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Research

Women's Health Literacy Levels and Health Beliefs Concerning Cervical Cancer and Pap Smear Test in Türkiye

Türkiye'de Kadınların Sağlık Okuryazarlığı Düzeyleri ile Serviks Kanseri ve Pap Smear Testine İlişkin Sağlık İnançları

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ABSTRACT

Objective: This study examined the relationship between women's health literacy levels, their health belief levels concerning cervical cancer, and the Pap smear test.

Methods: This descriptive and relationship-seeking study was conducted with 519 women who were selected using the purposive sampling method and met the inclusion criteria. Data were collected using a questionnaire by the researchers, the Turkey Health Literacy Survey (THLS-32) and the Health Belief Model Scale for Cervical Cancer and the Pap Smear Test (HBM-SCCPST).

Results: The mean THLS-32 score of the women was 32.08±11.85 and 30.2% had an insufficient level of health literacy. Women's education, occupation, economic status, knowledge of the Pap smear, and willingness to be vaccinated against the human papillomavirus were found to be factors affecting their health literacy ($p<0.05$). The mean subscale scores in the HBM-SCCPST were determined to be 30.83±8.46 for Pap smear benefits, 32.70±11.41 for barriers, 22.16±6.06 for cervical cancer-seriousness, 7.83±2.40 for cervical cancer-susceptibility, 9.15±2.86 for cervical cancer health motivation. The women's health literacy levels had a weak positive correlation with their mean Pap smear benefits subscale score ($r=0.275$), weak negative relationship with their mean barriers subscale score ($r=-0.212$) ($p=0.000$).

Conclusion: In this study, it was observed that as the health literacy levels of the women increased, there was a decrease in their barrier perception and an increase in their benefit perception concerning the Pap smear test. The results suggest that women's health literacy levels are moderate, and there is a need for interventions to increase their health literacy.

Keywords: Pap smear test, cervical cancer, health literacy, beliefs

ÖZ

Amaç: Kadınların sağlık okuryazarlığı düzeyleri ve serviks kanseri ve Pap smear testine ilişkin sağlık inanç düzeyleri arasındaki ilişkinin incelenmesidir.

Gereç ve Yöntem: Tanımlayıcı ve ilişki arayıcı tipte olan bu araştırma amaçsal örnekleme yöntemi ile seçilen ve dahil edilme kriterlerine uyan 519 kadın ile gerçekleştirildi. Veriler araştırmacılar tarafından hazırlanan anket formu, Serviks Kanseri ve Pap Smear Testi Sağlık İnanç Modeli Ölçeği (SKPST-SİMÖ) ve Türkiye Sağlık Okuryazarlığı Ölçeği (TSOY-32) kullanılarak toplandı.

Bulgular: Kadınların TSOY-32 puan ortalamaları 32,08±11,85 olup, %30,2'sinin sağlık okuryazarlığı "yetersiz" düzeydedir. Kadınların eğitim düzeyi, mesleği, ekonomik durum, sigara kullanımı, Pap smear testini bilme ve insan papillom virüsü aşısı olmak isteme durumu sağlık okuryazarlığını etkileyen faktörler olarak bulunmuştur ($p<0,05$). SKPST-SİMÖ Pap smear yarar ve motivasyon alt boyutundan 30,83±8,46 puan, "Pap smear engeller" alt boyutundan 32,70±11,41 puan, "serviks kanseri önemseme/ciddiyet" alt boyutundan 22,16±6,06 puan, "serviks kanseri duyarlılık" alt boyutundan 7,83±2,40 puan ve "serviks kanseri sağlık motivasyonu" alt boyutundan 9,15±2,86 puan aldıkları saptandı. Kadınların, sağlık okuryazarlık düzeyi ile "Pap smear yarar ve motivasyonu" alt boyutu puan ortalamaları arasında pozitif yönde zayıf bir ilişki ($r=0,275$) ve "Pap smear engeller" alt boyutu puan ortalamaları arasında ise negatif yönde zayıf bir ilişki ($r=-0,212$) olduğu görülmektedir ($p=0,000$).

