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Women's awareness about gynaecological cancers in Poland and Turkey – a comparative study

Serap Ejder Apay[1,A-B,E-F]*, **Małgorzata Nagórska**[2,A-B,E-F]✉*, **Elif Erdogan**[1,B-D], **Adam Sidor**[3,B], **Barbara Zych**[2,B,E]

[1] *Midwifery Department, Ataturk University, Erzurum, Turkey*
[2] *Faculty of Health Sciences and Psychology, Collegium Medicum, University of Rzeszów, Poland*
[3] *Medical Faculty, Collegium Medicum, University of Rzeszów, Poland*

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Abstract

Introduction and Objective. The aim of the study is to determine and compare the awareness levels of women in two different countries regarding gynaecological cancers.

Materials and Method. The descriptive and cross-sectional study collected data from among 1,017 women in Turkey and Poland. Personal Information Form (PIF) and Gynaecological Cancer Awareness Scale (GCAS) were used as data collection tools.

Results. Routine Control in Gynaecological Cancers and Serious Illness Perception Awareness Sub-Dimension mean score in Turkey and Poland was 87.84±15.23 vs. 85.47± 10.86. Gynaecological Cancer Risks Awareness Sub-Dimension mean score in Turkey was 29.62±6.09, in Poland's – 28.47±4.78; a significant difference was found between the score averages. When the Gynaecological Cancer Protection Awareness Sub-Dimension was evaluated, the score obtained for Turkey was 22.46±4.45, while the average score for Poland was calculated as 22.44±3.42; statistical significance was determined for these averages. Based on the Early Diagnosis and Information Awareness Sub-Dimension in Gynaecological Cancers, the mean score in Türkey was found to be 17.04±3.24, and in Poland – 16.90±2.39; the difference between the mean scores was statistically significant. The total score obtained in the Gynaecological Cancer Awareness Scale was calculated as 156.97±23.23 in Turkey and 153.30±16.83 in Poland. There was a significant difference in the average scores obtained between the two countries.

Conclusions. There was a significant difference in the level between women's gynaecological cancer awareness in Turkey and in Poland. It was determined that gynaecological cancer awareness is higher among women in Turkey.

Key words

cancer, women, gynaecology, women's health

* Equal contribution.

INTRODUCTION

Cancer is defined as the uncontrolled proliferation of a cell by disrupting its self-control structure. Cancers rank second in terms of causes of death. Important risk factors for cancer formation are genetic predisposition, age, hormones, environmental and individual factors, smoking-alcohol use, body mass index, occupational exposure [1, 2].

Gynaecological cancer is the type of cancer that occurs in the female reproductive organs, and although they are common worldwide and in all age groups, they are most common in the reproductive age group. Gynaecological cancers constitute 35% of cancers seen in women [3]. The World Health Organization (WHO) and the Global Cancer Observatory (GLOBACON) report that cervical cancer is the most common gynaecological cancer [4] While GLOBACON and although it constitutes 6.5% of all new cancer cases (92 million) worldwide, cancer of the cervix accounts for 6.5%, cancer of the ovary 3.4%, *corpus uteri* – 4.7%, vaginal cancer – 0.1%, and cervical cancer – 7.7% of female deaths from gynaecological cancers. It has been determined that it constitutes 4.7% of ovarian cancer [4].

In the Turkish Ministry of Health Statistics Yearbook, the most common gynaecological cancer is *corpus uteri* cancer, the second most common is ovarian, and the third most common – cervical cancer [5]. Gynaecological cancers increase over time and affect people biologically, psychologically and socially. According to Ministry of Health data, the most common gynaecological cancer rate in Turkey is per hundred thousand: *corpus uteri* – 10.7, ovary – 6.3 and cervical cancer – 4.3 [6]. In Poland, in 2020, the number of deaths from gynaecological cancers was 367, and the cumulative risk of gynaecological cancers was 4.17 [7]. According to the study by Caetano Dos Santos et al., the number of gynaecological cancers is increasing over the years [8].

