

Knowledge about Cervical Cancer among Women in Saudi Arabia

Samaher Sahal Malibari

College of Medicine, Umm Al-Qura University

ABSTRACT

Aim of the work: cervical cancer is considered as a major wellbeing danger towards women. Many studies have shown that even with the high prevalence of cervical cancer the awareness of cervical cancer, cervical screening and human papilloma virus (HPV) is very low. This study aimed to evaluate the level of awareness of cervical cancer, Pap smear test and HPV among women in Saudi Arabia. **Methodology:** this descriptive cross-sectional study was conducted among women in Saudi Arabia during the period from October 2017 to January 2018. A total of 412 participants were included in this study. Data were collected by using pre coded structured questionnaire. The data were analyzed by using the SPSS. P value less than 0.05 was considered significant. **Results:** the overall knowledge level of cervical cancer was good (78.6%), but it was low regarding the HPV (16.4%) and Pap smear screening test (35.9%). **Conclusion:** this study concluded that the level of knowledge about cervical cancer was generally good among women in Saudi Arabia, but there was low knowledge regarding Pap smear test and HPV as a main cause of cervical cancer and as sexual transmitted disease. There was a need for health education to increase the awareness of cervical cancer among women in Saudi Arabia.

Keywords: cervical cancer, knowledge, Pap smear, human papilloma virus (HPV).

INTRODUCTION

Cervical cancer remains to be a major wellbeing danger towards women. In 2010 cervical cancer was the fifth most fatal cancer in women ⁽¹⁾. It was documented worldwide as the fourth most common cancer in women by the year 2012, with about 528,000 new cases and 266,000 died of cervical cancer ⁽²⁾. It considered one of the important causes of gynecological cancer associated mortality and morbidity in the developing countries ^(3,4). Fortunately, cervical cancer is considered as one of the rare preventable malignant tumors. The prevention of the cervical cancer is done by screening tests and early detection of precancerous lesions ^(5,6). The incidence of cervical cancer declined in the developed countries because the awareness of the cervical cancer and the screening tests ^(7,8).

Many studies have shown that even with the high prevalence of cervical cancer the awareness of cervical cancer, cervical screening and human papillomavirus (HPV) is very low ^(9,10). This highlights the need of increased awareness of the cervical cancer among women ⁽¹¹⁾.

The cervical cancer screening test is called Papanicolaou (Pap) smear. The Pap smear test is considered proficient, inexpensive and an effective technique in discovering cytological changes in the cervix. The Pap smear shows an important role in screening programs and has an obvious role in reducing both the incidence and mortality of cervical cancers ⁽¹²⁾. The aim of routine screening is to discover early cytological abnormalities for example dysplasia and early

treatment of the discovered patient before development if the disease ^(13,14).

Human papilloma virus (HPV) is a sexually transmitted infection that considered the most important cause of cervical cancer ⁽¹⁵⁾. Worldwide, it has been estimated that 75% of sexually active adults during their life had HPV infection ⁽¹⁶⁾. Many sexual partners, sexually transmitted infections (STIs), early sexual activity and smoking is considered risk factors for cervical cancer. To reduce the risk of cervical cancer, women must do routine Pap tests, being vaccinated against HPV, stop smoking and practice safe sex ^(15,17).

The USPSTF (U.S preventive services task force) recommends screening for cervical cancer in women from age 21 years up to 65 years with cytology (Papanicolaou smear) every 3 years or, for women aged 30 years to 65 years screening with a combination of cytology and HPV testing every 5 years ⁽¹⁸⁾. This study aimed to evaluate the level of awareness of cervical cancer, Pap smear test and HPV among women in Saudi Arabia.

METHODOLOGY

This descriptive cross-sectional study was conducted among women in Saudi Arabia during the period from October 2017 to January 2018. A total of 412 participants were included in this study. Data were collected by using pre coded structured questionnaire, to collect required data about socio demographic characteristics of the respondents, their knowledge about cervical cancer screening tests and their predisposing risk factors. The data were analyzed by using the SPSS (Statistical Package for the Social Sciences)

program. P value less than 0.05 was considered significant. The chi-square test was used to test the association between each of the categorical variables.

