

Knowledge, Early Signs and Symptoms, Risk Factors and Prevention of Cervical Cancer among Teachers in the Urban Schools in Al-Ahsa, Kingdom of Saudi Arabia

Abdulaziz S Aldhafar¹, Abdulhmeed A Alhulaybi¹, Talha M Khan²

¹Medical Intern, King Faisal University, Al-Ahsa, Saudi Arabia, ²Department of Family and Community Medicine, King Faisal University, Al-Ahsa, Saudi Arabia

Abstract

Background: Cervical cancer is a major public health problem in the world. It is the most common gynecological cancer and the second leading cause of cancer death worldwide, also it is one of the most preventable cancers. Awareness and attitude toward cervical cancer are important factors that may prevent or make the disease more curable when a patient diagnosed to have cervical cancer; teachers are in a better position to educate young girls under their domain and the society at large, and can play an important role in increasing awareness among the general population.

Objective: To assess the awareness of cervical cancer among teachers in urban schools in Al-Ahsa.

Materials and Methods: A cross-sectional study was conducted at different schools in Al-Ahsa, Kingdom of Saudi Arabia (KSA) between July 2015 and October 2015. A standardized questionnaire was used to collect information on knowledge, early signs and symptoms, risk factors and prevention of cervical cancer.

Result: The responses of 290 women; 42 (14.5%) single, 232 (80%) married, 10 (3.4%) divorced, and 6 (2.1%) widowed. The mean age of the respondents was 36.4 years and all of the respondents are educated, Most of the women were not aware of the early warning signs, symptoms, and risk factors. On average, 63.7% of the teachers were not aware of the early signs and symptoms 58.2% of the women do not have knowledge about the risk factors of cervical cancers. 66.2% of the teachers not aware of the availability of screening program KSA. Most of the women (90%) were not aware of the availability of a vaccine against human papillomavirus.

Conclusion: The majority of teachers have inadequate knowledge about early warning signs and symptoms, risk factors and prevention of cervical cancer.

Key words: Awareness, Cervical cancer, Human papillomavirus vaccine, Kingdom of Saudi Arabia, Teachers

INTRODUCTION

Cervical cancer is a major public health problem in the world.^{1,2} It is the most common gynecological cancer and the second leading cause of cancer death worldwide, at the same time it is one of the most preventable cancers.^{3,4} The World

Health Organization (WHO) estimated that the contribution of cervical cancer to adult female death is 35%.⁵⁻⁷

In the kingdom of Saudi Arabia (KSA), there are about 6.51 million women at risk of developing cervical cancer. In KSA, cervical cancer accounts 33.5% of all genital cancers.⁸ According to the WHO, there are 152 women who are diagnosed with cervical cancer yearly, and 55 of them die from the disease. It is also the eighth most common cancer in women between 15 and 55 years of age in KSA.

Since human papillomavirus (HPV) is the main cause of cervical cancer and pre-cancer,⁹ avoiding exposure to HPV could help to prevent the disease, HPV - infected women

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Corresponding Author: Dr. Abdulaziz S Aldhafar, King Faisal University, Al-Ahsa, Alhufuf, Saudi Arabia. Phone: +00699506932503.
E-mail: azizdhafar@gmail.com

under 30 years of age. There are sexual behaviors increase the risk to get infected by HPV such as having sex at an early age and having many sex partners.

One of the preventive methods is Pap smear screening, which identifies cytological abnormalities of the cervical transformation zone and it has helped reducing cervical cancer incidence and mortality rates by 70% in developed countries.¹³ Alternative screening methods that might be effective in the settings with low resources are using either visual inspection with acetic acid or visual inspection with lugol's iodine.¹⁴

Another prevention method is vaccines that can protect against certain HPV infections.¹⁰ These vaccines prevent infection with HPV subtypes 16 and 18.¹¹ The vaccines also prevent infections with other HPV subtypes including some types that cause anal and genital warts. Vaccines did not treat patients who already got the infection. Therefore, the HPV vaccines must be given before the person becomes exposed to HPV such as through sexual activity.¹²

The other known risk factors for cervical cancer are a long use of oral contraceptives, immunosuppressants, and smoking.¹⁶

Most of the patient in KSA presents at an advanced stage of cervical cancer which makes the treatment difficult and increases the mortality. Therefore knowing, the warning signs and symptoms of cervical cancer will make early detection and will make the disease more curable.¹⁵

Awareness and attitude toward cervical cancer are important factors that may prevent or make the disease more curable when a patient diagnosed to have cervical cancer.