Increasing awareness of gynaecological cancer in society is the most effective method of reducing the incidence of this disease [9, 10], and raising awareness – known as the primary prevention method – is effective in reducing mortality and morbidity. Some situations that indicate awareness include avoiding behaviours that endanger health, adopting a healthy lifestyle, eating a balanced and regular diet, avoiding smoking

✉ Address for correspondence: Małgorzata Nagórska, Faculty of Health Sciences and Psychology, Collegium Medicum, University of Rzeszow, Poland
E-mail: ma.nagorska@gmail.com

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and alcohol, and HPV vaccination [10, 11]. However, many problems, such as women's lack of health literacy, neglect of their health problems, fear and embarrassment of gynaecological examination, financial problems and fear of cancer, prevent women from receiving diagnosis and treatment [9, 12].

As with all types of cancer, there are studies examining gynaecological cancers of the cervix, ovary and endometrium in terms of knowledge, attitude and belief, and awareness about gynaecological cancers; which saves lives by providing early diagnosis and treatment. However, when examining the literature, it is seen that very few women undergo gynaecological evaluation unless they have a prior health problem [13]. For the early diagnosis of cancer it is to know the symptoms and to catch the disease before it causes any symptoms [10]. For this reason, the importance of early diagnosis and screening programmes, the causes of the disease, potential risk factors and common symptoms should be explained, and women should be encouraged to have regular gynaecological examinations [14]. In this context, it is recommended that women between the ages of 18–40 undergo a pelvic examination every 1–3 years, and those aged 40 and over, once a year. In addition, the pap smear test is recommended approximately 3 years after the first sexual intercourse, 3 times after the age of 30, and every 2–3 years if normal, and in Poland, since 1992, with the recommendations of the World Health Organization, it is performed under the Cancer Early Diagnosis, Screening and Training Center (KETEM) for patients aged 30–65. Asymptomatic women are required to have a cervical smear test every 5 years [10]. In addition, early diagnosis and treatment are easier and more economical, besides which increasing the time and resources within the scope of preventive services is an important factor in gynaecological cancer awareness [9].

There are studies showing that in both Turkey and Poland awareness of gynaecological cancers is low [15]. Although this situation is a guide for health professionals in terms of preventive health services, it is reported that factors such as education, income level, marital status, fertility rate, age and family history of cancer, affect the awareness of gynaecological cancers [16–21]. It is also known that risky behaviours, nutrition, and the environment have an impact [14]. There is therefore a need for studies to raise awareness of gynaecological cancers worldwide, and show the importance of evidence-based studies. The current study aimed to compare the awareness of gynaecological cancers among the Turkish and Polish female population.

Proper preventive measures and early treatment significantly increase the chances of curing gynaecological cancers [22, 23]. The primary objective of preventive programmes is to optimize the balance between maximizing population-level health benefits and minimizing potential adverse effects, such as over-diagnosis, excessive medical interventions, increased patient anxiety, and the generation of unnecessary healthcare costs [23].

MATERIALS AND METHOD

The intention of descriptive and cross-sectional study was to investigate the gynaecological cancer awareness of in Turkey and Poland, among women who were patients in medical centres in Erzurum, Turkey and Rzeszów, in Poland between December 2022 – January 2024.

Sample. The population of the research was calculated as unknown sample and the required number of samples was calculated as 385 with the formula n=t2.pq\d 2 with 50% prevalence, 95% confidence interval and 5% margin of error. However, considering possible losses, 513 women from Poland and 504 women from Turkey were included. The women were 18 years of age or older, had at least primary school education, had not been previously diagnosed with gynaecological cancer, and agreed to participate in the study.

Women aged 18 and over with at least primary school education were included to the study. Women who did not agree to participate in the study and had been previously diagnosed with gynaecological cancer were excluded from the study.

Data collection tools. Two tools were used in the study for collecting data: the Personal Information Form (PIF) and the Gynaecological Cancer Awareness Scale (GCAS). The PIF contained 14 questions, 2 questions concerning socio-demographic characteristics, 1 question about health habits, and 11 about gynaecological characteristics [9, 10, 13].

