



Knowledge, Attitude and Behavior About Gynecologic Cancers in Women Admitted to and Healthcare Staff Working at the State Hospital in KIRKLARELI

KEYWORDS

Cancer, knowledge, attitude, Human papilloma, pap smear

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ABSTRACT

Objectives: To evaluate the knowledge level, behavior, and attitude about gynecologic cancers of health staff, and the admitted patients to Kırklareli State Hospital.

Study Design: Our study was conducted in the clinics of the Kırklareli State Hospital on 96 health staff and 510 female patients aged 15-64 years who presented to the hospital. Study data were collected using a survey form. Statistical analyses were carried out with ANOVA, Kruskal-Wallis, Mann-Whitney U tests, and Pearson correlation analysis.

Results: The median point for gynecologic cancer was 118.00 for the healthcare staff and 25.00 for the patients. The rate of participants who had heard of Humanpapilloma virus vaccine was 87.5% in the healthcare staff and 50.1% in the patients; none of the participants had received the vaccine. The awareness on endometrial, ovarian, and cervical cancers was higher.

Conclusions: We observed inadequate knowledge levels on gynecologic cancers among the participants.

INTRODUCTION

Gynecologic cancers are responsible for 15% of all cancers and 10% of all cancer-related deaths (Özsoy,2007). While the incidence of gynecologic cancers in our country displays the following order from highest to lowest: ovarian, endometrial, and cervical cancers; same order is known to be endometrial, ovarian, and cervical cancer in Western countries. However, as of 2004, the incidences in our country has been found to be similar to that of the Western countries (Özsoy,2007; Türkiye Kanser İstatistikleri,2005). Gynecologic cancers are recognized as an important health issue among other gynecologic problems associated with poor knowledge, recurrent miscarriages, unwanted pregnancies, and marriage at early ages and they are the fourth most common cancer type (Güner&Taşkıran,2007; Türkiye Nüfus ve Sağlık Araştırması (TNSA),2003; Mete,1998).

Although gynecologic cancers increase mortality and morbidity, they are recognized as preventable, and if diagnosed early, treatable diseases (Hatipoğlu,2007). However, majority of our women can not benefit from the early diagnosis due to inadequate awareness and screening programs, economic insufficiencies, and lack of knowledge (Mete,1998). Pinpointing and reduction of health risks is a quantitative approach that can help individuals and groups to achieve the highest possible health status (Vural,1998). While determining the risk factors is important for prevention and early treatment of cancer, early signs and symptoms of cancer should be known by the nurses and accordingly taught by them to the individuals under risk (Kolutek&Karataş,2007).

The aim of this study is to evaluate the knowledge, attitude, and behavior of female patients admitted to, and healthcare staff who working at Kırklareli State Hospital on gynecologic cancer.

MATERIAL AND METHODS

Our study was performed in Kırklareli State Hospital. Pri-

or to the study, first we obtained approval of the "Local Ethics Committee of the Trakya University" and then we gained the required permission from the "Provincial Health Directorate".

The women included in the sample were volunteers aged between 15-64 years. The sample size calculated 384 for polyclinic patients, but the sample size was set to a number above this (n=501) in order to increase the reliability of the study. The population of healthcare staff was 194, but only 96 of them agreed to participate in the study due to voluntary and constituted the sample.

The questionnaire were designed based on the literature had 4 parts. It's contents were sociodemographic data of the women, the knowledge, attitude, and practices of the participants concerning gynecologic cancers. The questionnaire was collected by interviewing face to face. Participants provided verbal informed consent.

Each gynecologic cancer type was evaluated on basis of 50 points. Thus, 5 cancer types were evaluated as gynecological cancer points on basis of 250 points and total score between 125-250 were deemed as "having adequate knowledge", score below 125 were recognized as "having inadequate knowledge". In a subsequent analysis for each individual cancer type on basis of 50 points, people with a score below 25 points were noted as "having inadequate knowledge", score between 25-50 were recognized as "having adequate knowledge". Study data were analyzed with Minitab Inc. release 13.32 package program with the licence number of WCP1331.00197. Statistical analyses were carried out with ANOVA, Kruskal-Wallis, Mann-Whitney U tests, and Pearson correlation analysis.

RESULTS**1.Data of Health Staff**

As 79 (82.3%) of the healthcare staff were midwife-nurse, 17 (17.1%) were belonging to other healthcare professions (dental technician, laboratory assistants, radiologic tech-

nologist, and dietitian). Mean age was 34.35±6.53.(Table 1)

The median of total knowledge score of the healthcare staff was 118.00 (Table 2).

