

## RESEARCH COMMUNICATION

# Awareness of Cervical Cancer Risk Factors and Screening Behaviour among Nurses in a Rural Region of Turkey

Gul Ertem

### Abstract

The demographic characteristics of nurses and knowledge on risk factors of cervical cancer, as well as awareness of symptoms and attitudes in terms of screening programmes such as Pap smear, were assessed in a cross-sectional survey of nurses working in public Health Clinics and Family Health Centers in the rural area of Izmir, located in the western region of Turkey. Of the nurses who participated in the research, 69.1% (67) said that they had talked about cancer and cancer prevention with their families or friends; 60.8% (59) believed that their occupation was important for cancer prevention; 11.3% of the nurses had a history of cancer in their families; and 63.9% (62) thought that their knowledge about cervical cancer was adequate. There were no significant differences between knowledge or attitudes about cervical cancer risk factors or symptoms and screening methods regarding age, marital status, years of experience ( $p > 0.05$ ). However, there was a statistically significant relationship between having received a pap test and having a history of cancer in their family ( $p < 0.05$ ). In conclusion, this study has shown that most nurses knew about the Pap smear test as a cervical cancer screening method. However, there were no significant differences between knowledge or attitudes about cervical cancer risk factors or symptoms and screening methods regarding age, marital status, years of experience.

**Key Words:** Cervical cancer - Pap smear test - screening behaviour - nurses

*Asian Pacific J Cancer Prev*, 10, 735-738

### Introduction

Cervical cancer is the most common malignancies among females worldwide. Its contribution to cancer burden is significant across all cultures and economies. Cervical cancer also accounts for over 270,000 deaths worldwide, an overwhelming majority of which occur in the less developed regions (Imam et al., 2008).

Cervical cancer is also a common type of cancer among women, especially in women of 20–39 years of age; cervical cancer remained the second leading cause of cancer deaths after breast cancer, accounting for approximately 10% of cancer deaths. The developing world has carried a disproportionate share of the burden and 80 % of the 250,000 cervical cancer deaths in 2005 occurred there (WHO, 2007; Uysal and Birsal, 2009). In Turkey, it was found that cervical cancer constituted 3.13% of all newly diagnosed cancer cases among women in 2002 (The Turkish Ministry of Health 2002). Cervical cancer is largely preventable by effective screening programmes (Mahleck et al., 1994; Yaren et al., 2008) and papanicolaou (pap) smear is an effective test for cervical cancer screening. The ideal ages of women for screening are 30–40 years owing to high risk of precancerous lesions due to being sexually active; and a precancerous lesion is detectable for 10 years or more before a cancer develops (Olamijulo & Duncan 1995). Although it has been already

proven that the efficiency of regular pap tests reduced the mortality rate of cervical cancer, its application in the developing countries is less compared with the developed countries. The lack of knowledge concerning cervical cancer may be related to this fact (Yaren et al., 2008). Similarly, there is no regular screening programme for cervical cancer in Turkey.

Nurses constitute the group of health workers who can provide accurate information to the public on cervical cancer. They also can have a predominantly educative, encouraging and informing role in terms of a screening programme. Nurses can combine their knowledge of the health care and available screening services to educate women about cervical cancer risk factors (Tessaro et al. 1996; Shaw et al. 1997; Tessaro & Herman 2000). Although The Turkish Ministry of Health encourages people to avoid from cancer risk factors and to perform screening activities, there is no a regular and systematic cancer prevention programme. The other cancer organizations have also limited role in this manner that they well-informed to population mostly by web sites and media. The lack of a regular screening programme for cervical cancer and low rate of pap smear for cervical cancer in Turkey led us to perform this study.

The purpose of the study was to assess knowledge, awareness and attitudes in terms of cervical cancer risk factors, symptoms and screening behaviors among nurses

in Odemis, which is a rural city in western region of Turkey.

## Materials and Methods

### Sample and Setting

The study was conducted as a cross-sectional survey among nurses working in all public Health Cabins and Family Health Centers in the rural area of Izmir, a city located in the western region of Turkey. The researcher invited all nurses regardless of working department. In fact, nurses do not have a primary role in the education of persons about the cancer risks and prevention as well as screening methods; however, they have been chosen for this study for two reasons. One of them was that they were expected to have higher knowledge about cervical cancer due to highly scientific working conditions than counterparts working outside the university hospital. The second reason was the fact that nurses have an important role in the education of women in our country because women feel them more closely to ask something about the symptoms and screening of sex specific cancers such as breast and gynecological cancers. Thus, they can constitute a model of health promotion for women. Hence, they have a meaningful role in the education of women despite of the absence a role on a regular education programme. The survey was designed to investigate the demographic characteristics of the nurses and their knowledge on risk factors of cervical cancer as well as and awareness of symptoms and attitudes in terms of screening programmes such as Pap smear.