RESULTS

The number of the study respondents were 412 women. The respondents were categorized into four age groups. The majority of the respondents were in the age groups of 31 – 40 and 41 – 50 years accounting for 34.2% and 33.3%, respectively. Regarding the nationality of the respondents, 381 were Saudi and the rest of 31 were non Saudi. Out of the 412 respondents, 342 were married, 58 were single, 23 were divorced 7 were widowed. Regarding the education level of the respondents, 269 were university students, 71 had pots graduation degree, 61 were in the high secondary school, 6 were in the intermediate school and the rest of 5 were in the primary school, as shown in **table 1**.

Frequency of distribution of the respondents according to their type of work reviled that out of 412 respondents 356 were house wife, 6 were university students and 22 were university students but not in the medical filed, 10 were Employee in the medical field, 5 were employee but not in the medical field, 6 were doctors and 7 were nurses (**Figure 1**).

Investigations about awareness of the cervical cancer revealed that, out of the 412 respondents who were included in the study 324 were aware of cervical cancer, while the rest of 88 were not aware of cervical cancer. Of those who were aware of cervical cancer only 16 had family history of cervical cancer and the rest of 308 had no family history. Out of the 324 who were aware of cervical cancer, 245 got the knowledge from the Social media, 35 got the information from people they know, 16 from medical education, 15 from doctors and 13 from friends, as shown in **table 2**.

Table 1: demographic characteristics of the respondents (n = 412)

Variables	Frequency	Percent (%)
Age groups		
18 - 30	69	16.7
31 - 40	141	34.2
41 – 50	137	33.3
51 or more	65	15.8
Nationality		
Saudi	381	92.5
Non-Saudi	31	7.5
Marital status		
Single	58	14.1
Married	342	78.7
Divorced	23	5.6
Widow	7	1.7
Education level		
Primary school	5	1.2
Intermediate school	6	1.5
Secondary school	61	14.8
University	269	65.3
post grads studies	71	17.2