The GCAS was developed by Dal and Ertem (2017) and consists of 41 questions and 4 subscales [1]:
- the 'Routine Control and Serious Illness Perception Awareness' sub-scale occurs between questions 20–41;
- questions concerning the 'Gynaecological Cancer Risks Awareness' sub-scale occurs between questions 3–11;

Questions include the "Awareness of Protection from Gynaecological Cancers" sub-dimension; – questions 14–19 refer to the 'Early Diagnosis and Information Awareness of Gynaecological Cancers' sub-dimensions 1, 2, 12,13.

The score that can be obtained from the scale is at least 41 points and at most 205 points,? but as the score increases, awareness increases. The Cronbach Alpha values of the sub-dimensions of the original scale are 0.979, 0.843, 0.778 and 0.708, respectively. The Cronbach Alpha values of the sub-dimensions are 0.946, 0.808, 0.693 and 0.810, respectively. The Cronbach Alpha value of the original scale was 0.944 and was found to be 0.937. In Poland, the Polish version by Nagorska et al. was used [24].

Evaluation of data. Research data were evaluated with the SPSS 25 (Statistical Package for Social Sciences) programme. Significance level was taken as $p<0.05$ and $p<0.01$. Data was analyzed with mean, number, percentage, standard deviation, t test and Chi square test.

Ethical considerations. The study was approval by the Ethics Committee at the Atatürk University, University Faculty of Health Sciences (Approval No. 25/11/2022) and performed according to the Declaration of Helsinki. Informed consent was obtained from the participants before commencement of the study.

RESULTS

In Poland, most of women (65.3%) participating in the study from Poland lived in cities, 86.7% were university graduates, 21.6% drank alcohol, 69.5% did not smoke or drink alcohol, 68.4% had regular menstrual cycles, 3 more than 1 in 100 people were sexually active, and 96.2% had only one partner.

Regarding methods of protection, 64.7% stated that they did not use any method, 73.9% had had a pap smear test, 94.9% did not have the HPV vaccine, and 13% did not have the HPV vaccine. It was determined that 6 of them had cancer in their families.

In Turkey, 68.7% of women living live in the city center and 83.3% are university graduates. It is stated that 21.4% of women in Türkiye smoke and 73.8% do not smoke or drink alcohol, 29.4% experience menstrual irregularities, 72.6% are sexually active and 96.2% live a life with a single partner. When these women were examined in terms of protection methods, it was determined that 36.5% did not use any method, 70.6% had a pap smear test, but 93.8% did not have the HPV vaccine, and 11.5% had a family history of gynaecological cancer.

There are similarities between these groups in terms of socio-demographic characteristics, place of residence, education level, alcohol and cigarette use. Gynaecological characteristics are also similar in terms of menstrual regularity, living with a single partner, having a Pap smear test-HPV vaccine, and having a family history of gynaecological cancer. There are differences in terms of how women living in Poland and Türkiye are sexually active and protect themselves (Tab. 1).

In Poland, the average age of the women in the study was 38.45±12.64, the average number of pregnancies – 2.2 4 ± 1.24, average number of curettages – 0.39±0.73, average number of abortions – 0.24 ± 0.54, average age at which the first menstrual period occurred – 13.40 ± 1.51, average age at which the first sexual activity occurred – 13.40 ± 1.51. The average age was 20.85±2.93 and the average age at menopause – 48.92 ± 4.48.

In Turkey, the average age of the women in the study was 37.18 ± 10.01, the average number of pregnancies – 2.41±1.54, average number of curettages – 0.29 ± 1.19, average number of abortions – 0.31 ±0.67, average age at which the first menstrual period occurred – 13.02±1.40, average age at which the first sexual activity occurred – 22.39.±3.85, and the mean age at menopause – 48.97±3.37.

Table 2 compares the mean scores of the groups according to the Gynaecological Awareness Scale. In Poland, the average score of routine control and serious disease perception awareness subscale was 85.47±10.86, the average score of the gynaecological cancer risks awareness subscale – 28.47±4.78, average score of the gynaecological cancer prevention awareness subscale – 85.47±10.86. The mean score of the subscale of early diagnosis and information awareness in gynaecological cancers was 16.90±2.39, and the mean score of the awareness scale in gynaecological cancers was 153.30±16.83.

