Income level is a factor affecting the participation of individuals in early screening programs of cervical cancer.6-7 When the women were examined in terms of their income status, it was determined that those with high income status had higher scores from pap-smear benefit subscale and the difference was statistically significant (p<0.001); whereas, their barrier perceptions were lower (Table 4). Poor income can have a negative effect on having a pap smear test and accessing information about cancer. In the present study, it was found that poor income status of women (32.4%) affected their benefit and barrier perceptions; likewise in the literature, it has been stated to affect knowledge level about cervical cancer and pap smear test conducted for early diagnosis and there is a positive correlation between them.<sup>22</sup>

It was determined that those who had heard of HPV before had higher pap smear benefit perceptions and lower barrier perceptions compared to those who had not (p<0.001, Table 4). In addition, it was also found that those who knew pap smear test and had test before had higher cancer benefit motivation perceptions and lower barrier perceptions compared to those who did not know and have the test previously. In a study, cancer benefit motivation, barrier perception and sensitivity perceptions of women who had heard of pap smear test were found to be significant; on the other hand, benefit and sensitivity perceptions were higher in women who had heard of pap smear test than women who had not.<sup>21</sup> In the study conducted by Acar<sup>23</sup>, it was also found that the women who had heard of pap smear test before higher benefit and motivation mean scores from Health Belief Model Scale and lower barrier perception mean scores than women who had not heard of smear test before. It can be asserted that knowing adequate knowledge about HPV and pap smear test will increase cervical cancer benefit perception, decrease barrier perception and women's status of having pap smear test can increase with the training about pap smear test.

It was determined that those who found themselves at risk in terms of cervical cancer had higher mean scores from Cervical Cancer Importance/Severity subscale than those who did not find themselves at risk and the difference between them was significant (p=0.008, Table 4). It can be asserted that giving importance to and taking cancer increased as the risk of getting cancer increased. It was also determined that those who found themselves at risk in terms of cancer had higher cervical cancer sensitivity subscale mean scores than those who did not and the difference between them was significant (p=0.001, Table 4).

#### CONCLUSION

According to the study results, it was determined that the women had the highest mean score in pap smear barriers subscale and the lowest mean score in the cancer sensitivity subscale among subscales of Health Belief Model Scale for Cervical Cancer and Pap Smear Test. Most of the women participating in the study had not heard of HPV and pap smear test before, and never had a pap smear test. In addition, having heard of HPV before and knowing and having the pap smear test increased pap smear and cervical cancer benefit perception and decreased the barrier perception. In this context, the most important factor causing barrier perception towards pap smear test and cervical cancer is the lack of knowledge of women on this issue. Therefore, informing and providing counseling about pap smear test and cervical cancer by healthcare professionals is believed to be important.

### **Ethical Considerations**

In order to conduct the study, written permission was obtained from Bingöl University Scientific Research and Publication Ethics Committee Presidency with the decision numbered E. 12341 and dated 19 June 2019.