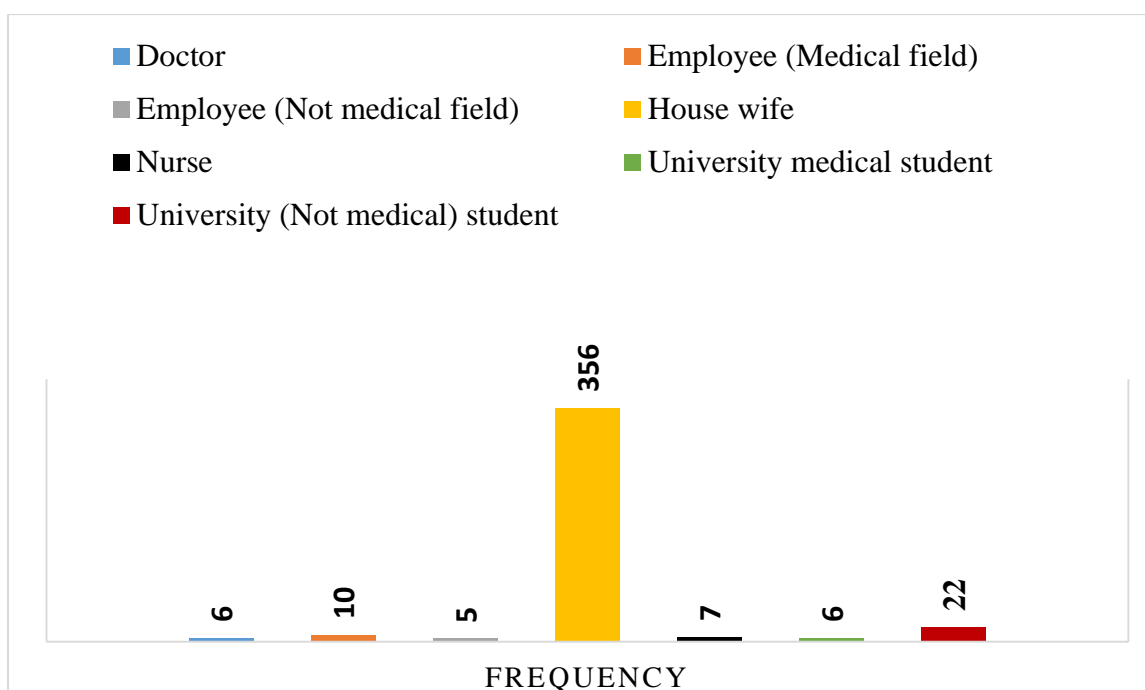


Figure 1: frequency distribution of the respondents according to their type of work, (n = 412).

Investigations regarding participant’s opinion about cervical cancer revealed that out of 324 respondents who were aware of cervical cancer, 82 thought that it was a hereditary disease, while 242 didn’t think so (**Table 2**).

Regarding knowledge of the respondents who were aware of cervical cancer about human papilloma virus (HPV), out of 324 only 53 were found to be aware of the HPV and 271 have no idea about the virus, as shown in **table 3**. Out of

53 who were aware of HPV, 36 knew that HPV is sexually transmitted, while 17 didn’t know. Of those 53 only 32 knew the fact that HPV is sexually transmitted and 21 didn’t know, as shown in **table 3**.

Surprisingly, out of 342 respondents who were aware of cervical cancer only 34 were aware of HPV vaccine, while the rest of 290 didn’t knew the HPV vaccine (**Table 3**).

Table 2: frequency distribution of the respondents according to their knowledge about cervical cancer

Variables	Frequency	Percent (%)
Knowledge about cervical cancer (n= 412)		
Know	324	78.6
Don’t know	88	21.4
Source of information about cervical cancer (n = 324):		
Doctor	15	4.6
Medical education	16	4.9
Friends	13	4.1
Social media	245	75.6
People you know	35	10.8
Family history of cervical cancer (n = 324)		
Family history	16	4.9
No family history	308	95.1
Participants opinion about cervical cancer (n = 324)		
Hereditary	82	25.3
Not-hereditary	242	74.7

Investigation regarding the desire of being vaccinated against HPV revealed that, out of 27 respondents 26 wanted to have the vaccine and only one didn't want to be vaccinated (**Table 3**). Out of the 34 who were aware of the HPV vaccine, 27 thought its effective in prevention of cervical cancer and only 7 did not think so, as shown in **table 3**.

Table 3: frequency of distribution of the respondents according to their knowledge about HPV and HPV vaccine

Variables	Frequency	Percent (%)
Knowledge about HPV (n = 324):		
Know	53	16.4
Don't know	271	83.6
Do you know HPV is sexually transmitted (n = 53)		
Yes	36	67.9
No	17	32.1
Do u know the most common cause of cervical cancer is HPV (n = 53)		
Yes	32	60.4
No	21	39.6
Have you ever heard about HPV vaccine (n = 324)		
Yes	34	10.5
No	290	89.5
Do you want to have HPV vaccine (n = 27)		
Yes	26	96.3
No	1	3.7
Do you think HPV vaccine effective in prevention of cervical cancer (n = 34)		
Yes	27	79.4
No	7	20.6

The frequency distribution of cervical cancer risk factors revealed that multiple partners is the most common risk factor as 307 of the respondents mentioned, followed by sexual transmitted infections (STIs), personal hygiene, long term use of oral contraceptive pills, multiple, partners, smoking and high parity.

Out of the 324 respondents who documented their knowledge about cervical cancer 262 reported their awareness of Pap smear

test. Surprisingly, out of the 262 who were aware of the Pap test only 94 performed the test, while the rest of 168 didn't perform the cervical cancer screening test. 112 didn't perform the screening test because it was not recommended by the doctor, 30 of them lack of knowledge. Feeling of embarrassment and shyness was the reason in 24 of the respondents and 2 of them think the test is not effective, as shown in **table 4**.

