ORIGINAL ARTICLE

Identification of Women's Knowledge and Practices about Cervical Cancer Risk Factors and Early Diagnosis Methods

Kadınların Serviks Kanseri Risk Faktörleri ve Erken Tanı Yöntemlerine İlişkin Bilgi ve Uygulamalarının Belirlenmesi

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Abstract

Objective: This study was conducted as a cross-sectional survey between 2015-2016, to determine the cervical cancer risk factors, early diagnosis, knowledge and practices of women over the age of 18.

Method: The study was conducted using face-to-face interviews in the gynecology outpatient clinics of one state and two private hospitals in the Famagusta district. The population of the study consisted of women who applied to the polyclinic during the study period, and in the study, n=232 women who met the criteria and volunteered to participate in the study were reached using the convenient sampling method. The research data were collected with a questionnaire (n=34) created according to the literature, and the data analysis was performed using the SPSS 20 software. For descriptive data, the terms number, percentage, mean, median were used in data analysis, and the chi-square test was applied in the evaluation of categorical data.

Results: In the study, the cervical cancer risk knowledge level of women was found to be high with 7.36±2.23. There was a statistically significant difference in the level of education and age groups with Papanicolaou test (Pap smear test) (p<0.05). In the advanced analysis, it was found that the difference was due to women with a university education and over 41 years of age. In addition, a statistically significant difference was found between having the Pap smear test done at the right time and economic status (p<0.05). It was determined that this difference occurred among women whose income was less than their expenses.

Conclusion: It was determined that both the timing and frequency of initiating Pap smear tests were not sufficient for women who had knowledge about those tests. It is important to plan trainings for enhancing the knowledge and practices of women at risk (low education, over forty years of age, etc.) regarding early diagnosis and treatment of cervical cancer.

Keywords: Cervical cancer, risk factors, early diagnosis, Pap smear test

Öz

Amaç: Bu çalışmada, 2015-2016 yılları arasında, 18 yaş üstü kadınların serviks kanseri risk faktörleri, erken tanı, bilgi ve uygulamalarının belirlenmesi amacıyla kesitsel tipte bir araştırma olarak yapılmıştır.

Yöntem: Çalışma, Gazimağusa ilçesinde bulunan bir devlet ve iki özel hastanenin jinekoloji polikliniklerinde yüzyüze görüşme tekniği ile gerçekleştirilmiştir. Çalışmanın evrenini çalışma döneminde polikliniğe başvuran kadınlar oluşturmuş, çalışmada, uygun örnekleme metodu kullanılarak, kriterleri karşılayan ve çalışmaya katılmaya gönüllü olan n=232 kadına ulaşılmıştır. Araştırma verileri, literatüre göre oluşturulan bir ankette (n=34) toplanmış, verilerin analizi SPSS 20 paket programında yapılmıştır. Veri analizi, tanımlayıcı veriler için sayı, yüzde, ortalama, ortanca kullanılmış ve kategorik verilerin değerlendirilmesinde ki-kare testi uygulanmıştır.

Bulgular: Araştırmada kadınların serviks kanseri risk bilgi düzeyi 7,36±2,23 ile yüksek bulunmuştur. Papanicolaou testi (Pap smear test) yaptırma ile eğitim düzeyi ve yaş grupları arasında ilişki istatistiksel anlamlı fark bulunmuştur (p<0,05). İleri analizde farkın üniversite eğitimli ve 41 yaş üstündeki kadınlardan

kaynaklandığı bulunmuştur. Ayrıca Pap smear test zamanını doğru sürede yaptırma ile ekonomik durum arasında istatistiksel anlamlı fark bulunmuş (p<0,05), farkın geliri giderinden az olan kadınlarında olduğu belirlenmiştir.