Teachers are in a better position to educate young girls under their domain and the society at large, they are also a part of entry to the adolescence and their student are an important target population. Therefore, it is important to assess teacher's knowledge to develop education and awareness policy to increase their knowledge and then can be disseminated into the society and to the new generation to reduce the morbidity and mortality of cervical cancer.

The aim of this study is to determine teacher's knowledge regarding early signs and symptoms, risk factors and preventive methods of cervical cancer.

MATERIALS AND METHODS

Study Design

A cross-sectional study was conducted at different schools in Al-Ahsa, KSA between July 2015 and October 2015.

Target Population

Female teachers from the age of 25 to 55 years in different schools in Al-Ahsa were targeted to assess their knowledge and ability to educate and pass the knowledge to their student as well as teachers are a part of entry to the adolescence.

Data Collection

A standardized questionnaire was used to collect information on knowledge, awareness, and attitudes of women about the risk of cervical cancer and its prevention.

The questionnaire consisted of four sections: (i) Socio-demographic data, (ii) early signs and symptoms of cervical cancer, (iii) risk factors of cervical cancer, and (iv) prevention of cervical cancer. All the questions were tested before the survey, and an oral consent has taken from the participants. The level of knowledge was assessed on 25 questions guided from Cervical Cancer Awareness Measure Toolkit Version 2.1. A sample technique used is simple random sampling.

Data Analysis

Data entry was performed using SPSS Version 19 software.

RESULT

The participants in this study were 290 female teachers working in female primary, intermediate and high schools in Al-Ahsa city which is located in the eastern region in Saudi-Arabia.

Demographic Data

The total of 290 teachers participated in the study of which 42 (14.5%) were single, 232 (80%) were married, 10 (3.4%) were divorced, and 6 (2.1%) were widowed. The mean age was 36.4 years. Out of the total participants, 10.3% have high school degree, 89.7% have bachelor degree or higher (Table 1).

Knowledge about the Early Sign and Symptoms of Cervical Cancer

Nearly 50.6% of respondents aware that vaginal bleeding between periods is a sign of cervical cancer while 16.8% said is not a sign of cervical cancer and 32.4% said do not know.

As for lower back pain, painful sexual intercourse and polymenorrhagia, it was 28.2% yes, 38.4% no and 33.4% do not know; 25.8% yes, 30.6% no and 43.6% do not know; 42.4% yes, 19.4% no and 38.2% do not know, respectively. Positive response for persistent unpleasant vaginal smell were 30.3%. For postmenopausal bleeding, it was 55.1%. 21.1% of the teachers responded that

Table 1: Demographic characteristics

Characteristics	(%)
Age (years)	
20-30	29
31-41	44.1
41-50	23.8
51-60	3.1
Education level	
High school	10.3
College or higher	89.7
Marital status	
Single	14.5
Married	80
Divorced	3.4
Widowed	2.1

bleeding during or after intercourse could be a symptom of cervical cancer. 58.6% of the teachers responded that this cervical cancer could affect the fertility while 13.1% said cervical cancer so not affect the fertility and 28.2% do not know, positive response for blood in the stool or urine were 16.5%.

As for the symptoms like persistent pelvic pain, unexplained weight loss and persistent diarrhea, it was 30% yes, 26.8% no and 43.2% do not know; 32.4% yes, 24.2% no and 43.4% do not know; 8.2% yes, 42.4% no and 49.4% do not know, respectively (Table 2).

Knowledge about the Risk Factors of Cervical Cancer

Only 38.3% of the teachers responded positively that infection with HPV is a risk factor of cervical. For smoking, it was 60.3%. As for immunodeficiency, it was 65.2% positive, 60.3% agree that long-term use of the contraceptive pill is a risk factor of cervical cancer. A positive response to chlamydia infection as a risk of cervical cancer was 19.7%, 73.1% of the respondents not sure and 7.2% disagree. For Early marriage and having many children, it was 12% agree, 32.1% not sure and 55.9 disagree, 12% agree, 32.1% not sure and 55.9% disagree, respectively. 54.1% of the teachers positively responded that genetic has a rule in cervical cancer. 74.1% of the teachers agree that not going for regular Pap smear test might increase the chance to get cervical cancer (Table 3).

