



RESEARCH ARTICLE

KNOWLEDGE AND ATTITUDE OF CERVICAL CANCER SCREENING AMONG WOMEN IN HAIL-KINGDOM OF SAUDI ARABIA

*¹Duaa N.Almansour, ¹Asma M. Alshamri, ¹Shadiyah N. Alrashidi, ¹Anfal H. Alhobera and ²Rania A. Abdalla

¹College of Medicine, Hail University, Hail, KSA

²Department of Obstetrics and Gynaecology, College of Medicine, Hail University, Hail, KSA

ARTICLE INFO

Article History:

Received 20th February, 2018
Received in revised form
06th March, 2018
Accepted 30th April, 2018
Published online 23rd May, 2018

Key words:

Knowledge, Awareness,
Cervical cancer,
Cervical cancer screening.

ABSTRACT

Background: Cervical cancer is the commonest cancer that causes death among women in developing countries. Human papillomavirus (HPV) infection is responsible for more than 90% of the cases of invasive cervical cancer worldwide. The incidence and mortality rates of cervical cancer have a significant drop by roughly 70-80% in developed countries as a result of intensive cervical screening programs.

Objectives: To assess the knowledge and attitude to cervical cancer screens (Pap smear) and Human papillomavirus (HPV) vaccine among women living in Hail City-Saudi Arabia.

Methods: This cross-sectional study involved the distribution of 501 questionnaires randomly among women 20 years and above throughout the general population of Hail, Saudi Arabia from October 2017 to January 2018. Data entry and analyzed using the Statistical Package for Social Sciences (SPSS).

Results: The knowledge of all respondents about cervical cancer screening (Pap smear) as a screening test for cervical cancer was low, only 167 women (33.3%) know about cervical cancer screening. Among those 40.1% (n=67) known about Pap smear from the internet and TV. Whereas about 430(85.8%) don't know if HPV is related to causing cervical cancer or not. The number of women did cervical screening only 90 (18%). The main reason for not having a Pap smear was the lack of awareness.

Conclusion: The knowledge about cervical cancer screening and HPV vaccine is low; there is a need for education programs to improve awareness of cervical cancer screening in this population.

Copyright © 2018, Duaa N.Almansour et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Duaa N. Almansour, Asma M. Alshamri, Shadiyah N. Alrashidi, Anfal H. Alhobera and Rania A. Abdalla. 2018. "Knowledge and attitude of cervical cancer screening among women in hail- kingdom of Saudi Arabia", *International Journal of Current Research*, 10, (05), 69149-69153.

INTRODUCTION

Cervical cancer is ranked the fourth most frequent cancer in female (Melan, 2017). Almost 12% of all female cancers (Acharya Pandey, 2017). Approximately 90% of deaths from cervical cancer in 2015 occurred in low- and middle-income countries (Sait, 2009). Regarding the Kingdom of Saudi Arabia, one study conducted in 2009 shows that it occurs in 4.1/100,000 females in the population and it accounts for 7% of all newly diagnosed cancers in females, and is the eighth leading cause of cancer death in Saudi females that (Sait, 2009). Current estimates indicate that every year 241 woman is diagnosed with cervical cancer and 84 dies from the disease (Alzahrani, 2018).

In developed countries, there is a significant drop by roughly 70-80% in the incidence and mortality rates of cervical cancer as a result of intensive cervical screening programs (Kitchener, 1999). Papanicolaou's (Pap) smear is a microscopic examination that can detect pre-invasive, and invasive disease process in very early stages by taken cells from the uterine cervix, at which it can be prevented, treated and cured (Sait, 2009) For that reason, Pap smear is universally recommended for all sexually active women (Saslow, 2002). Human papillomavirus (HPV) serotypes 16 and 18 have been established as the most frequent etiologies implicated in the development of cervical cancer (Al-Muammar, 2007). According to the WHO, the HPV accounts for 99% of cases of cervical cancer (Al-Shaikh, 2014). Vaccination of Human papillomavirus has been widely introduced in the national immunization programs in most of the worlds (Basu, 2013).