Sonuç: Pap smear testi hakkında bilgisi olan kadınların hem Pap smear testine başlama zamanı hem de sıklığının yeterli olmadığı belirlenmiştir. Serviks kanseri erken teşhis ve tedavisine yönelik, riskli kadınların (az eğitimli, kırk yaş üstü vs) bilgi ve uygulamalarına yönelik eğitimler planlanmasının önemli olduğu değerlendirilmektedir.

Anahtar Kelimeler: Serviks kanseri, risk faktörleri, erken tanı, Pap smear test

Introduction

Cervical cancer is the fourth most common cancer that threatens women's lives worldwide, after breast cancer (1). Globally, cervical cancer is the fourth most common cancer in women, with around 660,000 new cases in 2022 (2). Cervical cancer is the tenth most common cancer in Turkey (4), but Northern Cyprus, it is the second most common cancer (5). Cervical cancer is more prevalent in women with high-risk human papilloma viruses (HPV), an early age of first sexual intercourse, a history of smoking, obesity, multiple childbirths, low socioeconomic status, and a polygamous lifestyle of either the woman or her husband (3,6-9).

Cervical cancer can be diagnosed at an early stage. The preinvasive stage of this type of cancer allows diagnosis and effective treatment, making cervical cancer the most preventable type of cancer (10-13). However, it remains a major problem in developing countries due to inadequate screening. Since cervical cancer is a disease that can be diagnosed and treated at an early stage, such studies are crucial for early diagnosis (3,14-17).

The Papanicolaou test (Pap smear test) is a reliable and inexpensive method for early diagnosis of cervical cancer, making it an ideal screening tool. It is easily applicable and has high sensitivity and selectivity. Regular performance of this simple procedure plays a crucial role in the early detection of cervical cancer (8,10,18). Early diagnosis significantly increases the chance of treating cervical cancer, with a success rate of almost 100%, and reduces cervical cancer-related mortality by 50% (14,18). In a study conducted in Turkey, it was determined that women with good education and income levels who are living in the city had higher levels of knowledge about human papillomavirus (HPV), HPV vaccine, Pap smear test, and cervical cancer (p<0.05) (19).

Nurses play a crucial role in identifying gynecologic cancer risks and educating women on the significance of prevention and early diagnosis. Given that cervical cancer is the second most common cancer in women after breast cancer (5) and there are limited studies on cervical cancer in the Turkish Republic of Northern Cyprus (TRNC), this study was conducted to determine women's knowledge and practices regarding cervical cancer risk factors and early detection methods. The study aims to answer the following questions:

1. What is women's level of knowledge about risk factors of cervical cancer and Pap smear test?

2. Is there a relationship between women's knowledge and practice of Pap smear test?

Material and Method

Design

In this study, a cross-sectional study is conducted.

Population and Sampling

The study population consisted of 343 women who sought medical attention at the Gynecology Outpatient Clinic of Famagusta State Hospital and at the gynecology outpatient clinics of two private hospitals in Famagusta, TRNC, between December 1, 2015, and February 28, 2016. No sampling was conducted.

Variables of the Study

Independent Variable of the Study

• Sociodemographic characteristics of women.

Dependent Variables of the Study

• Cervical cancer causes of knowledge.

• Frequency of pubic smear, knowledge of the reason and application status.

Inclusion Criteria for the Study

• Age 18 and above,

• Not having had a hysterectomy,

• Having had sexual experience before,

• Being able to communicate in Turkish,

• Being willing to participate in the study.

Main Points

• According to the research findings, the majority of women are knowledgeable about cervical cancer risk factors and early diagnosis methods,

• More than half of women have had a pap smear test before,

• It was determined that the source of information for very few people was a nurse.

• In order to protect and improve women's health, it is recommended that nurses take a more active role and women's awareness of cervical cancer should be increased.

Exclusion Criteria for the Study

• Being diagnosed with cervical cancer,

• Having a psychiatric diagnosis.

