RESEARCH ARTICLE

Knowledge about Cervical Cancer Risk Factors and Pap Smear Testing Behavior among Female Primary Health Care Workers: A Study from South Turkey

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Abstract

Background: Cervical cancer is one of the ten most frequent cancers in Turkey. We here examined knowledge about cervical cancer in relation to Papanicolaou (Pap) testing among female primary health care workers in Hatay, a city is located in the south of Turkey. Materials and Methods: The study was completed on 261 women healthcare workers who were or had been sexually active and who accepted to participate to the study. The participants gave verbal informed consent and thereafter questionnaires prepared by the investigators were administered by personal interview. Results: Only 30.3% (n=79) of the participants regularly had a gynecologic examination. While 87.4% (n=228) of the participants reported that they had already heard about the Pap smear test, only 45.2% (n=118) had undergone this test. It was determined that had undergone an average of 1.66±0.89 times (1-4) within the last five years. Some 56.0% (n=117) of the participants were well informed about the Pap smear test (p<0,001) and 81.1% (n=63) of the participants who regularly had gynecological examinations (p<0,001) had this test. Conclusions: For the early diagnosis of the cervical cancer, regularly having a Pap smear test is crucial. Healthcare workers should also demonstrate sensitivity about this issue. We think that the importance of the issue should be re-highlighted by organizing in-service training for female primary healthcare workers. Studies are warranted to determine the psychosociological factors that cause individuals to not have the test.

Keywords: Cervical cancer - risk factors - Pap smear test - public health workers - Turkey

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Introduction

Cervical cancer is the ninth leading female cancer type, third leading gynecologic cancer following ovarian and endometrial cancers and thirteenth leading cause of cancer-related deaths, with an incidence of 4.2/100.000 based on 2006 data (Turkish Cervical Cancer and Cervical Cytology Research Group 2009; Eser et al., 2010). Most important cause of the cervical cancer is "Human Papilloma Virus" (HPV). Genotypes 16 and 18 of the virus most commonly account for the development of the cancer (Saslow et al., 2007).

Early diagnosis and treatment is crucial for decreasing the mortality rate in the cervical cancer. Cervical cancer has a long premalignant period that provides the opportunity for screen and treat before it turns to be invasive cervical cancer. Nowadays, there are so many methods to detect premalignant lesion such as conventional Pap smear (Oranratanaphan et al., 2010). The conventional Pap smear is a convenient, cost-effective, simple test. Performing this test is considered as a health promotion behavior (Keshavarz et al., 2011).

The Pap smear is the most effective cancer prevention test available (Geldenhuys et al., 2007). In the countries where it is performed, the morbidity and mortality rates of the cervical cancer showed a substantial decrease. Whether having Pap smear test varies by age, educational background, race, socioeconomic status and cultural properties of the women (Juon et al., 2003).

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.

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 and to reveal their attitude and behaviors about gynecological examination and Pap smear test with a vital importance for the prevention and early diagnosis of the cervical cancer, which are routinely recommended.

Materials and Methods

In this sectional study, reaching female primary

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healthcare workers (physician, nurse, obstetrician, other assistant healthcare professionals) in the province of Hatay, a Southern city of Turkey, was aimed.

The study was approved by local health authority of Hatay. During the period when the study was conducted, there were 398 family practice units where a total of 103 female Family Physician were working within the province of Hatay. Within these Family practice units, 352 nurses/obstetricians or other assistant healthcare workers (health officer, emergency medical technician etc.) were working. Of the targeted population that included a total of 455 female healthcare workers, 57.36% accepted to participate into the study. The study included 261 women who were or have been sexually active and who accepted to participate to the study among female healthcare workers. The participants gave verbal informed consent and thereafter, 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.

In our study, 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

Among 261 female primary healthcare workers who accepted to participated to the study, mean age was 33.79±7.01 years (21-53), mean duration of marriage was 9.43±6.09 years (1-25) and mean number of pregnancies was 2.41±1.19 (0-8). When the occupational distribution of the participant healthcare workers was examined, 12.6% (n=33) were physicians, 35.2% (n=92) were nurses, 43.3% (n=113) were obstetricians and 8.8% (n=23) were other assistant healthcare workers (health officer, emergency medical technician). It was found that 2.4% (n=6) of the participants went through the menopause and, of these, 0.8% (n=2) were still using hormone replacement therapy. When the regularity of the menstruation was questioned in non-menopausal participants, 89.4% (n=202) reported to have regular menstrual cycles. Mean menarche age of the participants was 13.15±1.27 years (10-17). Other sociodemographic characteristics of the participants are seen in Table 1.

It was found that only 30.3% (n=79) of the participants regularly had gynecologic examination. It was reported that, of the participants, 8.8% (n=23) had a gynecological examination once every six months, 11.9% (n=31) annually, 3.8% (n=10) every other year and 5.5% (n=15) more rarely. It was found that the participants who had gynecological examination had it for averagely 2.32±1.30 times (1-5) within the last five years. While 87.4% (n=228) of the participants reported that they had already heard about pap smear test, 45.2% (n=118) had underwent this test. It was determined that the participants who had pap smear test had it for averagely 1.66±0.89 times (1-4) within the last five years. It was reported that 56.0% (n=117) of the participants informed about Pap smear test ($p<0.001$) and 81.1% (n=63) of the participants who regularly had gynecological examinations ($p<0.001$) had this test.