In Turkey, the mean score of routine control and serious disease perception awareness subscale in gynaecological cancers was 87.84±15.23, mean score of gynaecological cancer risks awareness subscale – 29.62±6.09, mean score of gynaecological cancer prevention awareness subscale – 87.84±15.23. 22.46±4.45, mean score for the early diagnosis and information awareness subscale in gynaecological cancers – 17.04±3.24, and the mean score on the awareness scale in gynaecological cancers – 17.04±3.24. It was found to be 156.97±23.23. There was a statistically significant difference between the sub-dimensions and the scale total score averages, except for the sub-dimensions of gynaecological cancer prevention awareness and early diagnosis and information

Table 1. Distribution of participants' descriptive characteristics

	Poland		Türkiye		Test and p value
	n	%	n	%	
Place of residence					
City centre	335	65.3%	346	68.7%	X^2 = 1.289, p=0.25
District centre	178	34.7%	158	31.3%	
Education					
High school	68	11.9%	84	16.7%	X^2=2.327, p=0.12
University and above	445	86.7%	420	83.3%	
Alcohol and smoking status					
Not using any	357	69.6%	372	73.8%	X^2 = 136.480, p=0.00
Smoker	28	5.5%	108	21.4%	
Alcohol user	111	21.6%	8	1.6%	
Using both	17	3.3%	16	3.2%	
Those experiencing menstrual irregularities					
Yes	162	31.6%	148	29.4%	X^2=0.588, p=0.44
No	351	68.4%	356	70.6%	
Sexually active person					
Yes	416	81.1%	366	72.6%	**X^2 = 10.271, p = 0.01**
No	97	18.9%	138	27.4%	
Having more than one partner					
Yes	19	3.7%	18	3.6%	X^2 = 0.011, p=.915
No	494	96.3%	485	96.2%	
Prevention methods					
Retraction	10	1.9%	44	8.7%	**x^2 = 142.917, p = 0.000**
Cycle observation	25	4.9%	6	1.2%	
Condom	102	19.9%	167	33.1%	
Hormone	37	7.2%	33	6.5%	
Intrauterine device	6	1.2%	59	11.7%	
Tub ligation	1	0.2%	11	2.2%	
None	332	64.7%	184	36.5%	
Status of having a Pap smear test					
Yes	379	73.9%	356	70.6%	X^2=1.335, p=0.24
No	134	26.1%	148	29.4%	
HPV vaccination status					
Yes	26	5.1%	31	6.2%	X^2 = 0.563, p=0.45
No	487	94.9%	473	93.8%	
Gynaecological cancer occurrence in the family					
Yes	68	13.3%	58	11.5%	X^2 = 0.715, p=0.39
No	445	86.7%	446	88.5%	
Age	38.45±12.64		37.18±10.01		t= 1.766, p=0.78
Number of pregnancies	2.2 4± 1.24		2.41 ± 1.54		t= -1.893, p=0.059
Number of curettages	0.39 ± 0.73		0.29 ±1.19		t= 1.698, p= 0.09
Number of abortions	0.24 ± 0.54		0.31 ±0.67		t= -1.134, p= 0.25
First menstrual age	13.40 ± 1.51		13.02 ± 1.40		**t= 4.155, p=0.00**
Age of first sexual activity	20.85 ± 2.93		22.39 ± 3.85		**t= -7.104, p=0.00**
Age of menopause	48.92 ± 4.48		48.97 ± 3.37		t= -.086, p=0.93

Table 2. Comparison of Gynaecological Awareness Scale between Poland and Turkey

	Min-Max	Poland	Turkey	Test and p value
Routine control and serious illness perception awareness sub-dimension in gynaecological cancers	22–110	85.47 ± 10.86	87.84 ± 15.23	**t= -2.853, p=0.004**
Gynaecological cancer risks awareness sub-dimension	9/11–45	28.47 ± 4.78	29.62 ± 6.09	**t= -3.333, p=0.001**
Gynaecological cancer protection awareness sub-dimension	6–30	22.44 ±3.42	22.46 ± 4.45	t= -0.074, p=0.94
Early diagnosis and information awareness sub-dimension in gynaecological cancers	4–20	16.90 ± 2.39	17.04 ± 3.24	t= -0.752, p=0.45
Gynaecological cancers awareness scale total	41–205	153.30 ±16.83	156.97 ±23.23	**t= -2.881, p=0.004**

awareness of gynaecological cancers among women living in Poland and Turkey ($p<0.05$).