Table 4: awareness of the respondents about Pap smear test

Variables	Frequency	Percent (%)
Have you ever heard about pap test (n = 324)		
Yes	262	80.9
No	62	19.1
Have you ever did Pap test (n = 262)		
Yes	94	35.9
No	168	64.1
Why you didn't perform cervical cancer screening (n = 168)		
Feeling of embarrassment and shyness	24	14.3
Lack of Knowledge	30	17.9
recommended by the doctor	112	66.7
It's not effective	2	1.1

Cross tabulation between demographic characteristics of the respondents and knowledge about cervical cancer revealed significant association between marital status and type of work, p. value = 0.023 and 0.047 respectively, but

there was no significant association with the education level (p value = 0.274) (Table 5). There was a significant association between marital status and knowledge about pap smear test (p value = 0.00), as shown in figure 2.

Table 5: cross tabulation between demographic characteristics of the respondents and knowledge about cervical cancer (n = 412)

Variables	Knowledge about cervical cancer		P value
	Know	Don't know	
Education level:			
Primary school	1	4	0.274
Intermediate school	3	3	
Secondary school	44	17	
University	215	54	
post grads studies	13	58	
Marital status:			
Single	44	14	0.023
Married	69	255	
Divorced	22	1	
Widow	3	4	
Type of work:			
Doctor	6	0	0.047
Employee (Medical field)	10	0	
Employee (Not medical field)	4	1	
House wife	280	76	
Nurse	3	4	
University medical student	15	7	
University (Not medical) student	6	0	

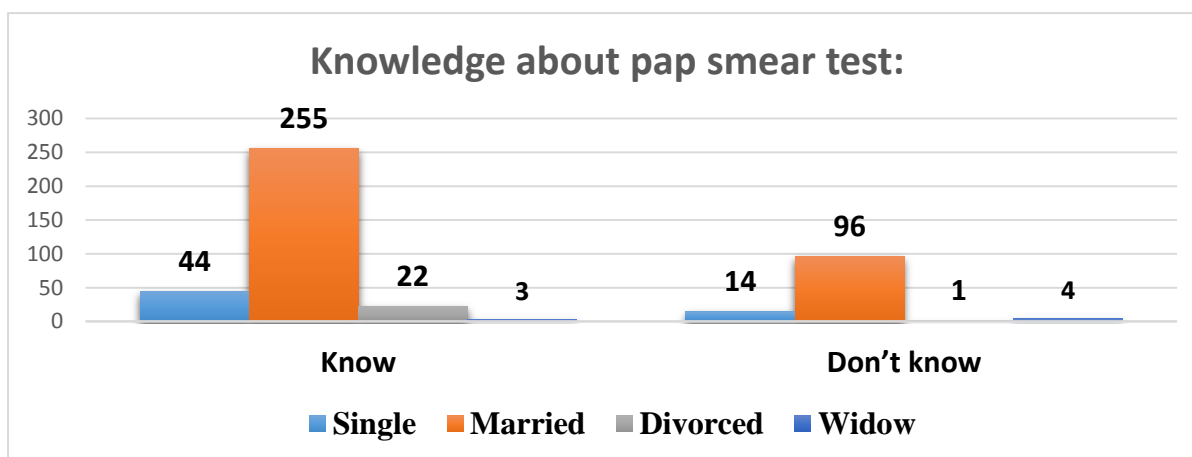


Figure 2: cross tabulation between marital status and knowledge about Pap test, (n = 412).

DISCUSSION

Results of this study revealed that there was a good awareness of cervical cancer and its risk factors among the surveyed women (78.6%). Out of those who reported their knowledge about cervical cancer 80.9% knew the Pap smear test and only 35.9% of them did the screening test.

Al-Darwish *et al.* mentioned in their study about knowledge about cervical cancer early warning signs and symptoms, risk factors and vaccination among students at a medical school in Al-Ahsa, Kingdom of Saudi Arabia that; there was absence of awareness regarding risk factors, early signs and symptoms and prevention of cervical cancer ⁽¹⁹⁾.