The data was collected between March and May, 2006. A total of 114 nurses work in the rural area of Izmir. It tried to cover the total population rather than sampling part of it. However, 17 nurses, where there was error detected in their data coding paper, and who did not want to join the study, were excluded from the study. A total of 97 nurses were included in the study group. The survey was conducted on a voluntary basis. Before answering the questionnaire, all subjects, who participated voluntarily, were given instructions on how to fill it out, and the completed questionnaire was placed anonymously in a collection box. All potential subjects were informed about the research and it was made clear to them that participation was voluntary, that is, they were being invited to participate. The questionnaire was designed in the line with the purpose of the study. The self administered questionnaire containing both coded and open-ended questions took 25 min and consisted of two sections.

### Instruments:

Data was collected through survey forms by the interviews conducted by researcher. The form consists of 30 questions and two parts. The first part of the survey focuses on the socio-demographic characteristics of nurses and on their family risks in terms of cancer and their habit of having pap smear testing. Finally, the second section contained information about cervical cancer risk factors, symptoms and using Pap smear screening test. Most of the questions had only two response options (yes/no or true/false) while some had several response options.

### Data Analysis

Statistical Package for Social Sciences (version 15.0) was used to compute frequency and descriptive statistics related to demographic data. The researcher compared the characteristics of nurses who did and did not report a Pap test. Statistical methods included the chi-square test (Aksakoglu, 2001; Özdamar, 2002). A level of  $p < 0.05$  was considered statistically significant.

The data collected were analyzed using SPSS-11.0 for Windows Descriptive statistical methods for each question were carried out according to the different demographic data on the collection of respondents. Statistical evaluation was accomplished using the Pearson chi-square test to test the relationship of sample characteristics and categorical variables. A P value of less than 0.05 was regarded as significant.

### Ethical Considerations

The purpose of the investigation was explained to the participants and a verbal informed consent was obtained. Furthermore, all study participants were told that they had the right to withdraw from the investigation at any time and that all information would be kept strictly confidential. The required approvals were obtained from the governorship, National Health Ministry, and the management of the relevant Healthcare Centers.

## Results

The age range was 20 - 40 years with a mean of 33 years. It was determined that 59.7% of the nurses were married, 34.0% had given birth three times or more and average number of children was  $2.26 \pm 0.86$ . Twenty-seven nurses (27.8%) have worked for less than 5 years, 49 (50.5%) for 5–10 years and 21 (21.6%) have worked for more than 10 years at the State Hospital, all public Health Cabins and Family Health Centers. Of the nurses, 69.1% (67) said that they had talked about cancer and cancer prevention with their families or friends; 60.8% (59) believed that their occupation was important for cancer prevention; 11.3% of the nurses had a history of cancer in their families; 63.9% (62) thought that their knowledge about cervical cancer was adequate (Table 1).

Of the 97 nurses, 69.1% (67) reported smoking, 72.2% (70) reported early age at first sexual intercourse, 81.4% (79) reported multiple sexual partners and 87.6% (85) reported history of sexually transmitted disease were risk factors of cervical cancer. Forty-five (46.4%) nurses knew all the risk factors of cervical cancer. Fourteen (14.4%) nurses believed that they had a higher risk in development of cervical cancer. When nurses were asked about

**Table 1. Characteristics of the study population**

Characteristics	Frequency	%
Married	58	59.7
Given birth three times or more	33	34.0
Regular menstrual cycle	63	64.9
History of cancer in the family	11	11.3
Those thinking that their knowledge about cervical cancer was adequate	62	63.9

symptoms of cervical cancer, most of the nurses knew pain in pelvic region (70.4%), pain during sexual intercourse (79.6%), vaginal bloody discharge (82%). The researcher asked about Pap smear test as a screening method; 80.4% (78) believed that it should be done yearly, 92.8% (90) believed that it was so difficult procedure, but 70.1% (68) did not know that it should be done 3 years after the onset of sexual life. In addition, 63.9% (62) did not know that if the repeated Pap smear tests were normal, it could be done every 2–3 years. Of the nurses, 53.6% (52) did not have Pap smear. The reasons of not performing Pap smear test were virginity (67.3%), forgetting (21.2%) and feeling embarrassed (11.5%). However, 71.8% of nurses believed that Pap smear decreases mortality of cervical cancer.