DISCUSSION

Cancer is a frightening disease because of its high mortality and morbidity rates, but which can be prevented or detected and treated early by paying attention to awareness, protection and early diagnosis [19]. Gynaecological cancer is one of the most common types of cancer occurring in women, and is becoming increasingly more common [3, 4]. Many studies have been conducted on the factors affecting awareness in gynaecological cancers [2, 9, 16, 25, 29]. Women have both correct and incorrect information about gynaecological cancers, with some misinformation concerning poor hygiene and induced abortions. Gynaecological information, however, does not provide sufficient protection against cancer [30].

Therefore, the current study is important for identifying differences in awareness of gynaecological cancers between Poland and Turkey. There is a significant difference in the use of contraceptive methods and the number of sexually active people between the two countries. The reason for this is that one in every two women living in Poland does not use contraception (64.7%), and 8.7% of women living in Turkey use the withdrawal method, and 11.7% use intrauterine devices. In Poland, 18.9% of women, and 27.4% of women living in Turkey who participated in the study were sexually active (Tab. 1). It is believed that this difference is the result of different cultures.

Although the use of smear tests – screening tests against gynaecological cancers – is similar in both Poland and Turkey, it is observed that in both countries one-quarter of women do not have smear screening, and studies show that smear screening is less frequent [13, 17]. It is evident that this rate has decreased even more in recent years [8, 30]. I

In the current study, it was found that 5.1% of women living in Poland and 6.2% in Turkey were vaccinated against HPV (Tab. 1), which shows that their awareness of gynaecological cancers is not at the desired level. In addition, the fact that in Turkey the HPV vaccine has to paid for and is not included it within the scope of compulsory vaccinations, affects the vaccination rate. In addition, the anti-vaccine sentiment has increased after the COVID-19 pandemic and resulted in the negative public approach to vaccines. It is believed that the HPV vaccine will likewise be affected.

It has been stated that gynaecological cancers can be prevented by abstention from smoking or drinking alcohol, adopting healthy eating habits, engaging in regular physical activity and a healthy lifestyle [31]. In the current study it was found that 69.3% of the participants in Poland and 73.8% in Turkey did not use alcohol or cigarettes. Although the groups were similar, in Poland 21.6% of the women smoked and drank alcohol, while in Turkey, 21.4% of the women smoked cigarettes. Thus, one-in-five women in both countries adopted harmful habits. This suggests that they are unable to quit these habits because of addiction, and not because they are unaware of the harmful effects of these habits, and because they are widely used in society.

When women living in Poland and Turkey were examined in terms of age at first menstruation, a significant difference was found between the two countries (Tab. 1). This significant difference is attributed to the fact that Turkey has a more temperate climate in the south, and the first menstrual period occurs at an earlier age than women living in Poland. It is also thought that the difference between the ages of first sexual activity of women living in both countries may be due to the desire to have safe sexual intercourse after turning 18 in Poland, while Turkish society is against sexual intercourse outside marriage.

Considering that the minimum score that can be obtained from the scale is 41 and the maximum is 205, it is possible to state that women's awareness of gynaecological cancer is above the medium level (Poland – 153.30 vs. Turkey – 156.97). This is consistent with the results of other authors who confirmed that the awareness of gynaecological cancers among women is above the moderate level (Toptaş – 149.10, Yasar – 149.64, Tekereci -151.80, Aydin – 152.17, Kaya – 153.71, Duman – 154.42 [9, 18–21, 29]). Other studies, however, have also found that awareness of gynaecological cancers is low [16].

