

## RESEARCH ARTICLE

# Are Primary Health Care Workers Aware of Cervical Cancer Risk?

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### Abstract

**Background:** We here examined the awareness of female health employees (doctors, nurses, midwives) working in primary health care service about cervical cancer and its risk factors. Additionally attitude and behavior for gynecologic examination and pap smear screening were researched. **Materials and Methods:** This cross-sectional, descriptive study concerned female health employees working at primary health care services in two southern cities of Turkey, over a four month period in 2013. Participants were recently or previously sexually active research was explained and verbal informed consent was obtained face to face. The questionnaire consisted of two parts; socio-demographic characteristics and level of knowledge about cervical cancer and its risk factors. **Results:** The average age of the participants (midwives 43.7%, n=143; nurses 40.4%, n=132; doctors 6.4%, n=21; emergency medical technicians and others, 9.5%, n=31; total, n=327) was 30.9±6.41 years. 64.2% (n=210) were working in Diyarbakir and 35.8% (n=117) in Batman. A large proportion reported low knowledge and inadequate screening practice **Conclusions:** Health employees should be better informed about the importance of screening for cancers, given their preventive roles for the general population.

**Keywords:** Cervical cancer - primary healthcare workers - Pap smear - knowledge

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### Introduction

Worldwide, cervical cancer is one of the leading causes of morbidity and mortality among gynaecological cancers, and is second to breast cancer as the commonest female cancer (Jemal et al., 2008a,b). Most important cause of the cervical cancer is "Human Papilloma Virus" (HPV) (Saslow et al., 2007). Screening for cervical cancer has been one of the few tests which have been shown to be able to directly reduce mortality and morbidity (Huh 2010). Early diagnosis and treatment is crucial for decreasing the mortality rate in the cervical cancer (Coskun et al., 2013). There are various methods to detect premalignant lesions such as conventional Pap smear (Oranratanaphan et al., 2010). Pap smear testing is an effective method of detecting, preventing and delaying the progress of cervical cancer (Bebis et al., 2012; Shieh et al., 2012; Sogukpinar et al., 2013; Karadag et al., 2014). Poor knowledge about cervical cancer, and lack of awareness of available screening methods have been identified as the most important factors hindering the use of available cervical cancer screening services (Nwankwo et al. 2011). In a selected population, it is the women healthcare workers who are expected to have the most adequate and

updated information regarding cervical cancer. However, studies have shown that this suggestion may not be true, since most of the women healthcare workers do not have adequate information regarding the risk factors of cervical cancer and, even if they have, they do not routinely visit gynecologists and have Pap smear. (Tarwireyi et al., 2003; Can et al., 2010; Coskun et al., 2013). Primary healthcare workers are the main drivers of the population-oriented health education programs. They have to be equipped with accurate and adequate information to be able to serve as trainer and consultant in the preventive healthcare services not only against cervical cancer but all cancer types (Coskun et al., 2013).

This study aims to determine the knowledge level of the female primary healthcare workers about cervical cancer, a commonly seen and preventable cancer, and its risk factors. It also aims to reveal their attitude and behaviors towards having gynecological examination and Pap smear, both of which have a vital importance for the prevention and early diagnosis of the cervical cancer.

### Materials and Methods

This descriptive, cross-sectional study was conducted

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in 327 female primary healthcare workers (physician, nurse, midwives, other assistant healthcare professionals) in the province of Batman and Diyarbakir, two Southern city of Turkey. We aimed to enlist all employees from the primary women’s health services located in Batman and Diyarbakir city centers. Of all these, approximately 60% (n=327) agreed to participate.

The study was approved by local health authority of Batman and Diyarbakir and also Ethics Committee of Tepecik Training and Research Hospital. 327 women healthcare workers who were or have been sexually active have participated in the study. The questionnaires prepared by the investigators were done in a personal interview. In the questionnaire, the first part included the questions about socio-demographic characteristics of the healthcare workers and the second part included the questions about their knowledge level about cervical cancer and its risk factors and their attitude and habitudes about gynecological examination and Pap smear test. We questioned the behaviors of the female primary healthcare workers in early diagnosis and screening. However, we did not question their reasons for not having early diagnostic methods, which consists one of the limitations of our study.

In the study, descriptive analyses used mean±standard deviation (minimum-maximum) and percentage (number), whereas intergroup comparisons were done using chi-square test. The p<0.05 was considered to be significant.

**Results**

The average age of the participants (midwife 43.7%, n=143; nurse 40.4%, n=132; doctor 6.4%, n=21; emergency medical technician and others, 9.5%, n=31; total, n=327) was 30.89±6.41 years. 64.2% (n=210) were working in Diyarbakir and 35.8% (n=117) in Batman. 56.9% of the participants (n=186) has bachelor degree, 41.0% (n=134) has high school degree, 2.1% (n=7) secondary school degree. 64.5% of the participants (n=211) were married, 33.7% (n=110) single and 1.8% (n=6) divorced. The average age of menarche was 13.60±1.38 years, and 1.2% of the participants (n=4) was in menopause, but none was on hormone replacement therapy. The average age of menopause was 49.67±2.51 years, and 86.7% (n=242) of those giving information regarding their menstruation periods reported regular menstruation. The average number of conceptions for 192 individuals having a gestation history was 2.22±1.31 and, 91.1% (n=175) had at least one delivery, 23.9% (n=46) has at least one miscarriage, 11.5% (n=22) has at least one abortion and 4.7% (n=9) haf at least one stillbirth. The answers given by the participants in response to the questions on pap smear testing is presented in Table 1.