Pap smear history was present 52.1% .Comparison of the groups with and without a history of pap smear revealed that knowledge scores on gynecologic cancers were higher among the group with a history of pap smear (median 123.00 v.s 111.00, p=0.369). (Table 5)

The rate of participants who had heard of HPV vaccine was 87.5% (n=84). none of the participants had received the vaccine. There was a difference between the participants who knew and did not know about the vaccine in terms of knowledge levels on gynecologic cancer (121.50 vs 98.00, p=0.012).

The percentage of participants aware of the vulval self-exam (VSE) was 51% (n=49).The frequency of the application of the technique was during each bath in 57.1% (n=28), once every month in 20.4% (n=10), irregular intervals in 22.5% (n=11).

2.Data of Polyclinic Patients

Mean age was 37.49±10.38 Job classifications are 322 (64.3%) housewife, civil cervant 55 (11.0 %), worker 65 (17.8%), self-employed 22 (4.4%), retired 21 (4.2%), student 16(3.1%) of them. The median of total knowledge score of the patients was 25.00.

Lowest score was found in the patients aged ≥56 years, however, this difference was not significant (p=0.056). Unmarried patients had a significantly high level of knowledge on gynecologic cancers (p=0.023). As the knowledge level on gynecologic cancers was analyzed relative to the marital status, the knowledge levels on ovarian cancer (p=0.003) and endometrial cancer (p=0.014) were higher than other cancer types in all the patients (n=597).

Pap smear history was 40.1%. Comparison of the groups with and without a history of pap smear revealed that knowledge scores on gynecologic cancers were higher among the group with a history of pap smear (patients 31.00 vs 20.00, p=0.271). The rate of patients who had heard of HPV vaccine was 50.1% (n=251). none of the participants had received the vaccine.

There was a difference between the participants who knew and did not know about the vaccine in terms of knowledge levels on gynecologic cancer (35.00 vs 15.50, p=0.004). The percentage of participants aware of the vulval self-exam (VSE) was 15.2% (n=76). The frequency of the application was 38.2% (n=29) during each bath, once every month in 36.8% (n=28), irregular intervals in 25% (n=10).

Table 1: Socio-demographic characters of groups

Variables		Polyclinic patients Healthcare staff	
		n (%)	
Age	15-25 years	72 (14.4)	7 (7.3)
	26-35 years	150 (29.9)	51 (53.1)
	36-45 years	161 (32.1)	32 (33.3)
	46-55 years	95 (19.0)	6 (6.3)
	>56 years	23 (4.6)	0

		p=0.273	p=0.501
Marital Status	Married	429 (85.6)	77 (80.2)
	Unmarried	49 (9.8)	12 (12.5)
	Widowed	23 (4.6)	7 (7.3)
		p=0.023	p=0.130
Education- al Status	Literate	16 (3.2)	0
	Primary education	268 (53.5)	0
	Secondary education	133 (26.5)	21
	High school/ undergradu- ation	(17.4)	84 75
		P<0.001	P=0.900
Income	No	20 (4.0)	0
	<500.00 TL	121 (24.2)	0
	500.00- 800.00 TL	150 (29.9)	4 (4.2)
	801.00- 1.000.00 TL	63 (12.6)	22 (22.9)
	>1.000.00 TL	147 (29.3)	70 (72.9)
		P<0.001	P=0.327

*Chi-square, Kruskal Wallis test

**Table 2: Distrubition of knowledge points on gyneco-
logic cancer and subtypes of participants**

		Median	t	p
Gynecologic Cancer	Healthcare staff	118.00	12.382	<0.001
	Polyclinic patients	25.00		
Vulval Cancer	Healthcare staff	190.00	10.287	<0.001
	Polyclinic patients	0.00		
Vaginal Can- cer	Healthcare staff	21.00	9.414	<0.001
	Polyclinic patients	0.00		
Ovarian Cancer	Healthcare staff	26.00	9.850	<0.001
	Polyclinic patients	0.00		
Endometrial cancer	Healthcare staff	26.00	8.416	<0.001
	Polyclinic patients	0.00		
Cervix cancer	Healthcare staff	30.00	9.957	<0.001
	Polyclinic patients	5.00		

*Independent samples 't' test

3. General Knowledge Score of Gynecologic cancer

Total knowledge score for gynecologic cancer was highest among the 26-35 age group (63.90±56.39). Younger age groups attained higher knowledge scores for each of the gynecologic cancer types (Table 3)

In terms of the relationship between the educational status and knowledge levels, knowledge levels of the participants with an education of primary school were lower than other groups (median 10.00). In our study population, knowledge levels were significantly different between the

groups with different education levels in all gynecologic cancer types (Table 3). Intergroup analysis revealed that knowledge levels elevated parallel to the increases in the education levels among the patients ($p < 0.001$).