Sonuç: Çalışmada kadınların sağlık okuryazarlığı düzeyi arttıkça Pap smear testi engel algısının azaldığı, yarar algısının ise arttığı görülmüştür. Sonuçlar, kadınların sağlık okuryazarlığının orta düzeyde olduğunu göstermekte olup, sağlık okuryazarlığını artıracak müdahalelere gereksinim bulunmaktadır.

Anahtar Kelimeler: Pap smear testi, rahim ağzı kanseri, sağlık okuryazarlığı, inançlar

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INTRODUCTION

Health literacy allows individuals to access accurate information, participate in their own health services, improve their health, and build individual and community resilience by addressing health inequalities (1). Individuals with sufficient health literacy can take responsibility for their health and community health (2). This concept has gained even more importance during the most recent pandemic of coronavirus disease (3). Individuals with low health literacy cannot effectively distinguish between facts and fiction and may allow unreliable information to influence their actions and quality of life (4). Unfortunately, this harms not only the individual but also society as a whole. This situation can be further worsened by myths about diseases and unclear and incomprehensible health information spread on social media, and inaccurate information in society can negatively affect the psychological health and quality of life of the public (1,4,5).

Health literacy affects women's health in many ways. Improving women's health is particularly important because of its effects on family and community health (6). Having a high level of health literacy is an important factor for women to protect and promote their health throughout their life cycles, and it also affects newborn and child health (6,7). Increases a woman's capacity to take responsibility for her own health, as well as the health of her family, and affects her and her family's ability to seek solutions for their health problems (8). Health literacy is also considered an important focus, especially for women's reproductive health (9). It has been reported that women with a high level of health literacy have a healthy pregnancy and postpartum period, feed their infants only breast milk for the first 6 months, and participate in gynecological cancer screening at favorable levels. Studies have also shown that individuals with a high level of health literacy are more conscious and have a higher quality of life (4,5). However, as levels of health literacy decline, difficulties in participating in medical decisions, following medical advice, and attending follow-up appointments have been identified. It has been reported that adults with limited health literacy receive less information from materials on disease prevention and control and have lower rates of participation in screenings (10,11).

Cervical cancer is an important community health problem worldwide (12). Although cervical cancer is included in screening programs in Türkiye, as in many other parts of the world, and can be diagnosed early, deaths due to this cancer still occur at a high rate. Cervical cancer is globally the fourth most common cancer among women, with an estimated 604,000 new cases and 342,000 deaths in 2020 (12).

According to GLOBOCAN 2020 data, while 604,127 new cervical cancer cases were detected across the world, the number of deaths caused by cervical cancer was found to be more than 340,000 (13). There are also significant differences in the incidence of cervical cancer between countries with the highest and lowest human development rates (14,15).

Women's health in Türkiye is deeply linked to the dynamics of health systems and society. Women's health literacy level is critical, especially in terms of the early diagnosis of preventable diseases such as cervical cancer and the role it plays in healthy living. It is thought that this research will help understand the underlying reasons for the low cervical screening participation of women in Türkiye. In Türkiye, the relationship between women's health literacy level and preventive methods such as cervical cancer and Pap smear test is not well understood. In this context, one of the deficiencies in the literature is that women's health literacy level in Türkiye has a significant impact on their level of knowledge about cervical cancer and their access to preventive tests such as Pap smear. This is because its effects have not been studied in detail. This study was conducted to fill the gap in the field of women's health in Türkiye, to understand the relationship between health literacy levels and cervical cancer and the Pap smear test, and to contribute to shaping health policies in this context. Therefore, this study aimed to determine the relationship between women's health literacy levels and their health belief levels concerning cervical cancer and the Pap smear test. The research questions were as follows:

- What are women's health literacy levels and health belief levels concerning cervical cancer and the Pap smear test?
- Is there a significant relationship between women's health literacy levels and their health belief levels concerning cervical cancer and the Pap smear test?
- What are the factors associated with women's health literacy levels and health belief levels concerning cervical cancer and the Pap smear test?

METHODS

Research Design and Sample

This research was conducted as a descriptive-relationship-seeking study, and the population consisted of 246,739 individuals who presented to the outpatient clinics of a training and research hospital located on the European side of Istanbul from December 27, 2021, through January 30, 2022. The sample size was determined as a minimum of

384 individuals, considering the sample size table, at 95% confidence and ±0.05 margin of error. The study sample comprised 519 individuals who were selected using the convince sampling method and met the inclusion criteria. The inclusion criteria were being a woman and volunteering to participate in the study.