Of the participants, 88.5% (n=231) gave the right answer to the question of "Which Disease's Diagnosis Do Pap Smears Test For?". Of the participants, 64.0% (n=167) answered as "I don't know" the question of "Do you know when you should being to have pap smear test?". However, when the answers of these people were examined, it was seen that only 29.9% (n=78) gave the right answer. It was found that the people who were informed about the risk

Table 1. Sociodemographic Characteristics of the Participants

Sociodemographic characteristics		n	%
Age groups	20-29	76	29.1
	30-39	124	47.3
	40-49	56	21.7
	≥50	5	1.9
Educational background	Primary school	2	0.8
	High school	61	23.1
	University	198	76.1
Marital status	Married	210	81.2
	Single	41	15.3
	Widow/Divorced	10	3.5
Smoking status	Smoker	57	21.7
	Non-smoker	204	78.3

Table 2. Pap Smear Test Status by the Knowledge of the Women about Pap Smear

Knowledge about the risk factors for cervical cancer*		Previously had Pap smear, n (%)	Did not previously have Pap smear, n (%)	p
More than one sexual partners increase the risk for cervical cancer	Knows	110 (52.7)	98 (47.3)	0.838
	Does not know	8 (50.0)	8 (50.0)	
HPV is the leading causal factor of the cervical cancer.	Knows	110 (54.7)	93 (45.3)	0.146
	Does not know	8 (38.1)	13 (61.9)	
Smoking increases the risk for cervical cancer.	Knows	105 (52.0)	96 (48.0)	0.681
	Does not know	13 (56.5)	10 (43.5)	
Smaller age of first sexual intercourse increased the risk for cervical cancer.	Knows	101 (53.5)	88 (46.5)	0.594
	Does not know	17 (48.6)	18 (51.4)	
Cervical cancer may be prevented using vaccine or other preventive methods.	Knows	111 (54.7)	93 (45.3)	0.093
	Does not know	7 (35.0)	13 (65.0)	

*Number and percentage of the people who answered the questions

factors for the cervical cancer more commonly had Pap smear test, but no statistical significance was found (Table 2).

Discussion

In the cancer, the early diagnosis aims to reduce the number of cancer-related deaths, to increase the likelihood of therapeutic success and to prolong the survival (Thompson et al., 2005; World Cancer Report 2008). In the cervical cancer, which is one of the most important health problems of the women, early diagnostic approaches yield quite successful results. Pap smear test is a reliable test used for the early diagnosis of the cervical cancer and it is crucial for the prevention of the deaths caused by cervical cancer (Fitch et al., 1998). Therefore, regularly having Pap smear test and gynecological examination is vital for cervical cancer. It is known that, female health workers, who are a model for the population at each step of their occupational life, do not have early diagnostic tests due to several reasons such as "omission", "finding unnecessary" and "lack of time". In this study, it was found that very small part of the female health workers working in the primary healthcare undergoes gynecological examination. In similar studies performed in our country, it is stated that female healthcare workers who are expected to be more aware in this issue very rarely undergo gynecological examination (Akyüz et al., 2006; Can et al., 2010).

In our country, increasingly declining age of first sexual intercourse, incrementally increasing incidence of the risk factors such as more than one sexual partners among the adolescents and increased risk for sexually transmitted disease in this age group in which the use of barrier methods are not preferred during the sexual intercourse render HPV vaccine that will provide primary protection against the cervical cancer more important (Aras et al., 2007; Turkish Cervical Cancer and Cervical Cytology Research Group, 2009). In our study, majority of the participants reported that they knew that it was possible to be protected from cervical cancer using vaccine and other protective methods and more than half of these people were found to have undergone Pap smear test.

It indicates that having knowledge about the issue plays an essential role in the protection. We believe that increasing level of knowledge and awareness will allow to more efficiently use the facilities of early diagnosis and treatment.

In our study, it was detected that very little part of the female healthcare workers who participated to our study had regular gynecologic examinations. While the majority of the participants were reported to have knowledge of cervical cancer and Pap smear test, more than half of these people did not have Pap smear test.

For the early diagnosis of the cervical cancer, regularly having Pap smear test is crucial. Healthcare worker should also demonstrate sensitivity about this issue. While majority of our participants reported to previously have heard about Pap smear test and to have information about this issue, the rate of having this test among the participants remained at 45.2%.

In the studies conducted on both female healthcare workers and the women who are not, it was determined that the knowledge about cervical cancer and Pap smear test were not sufficient (McFarland, 2003; Tarwireyi et al., 2003). As all our participants were healthcare workers, the fact that they had sufficiently informed about Pap smear test and cervical cancer was an expected finding. Although a similarly high level of behavioral dimension was expected, the rate of the participants who had Pap smear test was found to be low. We believe that this rate depended on both working conditions, embarrassment, the lack of attention to intimacy and the fact that healthcare workers considered this test as unnecessary. This finding confirms the following proverb: "the shoemaker's son always goes barefoot". However, we believe that it is warranted to lead to a behavioral change by increasing the awareness of the healthcare workers about the causes and the risk factors of the cancer in addition to early diagnosis and screening of the cervical cancer.

The awareness could be increased by ensuring the equipment for Pap smear test in the family practice centers, by increasing the number of certification programs about the issue and by giving in-service trainings. 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.

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