#### References

- Kaya M. "Cervical Cancer" with a public health approach. Ed: Akm A. Hacettepe University Women's Problems Research and Application Center. HÜKSAM Publications, Ankara. 2009; 36 (1):45-51.
- Cancer Control in Turkey (Ed. Tuncer A.M.). T.C. Ministry of Health Cancer Control Department. Ministry Publication Number: 777. Ankara. 2009;11.
- Jemal A, Siegel R, Xu J et al. Cancer Statistics 2010. A Cancer Journal for Clinicians. Sep-Oct; 2010; 60(5):277–300.
- Kaiser Permanente Care Management Institute. Cervical cancer screening guideline.2006,www.guideline.gov. Accessed on:01.05.2019.
- Gökaslan H, Uyar E.Screening Servical Cancer With Pap Smear. Turkish Journal of Family Practice. 2004; 8(3):105-110.
- Ersin F, Bahar Z. Barriers and facilitating factors perceived in Turkish women's behaviors towards early cervical cancer detection: a qualitative approach. Asian Pac J Cancer Prev 2013; 14(9): 4977-4982.
- Gümüş AB, Çam O. Relationships Between Early Diagnosis Attitudes in Cervical Cancer of Women and Levels of Self-esteem, Body Perception and Hopelessness. Nobel Medicus 2011; 7(3): 46-52.
- Özkan S, Keskinkılıç B, Gültekin M, Karaca AS, Öztürk C, Boztaş G ve ark. ed. T.C. Ministry of Health Public Health Institution. http://www.iccpportal.org/sites/default/files/ plans/Ulusal\_Kanser\_Kontrol\_Plani\_ 20 13\_2018.pdf. Accessed on:01.07.2019.
- Cervical Cancer. Estimated Incidence, Mortality and Prevalence Worldwide in 2012. The GLOBOCAN 2012 database. International Agency for Research on Cancer. https://gco.iarc. fr/. Accessed on:01.05.2019.
- Waxman AG. Guidelines for cervical cancer screening: history and scientific rationale. Clin Obstet Gynecol. 2005;48(1):77-97. 11.
- Sawaya GF, Brown AD, Washington AE, Garber AM. Clinical practice: current approaches to cervical-cancer screening. N Engl J Med. 2001; 344(21):1603-1607.
- Güvenç G, Akyüz A, Açıkel CH. Health belief model scale for cervical cancer and pap smear test: psychometric testing. J Adv Nurs 2011; 67(2):428-37.
- Hacıhasanoğlu Aşılar R, Köse S, Yıldırım A. Women's Knowledge, Beliefs and Behaviors About Cervical Cancer and Pap Smear Test. Turkiye Klinikleri J Nurs Sci 2015;7(2):102-11.

- Champion VL. Instrument refinement for breast cancer screening behaviours. Nurs Res 1993;42(3):139-43.
- Champion VL. Revised susceptibility, benefits and barriers scale for mammography screening. Res Nurs Health 1999;22(4):341-8.
- Awosan KJ, Hassan M, Ibrahim BM. Knowledge of Cervical Cancer and Uptake of Pap Smear Test and Human Papillomavirus Vaccination among Gynecologic Clinic Attendees in Sokoto, Nigeria. International Journal of Scientific Study 2018; 6(5):52-58.
- Ak M, Canbal M, Turan S, Gürbüz N. Attitude concerning the pap smear test of women who admitted to the family medicine outpatient clinic. Konuralp Tip Dergisi 2010;2(2):1-4.
- Ozan H, Çetinkaya Demir B, Atik Y, Gümüş E, Özerkan K. Determination of knowledge level of patients regarding HPV and HPV vaccine in outpatient clinic of obstetrics and gynecology department. Journal of Uludağ University Faculty of Medicine. 2011;37(3):145-8.
- Duran ET. Examination with the health belief model of women's attitudes to cervical cancer and early diagnosis in Turkey: a qualitative study. Asian Pac J Cancer Prev 2011;12(5):1179-84.
- Segni MT, Demissie HF, Tadesse DM, Amdemichael R, Mamo YT, Worku A. Level of Knowledge and Associated Factor toward Cervical Cancer among Women Age (21-64) Years Visiting Health Facilities in Gulele Sub-city Addis Ababa Ethiopia. Journal of the Pancreas (Online) 2017 Jan 25; 18(1):44-48.
- Yanıkkerem E, Karakuş Selçuk A, Esmeray N. Women's attitude and beliefs about cervical cancer and pap smear test by using the health belief model. International Journal of Cancer and Clinical Research, 2018; 5(2):1–9.
- 22. Iflazoğlu, F. Status of Low Income and Non-Low Income Women for Taking Pap Smear In Accordance with Health Promotion Model and Examination of Affecting Factors. Journal Of Public Health Nursing. 2019; 1(3):132-146.
- 23. Acar GB. Health Beliefs and Affecting Factors on the Screening of Cervical Cancer for Women in the Reproductive Period. Health Sciences Institute, Department of Nursing, Master Thesis, Ankara: T.C. Yıldırım Beyazıt University, 2014.