Data Collection Tools

Descriptive characteristics form: This form was prepared by the researchers from the literature and consisted of 16 questions related to age, education level, marital status, occupation, age at marriage, age at first birth, the status of attending gynecological examinations, reasons for not attending gynecological examinations, place of residence, economic status, smoking status, presence of cervical cancer in the family, status of having a Pap smear test, and knowledge of and willingness to receive human papilloma virus (HPV) vaccination (16-19).

Turkey Health Literacy Survey (THLS-32): This scale was developed by Okyay et al. (20) in 2016 within the scope of the European Health Literacy Survey study. It consists of 32 Likert-type questions with the options of "very easy", "easy", "difficult", "very difficult", and "don't know". The lowest score that can be obtained from the scale is 0, and the highest score is 50. As the score increases, the level of health literacy of the individuals also increases. According to the score obtained, health literacy is interpreted at four levels: insufficient, 0-25 points; problematic-limited, >25-33 points; sufficient, >33-42 points; and excellent, >42-50 points.

The conceptual framework of THLS-32 includes two health-related dimensions ("treatment and service" and "disease prevention and health promotion") and four information-gathering processes ("access", "understanding", "evaluation", and "use/application") related to health-related decision-making and practices. In this study, the overall internal consistency coefficient of the scale was determined to be 0.957. The Cronbach alpha coefficients were found to be 0.915 for the treatment and service subscale and 0.950 for the disease prevention and health promotion subscale.

Health Belief Model Scale for Cervical Cancer and the Pap Smear Test (HBM-SCCPST): The Health Belief Model Scale was developed by Champion in 1997 to evaluate individuals' beliefs about breast cancer. In 2011, this scale was adapted and standardized by Guvenc et al. (21) to evaluate the beliefs about cervical cancer. Because of the standardization study, five subscales were identified: susceptibility, seriousness, benefits, barriers, and health motivation. There are three items in the susceptibility subscale, seven in the seriousness subscale, eight in the benefits subscale, 14 in the barriers subscale, and three in the health motivation subscale. In the evaluation of the scale, a 5-point Likert-type scale ranging from 1 to 5 - "strongly disagree" (1), "disagree" (2), "undecided" (3), "agree" (4), "completely agree" (5) method was used. Each dimension of the scale is evaluated separately and is not combined into a single total score. For each individual, scores equal to the number of subscales are obtained. Higher scores indicate increased susceptibility, seriousness, and health motivation; It indicates that the benefits are perceived as high for benefit perception and the barriers are perceived as high for barriers perception.

Data Collection

Study data were collected through face-to-face interviews with women who presented to the outpatient clinics of a training and research hospital on the European side of İstanbul between December 27, 2021, and January 30, 2022 and volunteered to participate in the research. Data collection took 20-25 minutes. Whether all forms were completed was checked during the data collection phase, and it was ensured that no sample loss occurred due to missing data.

Ethical Considerations: Approval was obtained from the Non-invasive Clinical Research Ethics Committee of İstanbul Medipol University on November 25, 2021 (decision no: 1151). Written institutional permission was obtained from the hospital management where the study was planned. All women who participated in the study provided informed consent.

Statistical Analysis

Statistical analyses were performed using IBM SPSS for Windows, version 22.0. Descriptive tests of frequency, percentage, mean, and standard deviation were employed. The distribution of numeric variables was tested using the Kolmogorov-Smirnov test, and it was determined that the data did not have a normal distribution ($p=0.00$). Therefore, the differences between the variables related to individual characteristics and the questionnaire scores were analyzed using the Mann-Whitney U and Kruskal-Wallis tests. To determine the association between the scores of the THLS-32 and the HBM-SCCPST, a coefficient analysis was undertaken. Statistical significance was considered at $p<0.05$.

RESULTS

The mean age of the women was 31.33±10.35 years, 31.8% (n=165) were housewives, and 57.4% (n=298) were married. The mean age at marriage was 23.84±4.56 years,

and the mean age at first birth was 24.94±5.16 years. The remaining sociodemographic data are presented in Table 1. Approximately half (48.4%) of the women stated that they had not undergone a gynecological examination. The reasons for not attending gynecological examinations were having no complaints (48.7%), not considering it necessary (35.6%), not being recommended by any physician (7.3%), fears (5.4%), and feeling ashamed (3%).