Financial status was observed to have an influence on ovarian cancer knowledge levels, and knowledge scores were found to increase parallel to the improved financial status ($p < 0.001$). All the participants demonstrated a significant correlation between financial status and knowledge levels for each gynecologic cancer type ($p < 0.001$) (Table 3).

Table 3: Correlation between some socio-demographic characters, and knowledge levels on gynecologic cancer types (n=597)

	Vulval cancer		Vaginal Cancer		Ovarian Cancer		Cervix Cancer		Endometrial cancer	
	r [*]	p	r [*]	p	r [*]	p	r [*]	p	r [*]	p
Age	9.775	0.044	7.575	0.108	4.142	0.307	23.270	<0.001	10.315	0.035
Marital status	2.583	0.306	3.877	0.144	11.706	0.003	1.309	0.904	8.484	0.014
Education	48.859	<0.001	61.362	<0.001	75.374	<0.001	53.373	<0.001	56.306	<0.001
Job	71.786	<0.001	91.449	<0.001	122.966	<0.001	98.921	<0.001	70.558	<0.001
Income	27.016	<0.001	21.101	<0.001	52.259	<0.001	36.370	<0.001	42.463	<0.001

*Pearson Correlation test

Number of pregnancies and miscarriage values showed a negative correlation with the knowledge levels on gynecologic cancers ($p=0.022$; $p=0.043$). However, number of births, and miscarriage values were observed to have no influence ovarian the knowledge levels. Number of pregnancies, births, and induced abortion values showed negative correlation, whereas miscarriage value demonstrated a positive correlation with the knowledge levels (Table 4).

Table 4: Correlation between pregnancy-delivery characteristics and marriage and sexuality characteristics of all participants with knowledge levels on gynecologic cancer subtypes of all participants

	Vulval cancer		Vaginal cancer		Cervix cancer		Ovarian cancer		Endometrial cancer	
	r	p	r	p	r	p	r	p	r	p
Pregnancy	-0.187	<0.001	0.155	<0.001	-0.195	0.015	-0.47	0.028	-0.198	0.072
Births	-0.124	0.034	0.119	0.028	-0.115	0.032	-0.94	0.027	-0.124	0.004
Abortion	-0.190	<0.001	-0.221	<0.001	-0.090	0.016	-0.057	0.185	-0.066	0.129
Miscarriage	0.016	0.719	0.107	0.015	0.059	0.167	0.122	0.005	0.055	0.280

Pearson Correlation Test

Table 5: Correlation between knowledge levels on gynecologic cancer subtypes and preventive health behaviors

	Vulval cancer		Vaginal Cancer		Ovarian Cancer		Cervix Cancer		Endometrial cancer	
	r [*]	p	r [*]	p	r [*]	p	r [*]	p	r [*]	p
VSE	79.349	<0.001	54.382	<0.001	35.607	<0.001	28.674	<0.001	28.204	<0.001
Pap smear	1.418	0.234	1.725	0.189	7.790	0.005	5.267	0.021	3.766	0.052
HPV	8.763	0.003	7.875	<0.001	20.088	<0.001	38.783	<0.001	30.529	<0.001

Chi-square test VSE: Vulval self-examination , HPV: Human Papilloma Virus

There was difference between the gynecologic cancer scores relative to the application of VSE (healthcare staff 133.00 vs. 110.00, $p=0.002$; patients 94.00 vs 20.00, $p < 0.001$) (Table 5).

COMMENT

In our study, healthcare staff had higher knowledge scores than those of outpatient polyclinic patients. It is an expected outcome that healthcare staff have higher awareness and knowledge on gynecologic cancers because of their occupational education and job.

In our study, knowledge of the healthcare staff on gynecologic cancers was markedly low. Tarwireyi et al. concluded that the knowledge of healthcare staff was inadequate on risk factors of cervical cancer (Tarwireyi, Chirenje&Rusakaniko,2003). Insufficient knowledge may be due to lack of interest on the subject and inadequacy of the in-service trainings provided after graduation.