There were no significant differences between knowledge or attitudes about cervical cancer risk factors or symptoms and screening methods regarding age, marital status, years of experience ( $p>0.05$ ), a statistically significant relationship was determined between having received a pap test and having a history of cancer in their family ( $p<0.05$ ).

## **Discussion**

The results of our study indicated that most of the nurses knew that pap smear test as a cervical cancer screening methods, should be done yearly, but, did not know that women should begin cervical cancer screening approximately 3 years after the first sexual life and if the repeated pap smear tests were normal, it could be done every 2–3 years. Most of the nurses knew that Pap smear test decreased mortality of cervical cancer.

Pap smear test is one of the most crucial screening tools for the early diagnosis of cervix cancer (Elovainio et al., 1997; WHO, 2007; Kaya, 2009). While the rate of women having Pap testing is equal to or above 80 % in developed countries (Welensek et al., 2002; Carrasquillo & Pati, 2004; Sirovich & Welch, 2004; Coughlin et al., 2006), this rate varies between 46-68% in developing countries (Farland, 2003; Behbackt et al. 2004; Imami et al., 2008). In this study, the rate of nurses having Pap smear testing is at the lower limit of developing countries (46.4 %). Similar to the findings of our study, in the study conducted by Yaren et al at a Pamukkale University Hospital in Denizli (2006), it was determined that 49.6% of the nurses had Pap smear testing (Yaren et al., 2008).

Nurses have an important role in cancer prevention and health education. Therefore, knowledge and awareness of cervical cancer are the most important for our women, who were educated by nurses. In the literature, some studies have shown that nurses who knew very well about symptoms, risk factors and screening methods of cancer were more likely to use cervical cancer screening methods (Tessaro &Herman 2000; Odunsanya & Tayo 2001; Yaren et al., 2008). This study demonstrated that having knowledge of cervical risk factors such as smoking, early age at first sexual intercourse, multiple sexual partners and having a sexually transmitted were risk factors of cervical cancer. In the literature, similar rates were found related to the level of knowledge on cervical

cancer risk factors [smoking (57.7%), early age at first sexual intercourse (90.6%), multiple sexual partners (95.9%), history of sexually transmitted disease (92.4%)] (Tessaro & Herman, 2000).

In several studies, knowledge about cervical cancer risk factors and counseling of the nurses and clinical skills for cervical cancer control were studied (Tessaro & Herman, 2000; Mutyaba et al., 2006; Hoai Do et al., 2007). Although cervical cancer constituted 3.13% of all newly diagnosed cancer cases among women in Turkey in 2003 (The Turkish Ministry of Health, 2003), there was no regular screening practices. In our study, nurses knew all risk factors and symptoms of cervical cancer, but, did not know the Pap smear test should be done 3 years after onset of sexual life and if the repeated tests were normal, it could be done every 2–3 years. These results indicated that information of cervical cancer screening was inadequate among our nurses. However, it might contribute the delaying of establishment of prevention and screening efforts in our hospital locally. Furthermore it is important for their own health.

In conclusion, this study has shown that most of the nurses knew that Pap smear test as a cervical cancer screening methods. And however, there are no significant differences between knowledge or attitudes about cervical cancer risk factors or symptoms and screening methods regarding age, marital status, years of experience.

People often did not visit the doctor unless they are ill (Uysal and Birsal, 2009). Therefore, nurses have an important task of giving women information on how to detect early signs of breast and cervical cancer, advice and education aimed at primary and secondary preventive behaviours and encouraging them. This may be very effective in cancer prevention and it may also decrease the mortality rate. To encourage women to perform breast and cervical cancer screening regularly, first of all, we should implement additional education programmes for nurses. The results of our study may provide important baseline information about awareness of cervical risk factors and cancer screening in health professions.

Further studies evaluating the knowledge and attitudes of persons who have a close relation with women about health promotion education such as nurses and teachers will indicate the size of this problem and also will help to assessment more applicable screening programmes.

This study was conducted with a limited sample group in order to determine women's condition of having pap testing and level of knowledge of cervical cancer. It will be beneficial to plan studies to be carried out with larger sample groups in determining traditional beliefs and attitudes concerning cervical cancer and having pap testing. Thus, the results cannot be generalized to the population of nurses. However, the findings of the descriptive study can provide a foundation for future intervention studies of Turkish nurses and comparisons with other groups.