It was determined that women with undergraduate and postgraduate degrees, those working as civil servants, those with good economic status, non-smokers, occasional smokers, and women who were willing to be vaccinated against HPV had significantly higher mean THLS-32 scores than the remaining participants (p<0.05) (Tables 1,2).

Table 1. Distribution of the Health Belief Model Scale for Cervical Cancer and the Pap Smear Test and THLS-32 mean ranks according to women's demographic characteristics (n=519)

					Health Belief Model Scale for Cervical Cancer and the Pap Smear Test (HBM-SCCPST)				
				THLS-32	Susceptibility	Seriousness	Benefits	Barriers	Health motivation
Variables		**n**	**%**	**Mean rank**	**Mean rank**	**Mean rank**	**Mean rank**	**Mean rank**	**Mean rank**
Education level	Illiterate	38	7.3	152.65	243.46	217.56	192.55	185.23	112.85
	Literate	20	3.9	162.46	176.43	177.39	188.54	196.54	224.65
	Primary school	81	15.6	162.50	206.32	217.37	181.55	161.50	189.54
	Middle school	30	5.8	172.56	209.63	163.10	231.80	159.50	132.80
	High school	135	26	131.83	173.39	201.81	147.70	175.55	184.59
	Undergraduate	202	38.9	187.13	169.40	185.16	331.32	188.21	302.80
	Postgraduate	13	2.5	195.67	207.23	226.42	201.32	160.53	194.43
	KW/p			14.475/**0.002**	10.838/0.055	6.670/0.154	26.844/**0.000**	12.116/0.0533	13.218/**0.021**
Occupation	Housewife	165	31.8	132.12	216.22	265.94	161.96	146.82	207.69
	Civil servant	126	24.2	203.76	175.39	213.88	216.10	202.92	225.58
	Employed in the private sector	141	27.2	191.73	233.49	165.24	191.43	219.62	192.70
	Retired	4	0.8	192.85	83.00	384.50	326.50	175.00	300.50
	Self-employed	80	15.4	88.00	151.00	135.50	239.50	93.00	80.00
	Other	3	0.6	116.25	194.57	210.58	209.52	204.49	201.01
	KW/p			11.569/**0.041**	13.808/**0.017**	19.182/**0.002**	9.403/0.094	12.132/**0.033**	9.126/0.104
Marital status	Married	298	57.4	205.42	199.84	219.85	192.61	205.02	223.32
	Single	221	42.6	187.24	189.83	207.24	224.29	203.18	203.03
	Z/p			-1.579/0.114	-.894/.371	-1.056/.291	-**2.672/0.008**	-0.157/0.875	-1.713/0.087
Place of residence	Province	440	84.8	195.70	192.84	206.60	207.04	195.06	208.32
	District	46	8.9	201.09	165.59	229.69	193.09	243.03	211.99
	Village	33	6.3	187.80	360.50	161.20	252.10	157.00	281.30
	KW/p			0.088/0.957	7.096/**0.029**	1.671/0.434	1.153/0.562	5.992/0.050	1.854/0.396
Economic status	Poor	62	11.9	176.345	202.12	154.28	153.43	181.16	146.89
	Moderate	360	69.4	201.18	187.14	203.86	215.47	213.16	209.43
	Good	97	18.7	241.95	234.39	223.13	228.74	180.95	271.78
	KW/p			6.301/**0.043**	8.318/**0.016**	11.307/**0.004**	10.205/**0.006**	5.254/**0.032**	28.798/**0.000**
Smoking status	Non-smoker	374	72	200.03	185.91	212.81	203.93	198.09	212.05
	Smoker, at least once a day	84	16.2	180.78	219.86	200.96	218.76	212.28	192.72
	Occasionally	38	7.3	258.26	243.07	237.86	239.74	180.00	208.62
	Ex-smoker	23	4.4	58.00	297.50	405.90	399.00	77.60	236.05
	KW/p			21.433/**0.000**	17.055/**0.001**	14.413/**0.002**	15.508/**0.001**	8.816/**0.032**	2.932/**0.002**