Gynecologic cancers are known to usually occur during advanced ages (Güner & Taşkıran,2007; Anderson et al,2001;Denny& Ngan,2006). In a study on cervical cancer, age was observed to have no effect ovarian knowledge scores before and after the training. In our study, age did not affect the knowledge scores on gynecologic cancers, however, it was observed to influence the individual knowledge scores for vulval, cervical, and endometrial cancer types; those knowledge scores decreased parallel to the advances in age. The reason behind this negative correlation may be associated with the reduced self-care and increased insensitivity occurring at older ages along with the fear against growing rates of cancer leading to higher sensitivity at young ages.

Sexual activity is one of the important risk factors for gynecologic cancers. Because being married, early marriages, and number of partners bear importance in cervical cancer (Güner& Taşkıran,2007;Dönmez,2007). Marital status of the participants was observed to be influential in knowledge levels on ovarian and endometrial cancer types. The reason behind higher knowledge scores among bachelors may be having more spare time and being more open to new information due to young age.

Previous studies show that all pregnancies reduce the risk of ovarian cancer including miscarriages (WHO,1993; Zhang, Lee &Binns,2004). In our study, as the number of miscarriage elevated, knowledge scores on vaginal and ovarian cancers increased, as well. While this may be totally incidental, it may also be associated with more frequent medical visits due to miscarriage and other related health problems which improve the health status of such individuals.

To give birth and number of births are protective factors against endometrial cancer. Ovarian cancer incidence is 10-30% lower in multiparous women than in nulliparous women. However, infertility increases the risk of endometrial cancer (Schouten,Goldbohm& Brandt,2003;Zografo s,Panou&Panou,2004). In our study, number of pregnancies and miscarriages were found to have a negative effect ovarian knowledge levels on gynecologic cancers. This may be due to educational status. Because previous study shows that people with higher education want less children (Greggi et al,2000). Therefore, incidence of miscarriage/induced abortion is expected to be low among people with higher educational background. The knowledge scores of the patients showed a positive correlation with the education levels. Education is a factor that induces changes in the behaviors of a person. As the level of education rises, the awareness of the individuals rise as well and thus they start to participate in public training programs and make use of healthcare services at a higher degree (Aslantekin&Aslan,2006).

Cervical cancer is seen more commonly among people with poor nutrition and financial status as well as in developing countries (TNSA,2003; Rock,Michael,Reynold&Ruff in,2000). In our study, knowledge scores were elevated in people with higher financial status, however, this correla-

tion was not significant among the healthcare staff. A person with a well socioeconomic status is expected to have better health knowledge, use of healthcare services, and nutrition status.

In a study 51.3% of the patients presenting to the Gynecology Clinic hospital (Akyüz,Güvenç,Yavan,Çetintürk&Kök,2006) had a history of pap smear test. 6.8% of the healthcare staff in Nigeria (Ayinde&Omigdobun,2003), and 49.6% of nurses working in the rural areas of Turkey (Yaren,Özkılınç,Güler&Öztop,2008) were determined to undergo pap smear test regularly. In our study, 52.1% of the healthcare staff and 40.1% of the patients were found to regularly undergo pap smear test. The knowledge levels on cervical and ovarian cancers were higher among those who had a history of pap smear. Similarly, undergoing pap smear test was determined to have a positive influence on cervical cancer knowledge levels in other study (Akyüz,Güvenç,Yavan,Çetintürk&Kök,2006).

HPV vaccine is a preventive healthcare measure against cervical cancer. In studies performed in Korea and China (Kim,2012; Li et al,2009) were found to be aware of the HPV vaccine 76.4% v.s. 15% of the women. In our study, aware of the HPV vaccine was low according to Korea. Although it is a newly introduced vaccine, it is also evident that there is a need to raise awareness and provide education. VSE is self-protective practices that can be applied by people themselves and has a particular importance in early diagnosis of vulval-vaginal cancers. Knowledge levels on gynecologic cancers were higher in people who applied VSE. We believe education level as a remarkable determinative in this result.

CONCLUSIONS

The knowledge levels of the healthcare staff and the patients on gynecologic cancers were found to be inadequate, whereas the awareness about endometrial, ovarian, and cervical cancers were observed to be better. The public health as well as individual knowledge, attitudes, and behaviors can be improved by establishing seminars, generalizing the screening programs, and making amendments in our health politics and system. The healthcare personnel has an important role in preventive medicine; therefore, they should be continuously and adequately educated by arranging in-service trainings and performing epidemiologic studies in order to determine knowledge levels and deficits.

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