Knowledge about Screening Program for Cervical Cancer

About 33.8% of the respondents aware of the availability of cervical cancer screening program in Saudi Arabia, 33.1% do not know and 33.1% were not aware of the availability of the screening program.

Knowledge about Vaccine against Cervical Cancer

Only 10% of the respondents were aware of the availability of a vaccine against cervical cancer.

Table 2: Response of the teachers regarding cervical cancer early signs and symptoms

Variables	Yes (%)	No (%)	Do not know (%)
Vaginal bleeding between periods	50.6	16.8	32.6
Lower back pain	28.4	38.2	33.4
Pain during intercourse	25.8	30.6	43.6
Polymenorrhagia	42.4	19.6	38.2
Persistent unpleasant vaginal smell	30.4	25.9	43.7
Post-menopausal bleeding	55.2	12.4	32.4
Persistent pelvic pain	30	26.8	43.2
Vaginal bleeding during or after sex	21.8	26.8	51.4
Fertility affect	58.6	13.2	28.2
Blood in the stool or urine	16.7	34.4	48.9
Unexplained weight loss	32.4	24.2	43.4
Persistent diarrhea	8.2	42.5	49.3

Table 3: Response of the teachers regarding risk factors of cervical cancer

Variables	Agree (%)	Disagree (%)	Not sure (%)
Human papillomavirus (HPV) infection	20.7	5.5	73.8
Smoking	59	17.9	23.1
Immunodeficiency	65.2	7.9	26.9
Long term use of the contraceptive pill	60.3	10.3	29.4
Chlamydia infection	19.7	7.2	73.1
Early marriage (below 17)	12	55.9	32.1
Having many children	12	55.9	32.1
Genetic/hereditary	54.2	22.4	23.4
Regular Pap smear tests	74.2	13.7	12.1

HPV: Human papillomavirus

DISCUSSION

Cervical cancer is one of the most common female genital cancers in Saudi Arabia and the second leading cause of cancer death worldwide, at the same time it is one of the most preventable cancers.^{1,2,4} This study was conducted among teachers in Al-Ahsa to determine their knowledge regarding cervical cancer. Most of the participate have inadequate knowledge about early signs and symptoms, risk factors and prevention of cervical cancer, on average 63.7% of the teachers were not aware of the early signs and symptoms 58.2% of the teachers do not have knowledge about the risk factors of cervical cancers. 66.2% of the teachers not aware of the availability of screening program in KSA. Most of the women 90% were not aware of the availability of a vaccine against cervical cancer, the study results revealed that Knowledge of cervical cancer symptoms, risk factors and screening program in KSA was greater among women aged 51-60 years and those who are married. More interestingly, we found that the teachers who graduated with high school degree had better knowledge about the early symptoms of cervical cancer and the screening program in KSA. In a descriptive cross-sectional study, Ssenyonjo (2013) reported that 57.3% of the respondents know about cervical cancer

risk factors and 46.8% know about the signs and symptoms.¹⁷ A study conducted by Ebu *et al.* in Elmina southern Ghana revealed that 31.6% of the respondents have heard about cervical cancer and only 2.3% have heard of the Pap smear test.¹⁸ However, Ombech *et al.* also reported a high level of awareness of cervical cancer in Nairobi Kenya where 87% of the female primary school teachers interviewed were aware of cervical cancer while 75% knew about the Pap smear test.¹⁹ There is a strong need to improve teachers' knowledge about cervical cancer symptoms, risk factors, screening program and vaccination. Teachers do not know enough about the main cervical cancer risk factors, particularly about the impact of early marriage (below 17) and having many children. Teachers are professional people and society take them as an elite group, and they are the port of entry to the adolescent group, they are in a better position to educate young girls under their domain and the society at large.

CONCLUSION

Therefore, it is important to increase their knowledge and then can be disseminated into the society and to the new generation to reduce the morbidity and mortality of cervical cancer.

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