*P<0.05. THLS-32: Turkey Health Literacy Survey, SD: Standard deviation, Z: Mann-Whitney U test statistic, KW: Kruskal-Wallis test statistic

Table 2. Distribution of the Health Belief Model Scale for Cervical Cancer and the Pap Smear Test and THLS-32 mean ranks according to the women's other descriptive characteristics (n=519)

				THLS-32	Health Belief Model Scale for Cervical Cancer and the Pap Smear Test (HBM-SCCPST)				
					Susceptibility	Seriousness	Benefits	Barriers	Health motivation
Variables		**n**	**%**	**Mean rank**	**Mean rank**	**Mean rank**	**Mean rank**	**Mean rank**	**Mean rank**
Cervical cancer in the family	Present	27	5.2	159.27	288.92	248.31	270.85	119.73	268.52
	Absent	492	94.8	198.40	188.30	207.67	204.14	205.66	207.52
	Z/p			-1.645/0.100	-3.818/**0.000**	-1.599/0.110	-2.653/0.128	-3.534/**0.000**	-2.409/**0.016**
Pap smear test history	Present	53	10.2	139.70	188.09	157.53	174.73	162.14	160.18
	Absent	466	89.8	167.02	147.57	172.11	169.82	168.38	178.57
	Z/p			-1.754/0.079	-2.680/0.127	-0.965/0.335	-0.319/0.750	-0.411/0.681	-1.190/0.234
Has anyone heard of HPV before?	Yes	173	33.3	193.61	190.00	199.42	205.59	195.77	200.59
	No	346	66.7	183.76	178.06	210.25	188.71	187.43	212.25
	Z/p			-0.771/0.441	-0.993/0.321	-0.843/0.399	-1.301/0.193	-0.654/0.513	-0.919/0.358
Has anyone heard of HPV vaccine before?	Yes	84	16.2	190.41	188.29	185.51	217.70	182.84	213.48
	No	435	83.8	187.77	182.51	215.72	189.07	206.23	198.53
	Z/p			-0.235/0.814	-0.525/0.599	-2.597/**0.009**	-2.463/**0.014**	-0.032/**0.042**	-1.281/0.200
Willing to undergo HPV vaccination?	Yes	221	42.6	131.43	123.99	131.30	131.99	123.26	136.55
	No	298	57.4	98.36	104.35	123.69	127.94	126.29	130.43
	Z/p			**-3.118/0.002**	**-2.015/0.044**	-0.697/0.486	-0.376/0.707	-0.286/0.775	-0.566/0.571

*P<0.05. THLS-32: Turkey Health Literacy Survey, SD: Standard deviation, , HPV: Human papillomavirus, Z: Mann-Whitney U test statistic, KW: Kruskal-Wallis test statistic

The Pap smear test benefit perception was higher among single women than among married women. The Pap smear test benefit perception and health motivation scores of undergraduate women were higher than those of the remaining participants (p<0.05). The Pap smear test benefit and cervical cancer sensitivity scores of the women working in the private sector and the cervical cancer seriousness score of the retired women were higher than those of the remaining participants (p<0.05). Economic level and smoking status were determined to be factors affecting all subscale scores in the HBM-SCCPST (p<0.05). Women with a good economic status and ex-smokers had significantly higher scores in the Pap smear benefits, cervical cancer seriousness, cervical cancer susceptibility, and cervical cancer health motivation subscales than the remaining women, whereas those with a moderate economic status and those who smoked at least once a day had a higher Pap smear barriers subscore (p<0.05) (Table 1).

Of the participants, 5.2% had a family member diagnosed with cervical cancer, 10.2% had undergone a Pap smear test, 33.3% had heard of HPV before, 16.2% had heard of the HPV vaccine, and 57.4% were not willing to be vaccinated against HPV (Table 2).

The cervical cancer susceptibility and cervical cancer health motivation scores were higher among women with a family history of cervical cancer than among the remaining women. Women without a family history of cervical cancer had a higher Pap smear barrier score. Those who had not heard of the HPV vaccine before had higher cervical cancer-seriousness and Pap smear-barrier scores than the remaining women. In contrast, the Pap smear benefit score of the women who had heard of the HPV vaccine was higher than that of the other women (p<0.05). Lastly, the participants who were willing to receive HPV vaccination had a higher cervical cancer susceptibility score than those who were not willing to be vaccinated against HPV (p<0.05) (Table 2).