Data Collection Tools

Data were collected in a survey that the researcher prepared according to the literature (8,11,20). The questionnaire was composed of two parts. The first part includes questions about women's socio-demographic characteristics, such as age, educational status, marital status, and employment status. The second part of the questionnaire includes questions about women's knowledge and practices related to risk factors and early diagnosis of cervical cancer.

Procedures

Firstly, a pilot study was conducted with 28 participants to determine the comprehensibility and applicability of the questionnaire. Based on the results of the pilot study, guiding comments were added to improve the clarity of the questions. The data obtained from the pilot study were not included in the data analysis.

Data were collected through face-to-face interviews with female participants who provided written informed consent between December 1, 2015, and February 28, 2016. The questions were read to the participants by the researcher, and their answers were marked on the questionnaire. On average, it took 20 minutes to complete the questionnaire. The interviews were conducted in a suitable waiting room.

Ethics

Ethical approval was obtained from the Near East University Scientific Research Ethics Committee (decision no: 233, date: 17.09.2015). Institutional approval was obtained from the two private hospitals. Consent was obtained from all participants.

Statistical Analysis

Data were evaluated using the SPSS 20.0 package program. Number, percentage, mean, standard deviation, and median were used to describe the descriptive data. Categorical data were evaluated using the chi-square test to compare groups, and the Bonferroni test was used to determine differences between groups. Analyses were conducted with 5% alpha error and a 95% confidence interval.

Results

Of the participants, 33.62% were aged 31-40, 42.24% were 41 years or older, 2.8% were high school graduates, 31.47% were university graduates and 52.16% were TRNC-TR nationals. Among the female participants, 53.02% were employed, 68.97% of them reported that their income was sufficient to cover their expenses, and 66.81% of the women had social security.

Table 1 presented the mean scores for women's knowledge of cervical cancer risk factors. The mean score was 7.36, indicating a high level of knowledge.

Table 2 shows a statistically significant difference in the rate of Pap smear testing among women of different age groups (p<0.05). Women aged 30 and below were more likely to undergo Pap smear testing at the recommended time compared to women in other age groups. Women aged 41 years and over were less likely to know when to start Pap smear testing compared to women in other age groups. Additionally, there was a statistically significant difference, based on age groups, in women starting the Pap smear test at the appropriate age (p<0.05). Women aged 41 years and above were less likely to undergo the Pap smear test at the appropriate age compared to women in other age groups.

Table 3 shows a statistically significant difference in the frequency of having Pap smear tests according to the level of education (p<0.05). Women who were university graduates had a higher frequency of correctly performed Pap tests compared to those with other levels of education.

Table 4 presents a statistically significant difference between women's knowledge of the appropriate time to start a Pap test and their income status (p<0.05). Women with lower income than their expenses were less likely to know when to start the test than those whose income equaled their expenses. Additionally, there was a statistically significant difference in the age of starting to get a Pap test at the recommended time based on income status (p<0.05). Women whose income was lower than their expenses had a lower rate of adhering to recommended Pap test schedules compared to women with equal income and expenses. Finally, we found a statistically significant difference between income status and knowledge of the recommended frequency of Pap tests (p<0.05). Women with incomes lower than their expenses had a lower knowledge about the frequency of Pap smear tests, compared to women with incomes equal to their expenses.

Discussion

Cervical cancer is a significant gynecologic cancer and ranks fourth in frequency among women worldwide. It is the leading cause of cancer-related deaths in women, particularly in sub-Saharan countries (20). Early detection is possible. Cervical cancer has a pre-invasive stage, which allows for effective screening and early diagnosis (10,13).

Table 1. *Mean Scores for Women's Knowledge of Cervical Cancer Risk Factors (n=232)*					
	n	Mean	SD	Min.	Max.
Knowledge score of risk factors for cervical cancer	232	7.36	2.23	0	10
SD=standard deviation					

However, lack of regular screening makes it a major problem in developing countries. Therefore, studies on this subject are important for early diagnosis (3,14,15).