It is thought that the majority of participants in both Poland and Turkey were university graduates, is reflected the fact that the women living in both countries received high scores in the study. However, the score that the participants obtained concerning the awareness of gynaecological cancers, was not at the desired level. Additionally, a significant difference was found between women living in Poland and Turkey in terms of gynaecological awareness, a factor that may cause a significant difference between these two countries being that having menarche at an earlier age and taking early responsibility for reproductive and gynaecological problems, increases knowledge and awareness. It is also thought that the fact that most of the women who agreed to participate in the study were university graduates and lived in cities may have had an effect. In addition, it is stated that in Turkish society, the experience of active sexual life begins with marriage, the gynaecological examination process is more active, and they receive the necessary services in terms of reproductive health, and the awareness of women between the ages of 30–40 is higher. This has been shown in other studies [2].

Adequate knowledge and awareness about gynaecological cancers makes it easier for women to use screening programmess effectively and to consult a physician when necessary. Differences between Poland and Turkey countries may result from cultural and economic characteristics, as

well as differences between countries in receiving health care. Additionally, it is stated in the literature that cervical cancer is less common in Muslim countries [13].

In the current study, it was found that women living in Turkey scored higher than those in Poland in the subscale of routine control and serious illness perception awareness in gynaecological cancers. When evaluated separately, both groups received scores above the average level. Other studies have confirmed similar results [9–11, 20, 23]. In both Poland Turkey, the women scored above average in the gynaecological cancer risks awareness subscale, a finding that also concurs with the current study [11, 20, 19, 23].

However, there are also studies that found that awareness of gynaecological cancer risks was below average [9, 10], differences that may be due to the educational status of the women participants. In Poland, the women scored lower than those living in Turkey, and revealed a significant difference. Although between the two countries there is no significant difference in the sub-dimensions of awareness of protection from gynaecological cancers and awareness of early diagnosis and information in gynaecological cancers, it is seen that they score above the average in both sub-dimensions. Similar studies have also reported scores above the average [9, 10, 19, 26, 32]. This result, however, is considered insufficient to show that women in the two countries have sufficient awareness to protect themselves from gynaecological cancers. With awareness, women need to reflect this information in their behaviour.

The current study focused on the differences between Poland and Turkey and confirmed significant differences between countries in two subscales, and in the total result. In addition, other authors in Turkish studies in various groups of women have shown that such variables as younger age, higher education, marital status, having children, higher economic status, and performing preventive examinations, positively correlate with the level of women's awareness of gynaecological cancers [9, 18–20].

Limitations of the study. First, the research was performed in one specific region in both Poland and Turkey. Second, the study was not made among a representative sample. For this reason, the results cannot be generalized to the whole of society.

CONCLUSIONS

This study showed that there are differences between Poland and Turkey in women's awareness of gynaecological cancer. There was especially a significant difference in the sub-scale of routine check-up and serious disease, awareness of cancer risks, and scale score averages. Scores above the average were obtained in the awareness scale and its sub-scale in gynaecological cancers, but this awareness was considered insufficient. The fact that most of the women had a high level of education and lived in provincial cities are among the factors that positively affect their gynaecological awareness. There were differences in the age of first sexual activity and the age of first menstrual period between the two countries.

Raising awareness against gynaecological cancers is one of the developments that will increase women's and public health. Although it is considered to be high, it is important to increase it even further and maintain the awareness. For this reason, it is recommended that the training provided for women should be continued and these services given priority in terms of protecting and improving health. It is also recommended to research the state of awareness at the regional level.

Increasing awareness is of great importance for early diagnosis and treatment of gynaecological cancers, and for reducing mortality. Health professionals should design and implement continuing education programmes to increase the awareness of women in all age groups about gynaecological cancer. The goal is to identify women's false beliefs and attitudes about gynaecological cancers and improve their awareness through these trainings. Training is needed to help women gain responsibility and reduce risk factors by directing them to regular screening tests, such as gynaecological examination and smear tests. Moreover, since it is thought that the density and frequency of screening centres will affect this situation, it is recommended to conduct such a study.

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