The health literacy level was determined to be insufficient in 30.2% of the women, limited in 25.7%, sufficient in 18.3%, and excellent in 26%. The mean THLS-32 score was 32.08±11.85. When the subscales of the THLS-32 were examined, the mean scores were found to be 31.93±12.10 for treatment and service, 32.49±12.11 for disease prevention and health promotion, 15.91±6.29 for accessing health-related information, 16.01±6.44 for understanding health-related information, 16.51±6.08 for evaluating health-related information, and 15.85±5.92 for using health-related information.

The women's mean HBM-SCCPST scores according to the subscales were as follows: Pap smear benefits, 30.83±8.46; Pap smear obstructions, 32.70±11.41; cervical cancer

seriousness, 22.16±6.06; cervical cancer susceptibility, 7.83±2.40; and cervical cancer health motivation, 9.15±2.86.

When the relationship between the mean THLS-32 score and the HBM-SCCPST subscale scores was examined, the THLS-32 score had a weak positive correlation with the Pap smear benefit score (r=0.275) and a weak negative correlation with the Pap smear barrier score (r=-0.212) (p=0.000) (Table 3).

DISCUSSION

A sufficient level of health literacy, which is accepted as the key to improving health, ensures that individuals effectively benefit from health services and regularly participate in health screening, as well as increasing productivity at the societal level. The current study examined the relationship between women's health literacy levels and their health beliefs concerning cervical cancer and the Pap smear test. According to the results, the health literacy of the participant women was moderate, and 30.2% had insufficient health literacy. As the level of health literacy increased, there was a decrease in the perception of barriers and an increase in the perception of benefits concerning the Pap smear test. In the literature, it has been determined that individuals with low health literacy have a lower propensity to participate in cancer screening because they have difficulty making the right decision about their health (22). Low health literacy is associated with a decrease in the use of cancer screening methods, delayed diagnosis, difficulty in choosing treatment, and reduced quality of life (23). Low health literacy is one of the greatest obstacles to following screening recommendations because it limits individuals' ability to understand and evaluate cancer screening methods (24). Similarly, the low rate of our participants' use of early diagnosis/screening services is considered to be due to the insufficient and problematic/limited health literacy levels of most participants. In a study by Ducray et al. (25), the tendency to undergo the Pap smear test was found to be significantly higher among individuals who knew about cervical cancer. A study of Asian immigrant women similarly showed that health literacy was associated with Pap smear practice (26). The capacity to acquire and understand health-related information is an important determinant in making health-related decisions. Lack of information is one of the major barriers to participation in screening. Healthcare providers should be aware that women's health literacy may affect their cervical cancer screening attitudes. Therefore, nurses play a crucial role in ensuring that information on cervical cancer is understandable to encourage Pap smear testing.

In this study, it was found that almost half of the women had never undergone a gynecological examination, 70% had never heard of HPV or had a very low awareness of HPV, and half were not willing to receive HPV vaccination. The literature suggests that the absence of a history of gynecological examination is an obstacle to the Pap smear test (27,28). The knowledge level of the women in our study was mostly consistent with other studies (5,29,30). In a study conducted in Nepal, it was found that 53% of women had insufficient knowledge, and another study in Malta reported that participants had moderate knowledge (31,32). Although cervical cancer screening programs are conducted on a national scale, the level of knowledge concerning HPV remains low. In this context, it can be stated that public education on the role of HPV in cervical cancer has been unsuccessful.