The mean knowledge score of the women regarding risk factors for cervical cancer was 7.36 out of 10, indicating a good level of knowledge among the participants (Table 1). Arabaci and Ozsoy (21) found that women mostly identified

Table 2.
Knowledge and Practice of Pap Test Among Women of Different Age Groups (n=232)

	≥30		31–40		≤41		X²	p
	n	%	n	%	n	%		
Knows the age to start getting a Pap test								
Yes	28	50.00	35	44.87	26	26.53	10.41	0.01*
No	28	50.00	43	55.13	72	73.47		
Started getting Pap test at the recommended age (n=136)								
Yes	19	76.00	28	52.83	16	27.59	17.95	0.00*
No	6	24.00	25	47.17	42	72.41		
Knows the recommended frequency of Pap test								
Yes	32	57.14	56	71.79	56	57.14	4.72	0.09
No	24	42.86	22	28.21	42	42.86		
Adheres to the frequency of Pap test (n=136)								
Yes	17	68.00	33	62.26	30	51.72	2.34	0.31
No	8	32.00	20	37.74	28	48.28		
Knows who should have a Pap test								
Yes	48	85.71	66	84.62	74	75.51	3.39	0.18
No	8	14.29	12	15.38	24	24.49		
*p<0.05, X²=chi-square								

Table 3.
Knowledge and Practice of Pap Test Based on Education Level (n=232)

	Primary school and below		Secondary and high school		University and above		X²	p
	n	%	n	%	n	%		
Knows the age to start getting a Pap test								
Yes	22	32.35	33	36.26	34	46.58	3.29	0.19
No	46	67.65	58	63.74	39	53.42		
Started getting Pap test at the recommended age (n=136)								
Yes	8	28.57	24	42.11	31	60.78	8.25	0.02*
No	20	71.43	33	57.89	20	39.22		
Knows the recommended frequency of Pap test								
Yes	39	57.35	48	52.75	57	78.08	11.95	0.00*
No	29	42.65	43	47.25	16	21.92		
Adheres to the frequency of Pap test (n=136)								
Yes	15	53.57	31	54.39	34	66.67	2.08	0.35
No	13	46.43	26	45.61	17	33.33		
Knows who should have a Pap test								
Yes	51	75.00	73	80.22	64	87.67	3.74	0.15
No	17	25.00	18	19.78	9	12.33		
*p<0.05, X²=chi-square								

Table 4.
Knowledge and Practice of Pap Smear Test Based on Income Status (n=232)

	Equal to expenses		Less than expenses		X²	p
	n	%	n	%		
Knows the age to start getting a Pap test						
Yes	69	43.12	20	27.78	4.94	0.02*
No	91	58.87	52	72.22		
Started getting Pap test at the recommended age (n=136)						
Yes	52	51.48	11	31.43	4.21	0.03*
No	49	48.52	24	68.57		
Knows the recommended frequency of Pap test						
Yes	109	68.12	35	48.61	8.01	0.00*
No	51	31.88	37	51.39		
Adheres to the frequency of Pap test (n=136)						
Yes	62	61.39	18	51.43	1.06	0.20
No	39	38.61	17	48.57		
Knows who should have a Pap test						
Yes	134	83.75	54	75.00	2.47	0.08
No	21	16.25	18	25.00		
*p<0.05, X²=chi-square						

having more than one sexual partner and lack of genital hygiene as risk factors for cervical cancer. Similarly, Sönmez et al. (22) reported that the majority of women (86%) identified having more than one sexual partner, starting sexual intercourse at an early age, and incorrect genital hygiene habits as risk factors. In the study conducted by Kashyap et al., (23) risk factors for cervical cancer were: lack of education, not paying attention to personal hygiene, frequent use of old clothes, place of residence, marriage at an early age, not washing the genital area after sexual intercourse, the spouse having many sexual partners, a history of sexually transmitted diseases, and genital warts. Our study's findings align with these results. Understanding the risk factors associated with cervical cancer is crucial in protecting women from the disease and promoting healthy behaviors to mitigate these risks.