## **References**

- Aksakoglu G (2001). Sağlıkta Arastırma Teknikleri ve Analiz Yontemleri (Research Techniques and Analysis Methods in

- Health). Dokuz Eylül University Rectorate Press, Izmir.
- Behbakht K, Lynch A, Teal S, Koen D, Massad S (2004). Social and cultural barriers to papanicolaou test screening in urban population. *Obstet Gynecol*, **104**, 1355-61.
- Carrasquillo O, Pati S (2004). The role of health insurance on pap smear and mammography utilization by immigrants living in the United States. *Prev Med*, **39**, 943-50.
- Coughlin SS, King J, Richards TB, et al (2006). Cervical cancer screening among women in metropolitan areas of the United States by individual-level and area-based measures of socioeconomic status, 2000 to 2002. *Cancer Epidemiol Biomarkers Prev*, **15**, 2154-60.
- Elovainio L, Nieminen P, Miller AB (1997). Impact of cancer screening on women's health. *Int J Gynecol Obstets*, **58**, 137-47.
- Farland DM (2003). Cervical cancer and Pap smear screening in Botswana: knowledge and perceptions. *Int Nurs Rev*, **50**, 167-75.
- Hoai H, Taylor VM, Burke N, et al (2007). Knowledge about cervical cancer risk factors, traditional health beliefs, and Pap testing among Vietnamese American women, *J Immigrant Health*, **9**, 109-14.
- Imam SZ, Rehman F, Zeeshani MM, et al (2008). Perceptions and practices of a Pakistani population regarding cervical cancer screening. *Asian Pacific J Cancer Prev*, **9**, 42-4.
- Kaya M (2009) Halk sağlığı yaklaşımıyla servikal kanser (Cervical Cancer with Public Health Perspective) (Edit. Akın A.) HÜKSAM Yayınları (HUKSAM Publication), Ankara.
- Mahleck CG, Jonsson II & Lenner P (1994). Pap smear screening and changes in cervical cancer mortality in Sweden. *Int J Gynecol Obstets*, **44**, 267-72.
- Mutyaba T, Mmiro FA, Weiderpass E (2006). Knowledge, attitudes and practices on cervical cancer screening among the medical workers of Mulago Hospital. *Uganda BMC Medical Education*, **6**, 13.
- Olamijulo J, Duncan ID (1995). Is cervical cytology screening of teenagers worthwhile? *Br Journal of Gynecology and Obstetrics*, **102**, 515-6.
- Odunsanya OO, Tayo OO (2001) Breast cancer knowledge, attitudes and practice among nurses in Lagos. *Nigeria Acta Oncologica*, **40**, 844-8.
- Özdamar K (1997). Paket Programları ile İstatistiksel Veri Analizi (Package Software and Analysis of Statistical Data). Publications of Anadolu University, Eskisehir.
- Shaw J, Tessaro I, Herman CJ, Giese E (1997). Predictors of the performance of breast and cervical cancer screening by public health nurses. *Am J Preventive Med*, **13**, 199-204.
- Sirovich BE, Welch G (2004). The frequency of Pap smear screening in the United States. *J Gen Intern Med*, **19**, 243-50.
- Tessaro I, Herman C (2000). Changes in Public Health Nurses' knowledge and perception of counseling and clinical skills for breast and cervical cancer control. *Cancer Nursing*, **23**, 401-5.
- Tessaro I, Herman CJ, Shaw J, Giese E (1996). Cancer prevention knowledge, attitudes and clinical practice of nurse practitioners in local public health departments. *Cancer Nursing*, **19**, 269-74.
- The Turkish Ministry of Health (2002). The most frequent ten cancers in females. Available at: <http://www.saglik.gov.tr/> (accessed March 2006).
- The Turkish Ministry of Health (2003). A council suggestion for cancer screening. Halatc\_F, Fidaner C. Available at: <http://www.saglik.gov.tr/extras/birimler/ksdb> (accessed March 2006).
- Uysal A, Birsal A (2009). Knowledge about cervical cancer risk factors and pap testing behaviour among Turkish women. *Asian Pacific J Cancer Prev*, **10**, 345-50.
- Yaren A, Ozkılıç G, Güler A, Oztop I (2008). Awareness of breast and cervical cancer risk factors and screening behaviours among nurses in rural region of Turkey. *Eur J Cancer Care*, **17**, 278-84.
- Wellensiek N, Moodley M, Moodley J, Nkwanya N (2002). Knowledge of cervical cancer screening and use of cervical screening facilities among women from various socioeconomic backgrounds in Durban, Kwazulu Natal, South Africa. *Int J Gynecol Cancer*, **12**, 376-82.
- World Health Organization (WHO) (2007). Progress in Reproductive Health Research Cervical Cancer Prevention: Screening Still the Only Option, Geneva, 2-8.