Table 3. Relationship between THLS-32 and HBM-SCCPST scores

HBM-SCCPST subscales		THLS Subscales		
		Treatment and service	Disease prevention and health promotion	THLS-32 total
Susceptibility	r	0.082	0.104	0.085
	p	0.122	0.053	0.123
Seriousness	r	0.030	0.041	0.016
	p	0.553	0.415	0.757
Benefits	r	0.217	0.294	0.275
	p	**0.000**	**0.000**	**0.000**
Barriers	r	-0.175	-0.240	-0.212
	p	**0.000**	**0.000**	**0.000**
Health motivation	r	0.001	-0.020	-0.011
	p	0.981	0.689	0.832

*P<.01; THLS-32: Turkey Health Literacy Survey, HBM-SCCPST: Health Belief Model Scale for Cervical Cancer and the Pap Smear Test, r: correlation coefficient

In this study, only 10% of the women had previously undergone a Pap smear test. In a study conducted with Asian immigrant women in South Korea, the rate of those who had previously undergone a Pap smear test was 23.5% (26). The low rate of participation in screening tests indicates that women are still unaware of preventive measures for cervical cancer. In South Korea, women aged 20 years and over are entitled to a free Pap smear test every two years under health insurance (33). In Türkiye, cervical screening is performed every 5 years for women aged 30-65 years (34). A systematic review on this subject found that cervical cancer education doubled screening rates and could be a useful initiative for communities with low health literacy levels (35).

Therefore, women should be made aware of and educated about healthy sexual behavior and cervical cancer screening. We determined that the mean health literacy scores of women with undergraduate and postgraduate degrees were significantly higher than those of the remaining participants. A study by Acharya Pandey and Karmacharya (31) found a significant relationship between adequate knowledge, attitudes, and practices and a higher level of education. It was also noted that literate women had a higher rate of sufficient knowledge. Individuals with higher education levels have higher health literacy, which is also a common finding in the literature. Increasing education is important to increasing the level of health literacy because better-educated individuals are better able to obtain the information necessary to address health problems (36-38). This is related to health literacy facilitating the processes of accessing, understanding, and evaluating health information (39).

Of the participants in this study, 5.2% had a family member diagnosed with cervical cancer, and this group was found to have higher susceptibility and health motivation scores for cervical cancer than the remaining participants. In addition, the perception of barriers was higher among those without a family history of cancer. This finding is supported by Chorley et al. (40), who reported that women with close family members suffering from cancer were more likely to undergo cervical cancer screening. Kim et al. (41) (2020) study, it was found that the rate of Pap smear test for women with a family history of cancer was significantly higher. These findings are important in terms of demonstrating that women who feel at risk of cervical cancer are more motivated to participate in screening programs.

The economic status of women was observed to be a factor affecting all HBM-SCCPST subscale scores. Women with good economic status had higher perceptions of benefits, seriousness, susceptibility, and health motivation. Similar studies have also shown that a low income is an obstacle to a Pap smear test (42-44). Elimination of these structural barriers should be given priority by ensuring the continuity of free screening programs and public service announcements.

CONCLUSION

In conclusion, this study showed that women's perceptions of the benefits and barriers of the Pap smear test were related to their health literacy levels. Health promotion programs should particularly target women of screening age and focus on women with low education levels. Defined attitudes and barriers related to cervical cancer should be addressed in future health services. While planning health services for women, activities should be organized to evaluate and increase health literacy levels. In this context, nurses have important responsibilities because they are in one-to-one contact with women at every stage of life. In particular, they can play an important role in helping women understand the importance of the Pap smear test and encourage them to attend screening regularly. During the provision of care, nurses can positively improve health behaviors by contributing to an increase in women's knowledge of healthy lifestyle behaviors. In addition, it is suggested that nurses evaluate women's health literacy levels at every stage of the education and counseling processes and offer support for women through appropriate strategies. Improving the level of health literacy is the most important step in protecting and improving not only women's health but also the health of children, families, and communities. It is considered that this study will contribute to the development of public health by providing a different perspective on women's behaviors that directly affect their health.

ETHICS

Ethics Committee Approval: Approval was obtained from the Non-invasive Clinical Research Ethics Committee of İstanbul Medipol University on November 25, 2021 (decision no: 1151).

Informed Consent: Participation in the study was on a voluntary basis, and verbal and written informed consent was provided by all participants.

Authorship Contributions

Surgical and Medical Practices: A.D., İ.N.Ö., Concept: A.D., İ.N.Ö., Design: A.D., İ.N.Ö., Data Collection or Processing: İ.N.Ö., Analysis or Interpretation: A.D., Literature Search: A.D., İ.N.Ö., Writing: A.D., İ.N.Ö.

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