This study showed that most women got the knowledge from the social media (75.6%) and only few numbers acquire their information from the doctors (4.6%). In spite of high level of awareness about cervical cancer, it was found that there was low level of knowledge regarding HPV (16.4%) and 89.5% didn't get vaccinated against HPV

A study in Saudi Arabia, about knowledge of Saudi female university students regarding cervical cancer and acceptance of the human papilloma virus vaccine was done by **Al-Shaikh *et al.***; they concluded that there was a deficiency of knowledge and awareness concerning cervical cancer, HPV as a main risk factor for cancer of the cervix and the cervical cancer screening test (Pap smear) ⁽²⁰⁾.

Another study about awareness and knowledge of cervical cancer, Pap smear screening and human papillomavirus infection in Gabonese women was done by **Samira *et al.*** they concluded that there was very low level of knowledge about Pap smear test, cervical cancer and HPV in Gabonese women. They also mentioned that there was an important need for Gabonese women to be educated about cervical cancer and the Pap smear test to increase the use of this screening test ⁽⁷⁾.

In this study, out of the surveyed women who reported their knowledge about HPV, 67.9% were found to be aware about the fact that HPV is transmitted sexually, 60.4% knew it as a major cause of the cervical cancer. Out of 27 women, 26, 96.3% accepted the vaccine and wanted her daughters to be vaccinated too.

These results found to be inconsistent with a study done in Morocco about cervical cancer and HPV. Awareness and vaccine acceptability

among parents, in which they concluded that HPV and vaccine acceptability was low among mothers (32%) and fathers (45%) ⁽²¹⁾.

Results of this study revealed that high awareness level was found to be among married women and those who study or work in the medical field, p. value = 0.023 and 0.047, respectively. These findings highlight the need of education programs to increase the knowledge of cervical cancer screening tests and HPV vaccine among women in Saudi Arabia.

In Kuwait, a study about knowledge, attitudes and practice related to cervical cancer screening among Kuwaiti women by **Muna *et al.*** concluded that a well-made health teaching program on cervical cancer and importance of screening would raise the Knowledge among women ⁽³⁾.

Another study was done in Nigeria about impact of health education intervention on knowledge and perception of cervical cancer and cervical screening uptake among adult women in rural communities by **Abiodun *et al.*** concluded that multiple media health education based on a movie was effective in creating awareness for and improving the knowledge and perception of adult women about cervical cancer and screening. It also improved the uptake of cervical cancer screening. The creation of awareness was very crucial to the success of a cervical cancer prevention program ⁽²²⁾.

CONCLUSION

This study concluded that the level of knowledge about cervical cancer is generally good among women in Saudi Arabia, but there is low knowledge regarding Pap smear test and HPV as a main cause of cervical cancer and as sexual transmitted disease. The degree of acceptance of HPV vaccine is good. This highlight the need of health education program to increase the cervical cancer awareness and education about the benefits of the Pap smear and HPV vaccination among women in Saudi Arabia.

REFERENCES

- Chang SC, Woo JS, Gorzalka BB and Brotto LA (2010):** A questionnaire study of cervical cancer screening beliefs and practices of Chinese and Caucasian mother-daughter pairs living in Canada. *J. Obstet. Gynaecol. Can.*, 32(3):254-262.
- Petrick J, Wyss A, Butler A, Cummings C, Sun X, Poole C *et al.* (2014):** Prevalence of human papillomavirus among oesophageal squamous cell carcinoma cases: systematic review and meta-analysis. *Br. J. Cancer*, 110(9):2369-2377.
- Al Sairafi M and Mohamed FA (2009):** Knowledge, attitudes, and practice related to cervical