25.9% (n=47) of 181 persons who claimed to know when one should start having pap smear tests answered correctly. 82.2% (n=226) of 275 persons who claimed to know which diseases pap smear testing is used to diagnose answered correctly. 70.6% (n=207) of 293 persons who claimed to know in which frequency one should have pap smear testing answered correctly. The distribution of answers based on location is given in Table 2.

92.2% (n=295) of the participants knew having more

**Table 1. The Answers Given by the Participants in Response to the Questions on Pap smear Testing**

Question		% (No.)
Are you having regular gynaecological examination?	Yes	23.5 (76)
	No	76.5(248)
What is the frequency of your gynaecological examinations	Every 6 months	5.5 (18)
	Annually	11.6 (38)
	Biennially	2.1 (7)
	Triennially	1.5 (5)
Have you ever heard of pap smear testing before?	Yes	75.9 (242)
	No	24.1 (77)
Have you ever had a pap smear test before?	Yes	33.0 (88)
	No	67.0 (179)
What is the number of pap smear tests you had?	1	17.6 (47)
	2	10.2 (27)
	3	2.6 (7)
	4 or more	2.6 (7)
Do you know when one should start having pap smear tests?	I know	59.5 (181)
	I don’t know	40.5 (123)

**Table 2. Distribution of Answers Based on Location**

	Location				p
	Batman		Diyarbakir		
	n	%*	n	%*	
Are you having regular gynaecological examination?					
Yes	34	29.1	42	20.3	0.074
No	83	70.9	165	79.7	
Have you ever heard of pap smear testing before?					
Yes	94	80.3	148	73.3	0.155
No	23	19.7	54	26.7	
Have you ever had a pap smear test before?					
Yes	34	29.1	54	36.0	0.231
No	83	70.9	96	64.0	
Do you know which diseases pap smear testing is used to diagnose?					
Right	95	89.6	131	77.5	0.011
Wrong	11	10.4	38	22.5	
Do you know when one should start having pap smear tests?					
Yes	68	58.1	113	60.4	0.690
No	49	41.9	74	39.6	
Is the answer given to the question regarding when to start having pap smear tests?					
Yes	30	44.1	17	17.3	<0.001
No	38	55.9	81	82.7	
Is the answer given to the question regarding how frequent one should have pap smear tests?					
Yes	84	75.0	123	68.0	0.198
No	28	25.0	58	32.0	

\*Column percentage

than one partner increases the cervical cancer risk. This was 96.5% for Batman, and 89.8% for Diyarbakir (p=0.030). 84.9% (n=270) of the participants knew that HPV that is transmitted during intercourse may cause cervical cancer, and there was no significant difference between cities (p=0.907). 65.1% (n=213) of the participants knew that the early sexual intercourse increases cervical cancer risk, the rate was 75.2% for Batman group and 67.4% for Diyarbakir group (p=0.027). 86.4% of the participants (n=279) (p=0.301) knew that smoking increases the cervical cancer risk and 78.8% (n=252) (p=0.373) knew one could protect herself from cervical cancer via injection and other measures.

## Discussion

Cervical cancer is the second most common cancer in women worldwide with nearly 500,000 new cases each year (Hoque and Hoque, 2009; Senol et al., 2012; Ersin and Bahar, 2013). Pap smear testing is an effective method for detecting, preventing and delaying the progress of cervical cancer (Bebis et al., 2012; Ersin and Bahar, 2013; Karadag et al., 2014). The female health care worker plays important roles as a health educator and a promoter. Therefore, unsatisfactory knowledge and low compliance with screening recommendations may lead to negative impact on community in undergoing a Pap smear (Nilaweera et al., 2012).

In this study, in accordance with other studies; we found that the rate of having pap smear test is higher among the healthcare personnel informed on pap smear testing, having regular gynaecological, and informed on cervical cancer, its risks, HPV and injection (Wellensiek et al., 2002; Coskun S et al., 2013). But when all participants are taken in view, we found that the rate of having pap smear test and having regular gynaecological examinations are low (33.0% and 23.5%, relatively), although knowledge levels of the participants are high. Many other studies found such low levels in terms of having regular gynaecological examinations and pap smear testing among healthcare workers (Nilaweera et al., 2012; Coskun et al., 2013; Karadag et al., 2014). Because primary healthcare personnel is the ones that meets patients first, they should be informed of pap smear testing and the risk factors of cervical cancer and taken to in-service trainings if necessary. Although we compared two cities located in the east of Turkey, similar results have been found for many other cities. It can be concluded that similar results have been obtained because these cities are in the same region and sharing the same culture.

Continuous training of primary care workers, extending the screening programs, regulating health policies and systems, informing people and changing their behaviors and attitudes may positively effect the public health. Because of their role in the preventive health services, We should determine the knowledge levels of healthcare personnel through epidemiologic studies and take actions.

As a result of the study, we think that the importance of the issue by organizing in-service trainings for female primary healthcare workers and the importance of having diagnostic tests should be re-highlighted. The studies are warranted to describe the psychological factors that cause them not having this test. It is hoped that the findings might be useful at policy making levels related to this important public health issue.

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