The study found that women's knowledge of when to start pap smear testing based on age groups varied significantly (p<0.05). Women aged 41 years and over had lower rates of knowing when to start Pap smear testing compared to women in other age groups. The same pattern was observed in women starting the Pap smear test at the appropriate age based on age groups (p<0.05). Women aged 41 years and above were less likely to undergo the Pap smear test at the appropriate age compared to women in other age groups (Table 2). In the study of Garg et al., (24) as the age of the participants increased, the knowledge about cervical cancer risk factors increased; however, the relationship was not found to be significant. Women whose marriage age is under 18 have been found to have good knowledge of cervical cancer risk factors. According to Reicheld et al., (25)

it was found that women aged 41 years and younger had better knowledge than women over the age of 41, and there was no significant relationship between this knowledge and religion, education, profession, socio-economic status, and marital status. Hacıhasanoğlu Aşılar et al. (26) observed that there was no difference between age groups in terms of women's knowledge level regarding the performance of the Pap smear test. Our study found that women aged 41 and above had low levels of knowledge and practice, suggesting that this age group may be less likely to use mass media and be distant from this information. In the study also found that the level of education and the age that the participants affected to start getting a Pap test and the knowledge of the recommended frequency of Pap tests (p<0.05). Women with a university degree were more likely to appropriately schedule and understand the frequency of pap smear tests compared to other women (Table 3). According to Bal's (8) research, there was a difference between women's education and their knowledge about pap smear tests. Ak et al. (20) found that as women's education level increased, their awareness of Pap smear tests also increased from 38.5% to 61.5%. The findings of other studies and our study, show that as the level of education increases, women are more likely to know the appropriate time to have a Pap test, indicating a correlation between education and health protective behaviors.

Finally, between the level of income and the knowledge of the age to start the Pap test relationship was important (p<0.05). Women with a lower income than their expenses had a lower level of knowledge about when to start having a Pap smear test compared to women in other income groups

(Table 4). Ünalan et al. (12) found that the percentage of women who knew when to start Pap smear tests increased with the income level, suggesting that higher income may provide greater access to health facilities and information. Unlike our study results, Reis (27) found in the literature that women with lower income levels had higher knowledge of the age and implementation of pap smear tests than those with higher income. Hacıhasanoğlu Aşılar et al. (26) found that women with higher income than expenses had a lower mean score compared to those with lower income. Previous studies and our study suggest that as women's income level increases, so does their likelihood of knowing when to have a pap smear. Therefore, it is important for nurses to closely monitor women with lower income levels and raise awareness about early diagnosis methods. It is thought that this difference between the literature and our study is due to the different research location and sample.

Study Limitations

This study was conducted in only one district of the country, and its results can be generalized only to women living in this region.

Conclusion

This study found that most women were aware of cervical cancer risk factors and early detection methods. Participants' age, education, and income level affected starting to have Pap tests at the appropriate age and knowing the frequency of having the test. Based on these results, it is recommended that high-risk groups receive continuous and periodic training to prioritize cervical cancer screening and early diagnosis. Cervical cancer risk factor awareness and screening should be prioritized in women in risk groups such as those with low education levels, those who are married, and those aged forty and over. It is recognized that nurses have important roles and responsibilities in protecting and improving women's health in society, particularly in the context of cervical cancer.

Ethics Committee Approval: Ethical approval was obtained from the Near East University Scientific Research Ethics Committee (decision no: 233, date: 17.09.2015).

Informed Consent: Consent was obtained from all participants.

Footnotes

Author Contributions: Conception - D.K.G., B.K.A.; Design - D.K.G., B.K.A.; Data Collection and/or Processing - D.K.G.; Analysis and/or Interpretation - D.K.G.; Literature Review - D.K.G.; Writing - D.K.G., B.K.A.

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