- cancer screening among Kuwaiti women. *Med. Princ. Pract.*, 18(1):35-42.
4. **Louie KS, De Sanjose S and Mayaud P (2009):** Epidemiology and prevention of human papillomavirus and cervical cancer in sub Saharan Africa: a comprehensive review. *Trop. Med. Int. Health*, 14(10):1287-1302.
 5. **Parkin DM, Bray F, Ferlay J and Pisani P (2005):** Global cancer statistics, *J. Clin.*, 55(2):74-92.
 6. **Monsonégo J (2006):** Prévention du cancer du col utérin: enjeux et perspectives de la vaccination antipapillomavirus. *Gynecol.Obstet. Ferti.*, 34(3):189-201.
 7. **Assoumou SZ, Mabika BM, Mbiguino AN, Mouallif M, Khattabi A, and Ennaji MM (2015):** Awareness and knowledge regarding of cervical cancer, Pap smear screening and human papillomavirus infection in Gabonese women. *BMC Women's Health*, 15(1):37-41.
 8. **Giles M and Garland S (2006):** A study of women's knowledge regarding human papillomavirus infection, cervical cancer and human papillomavirus vaccines. *Aust. J. Obstet. Gynaecol.*, 46(4):311-316.
 9. **Getahun F, Mazengia F, Abuhay M and Birhanu Z (2013):** Comprehensive knowledge about cervical cancer is low among women in Northwest Ethiopia. *BMC Cancer*, 13(1):2-12.
 10. **Francis SA, Nelson J, Liverpool J, Soogun S, Mofammere N and Thorpe RJ (2010):** Examining attitudes and knowledge about HPV and cervical cancer risk among female clinic attendees in Johannesburg, South Africa. *Vaccine*, 28(50):8026-8032.
 11. **Kietpeerakool C, Phianmongkhol Y, Jitvacharanun K, Siriratwatakul U and Srisomboon J (2009):** Knowledge, awareness, and attitudes of female sex workers toward HPV infection, cervical cancer, and cervical smears in Thailand. *Int.J. Gynaecol. Obstet.*, 107(3):216-225.
 12. **Brink A, Zielinski G, Steenbergen R, Snijders P and Meijer C (2005):** Clinical relevance of human papillomavirus testing in cytopathology. *Cytopathology*, 16(1):7-12.
 13. **Gustafsson L, Pontén J, Zack M and Adami H-O (1997):** International incidence rates of invasive cervical cancer after introduction of cytological screening. *Cancer Causes Control*, 8(5):755-763.
 14. **Janerich DT, Hadjimichael O, Schwartz PE, Lowell DM, Meigs JW, Merino MJ et al. (1995):** The screening histories of women with invasive cervical cancer, Connecticut. *Am.J.Public Health*, 85(6):791-796.
 15. **Parkin DM, Bray F and Devesa S (2001):** Cancer burden in the year 2000. The global picture. *Eur. J. Cancer*, 37(2):54-66.
 16. **Koutsky L (1997):** Epidemiology of genital human papillomavirus infection. *Am. J. Med.*, 102(5):3-8.
 17. **Matsuo K, Mabuchi S, Okazawa M, Kawano M, Kuroda H, Kamiura S et al. (2015):** Clinical implication of surgically treated early-stage cervical cancer with multiple high-risk factors. *Gynecol. Oncol.*, 26(1):3-11.
 18. **Moyer VA (2012):** Screening for cervical cancer: US Preventive Services Task Force recommendation statement. *Ann. Intern. Med.*, 156(12):880-889.
 19. **Mulhim, NKA-O, Mohammed and Saad Morsi AM (2014):** Knowledge about cervical cancer early warning signs and symptoms, risk factors and vaccination among students at a medical school in Al-Ahsa, Kingdom of Saudi Arabia. *Asian Pac.J.Cancer Prev.*, 15(6):2529-2532.
 20. **Al-Shaikh GK, Almussaed EM, Fayed AA, Khan FH, Syed SB, Al-Tamimi TN et al. (2014):** Knowledge of Saudi female university students regarding cervical cancer and acceptance of the human papilloma virus vaccine. *Saudi Med. J.*, 35(10):1223-1229.
 21. **Mouallif M, Bowyer HL, Festali S, Albert A, Filali-Zegzouti Y, Guenin S et al. (2014):** Cervical cancer and HPV: awareness and vaccine acceptability among parents in Morocco. *Vaccine*, 32(3):409-416.
 22. **Abiodun OA, Olu-Abiodun OO, Sotunsa JO and Oluwole FA (2014):** Impact of health education intervention on knowledge and perception of cervical cancer and cervical screening uptake among adult women in rural communities in Nigeria. *BMC Public Health*, 14(1):814-825.