*Corresponding author: Duaa N. Almansour
College of Medicine, Hail University, Hail, KSA

Early studies show that vaccination reduces precancerous cervical lesions and corresponding referrals for colposcopy and cervical procedures (Paavonen, 2009 and Chigbu, 2011). There are currently two vaccines which protect against both HPV 16 and 18, which are known to cause at least 70% of cervical cancers (Mishra, 2015). Clinical trial results show that both vaccines are safe and very effective in preventing infection with HPV 16 and 18 (Basu, 2013). WHO recommends vaccination for girls aged 9-13 years as this is the most cost-effective public health measure against cervical cancer (Basu, 2013). HPV vaccination does not replace cervical cancer screening (Tovar, 2008). In countries where HPV vaccine is introduced, screening programs may still need to be developed or strengthened (Vorsters, 2008). Screening that is being carried out in Saudi Arabia is not a planned program. It is done using opportunist method for those who visit certain clinics. Screening Programs should be an integrated system for all women utilizing reproductive health Facility with sufficient coverage and satisfactory access to services. Moreover, in Saudi Arabia, no formal nationwide campaigns to vaccinate females are commenced (Al-Shaikh, 2014). As a result, it has been observed that the number of cases of cervical cancer has been increasing over the past two decades (Al-Shaikh, 2014). The aim of this study was to determine the level of awareness of women in Hail City - Kingdom of Saudi Arabia regarding cervical cancer screening (Pap smear) and HPV, their sources of information, and their general attitudes toward cervical screening and HPV vaccine.

MATERIALS AND METHODS

Study design and study sample

A descriptive cross-sectional community-based study involved the distribution of 501 questionnaires to randomly select above 20 years women from different groups in the general population of Hail city, located in north-western of Kingdom of Saudi Arabia; the city has a population of 400,000. These questionnaires were sent out to school teachers, relatives, friends, university students, and employee as well as through direct interview of patient's escorts at King Khalid Hospital and Hail General Hospital from October 2017 to January 2018. The objectives of the study were explained and a verbal consent was obtained from each of the participants.

Data collection

A self-administered close-ended questionnaire was design. It consisting of 27 questions which were guided by study objectives and review of the literature. The questionnaire included 3 sections: the first section comprises socio-demographic data such as age, marital status, education level and profession. The second section for assessment of knowledge regarding Pap smear and HPV vaccine, the third section was questions related to participants' perception of safety, efficacy, and acceptance of Pap smear and HPV vaccination. Questions were prepared in the English language and translated into Arabic.

Data analysis

Data entry and analyzed using the Statistical Package for Social Sciences (SPSS Inc., Chicago, IL, USA) version 20. Results of descriptive analysis of socioeconomic variables, knowledge of cervical cancer screening (Pap smear), attitude, and acceptance of HPV vaccine were tabulated.

RESULTS

In total, 501 women participated in the study. The vast majority of the respondents aged between 19-29 years (45.3%). Most participants (n=323, 64.5%) were married, while (n=162, 32.3%) were single. The results showed that Illiterate represent (n=4, 0.8%) and college students (n=396, 79%). Employees (n=216, 43.14%) and unemployed (n=141, 43.1%). Table 1 shows the socio-demographical data for all respondents.

Table 1. Socio-demographic (n= 501)

	No.	%
Age classes		
19 to 29	227	45.3%
30 to 39	130	25.9%
40 to 49	112	22.4%
50 >	32	6.4%
Education status		
Illiterate	4	0.8%
Primary	11	2.2%
Elementary	12	2.4%
Secondary	78	15.6%
University	396	79%
Social status		
Single	162	32.3%
Married	323	64.5%
Divorced	6	1.2%
Widow	10	2%
Children		
Yes	305	60.9%
No	196	39.1%
Occupation		
Yes	216	43.1%
No	141	28.1%
Student	144	28.7%

Table 2 shows the knowledge of all respondents about Pap smear as a screening test for cervical cancer and HPV vaccine. A total of 334 women (66.7%) did not know about Pap smear. Only 167 women (33.3%) know about the Pap smear. A total of 448 women (89.4%) did not hear about HPV vaccine. only 53 women (10.6%) heard about it.

Table 2. Knowledge about Pap smear and HPV vaccine (n=501)

	No.	%
Do you know cervical cancer screening (pap smear)		
Yes	167	33.3%
No	334	66.7%
Do you know about human Papillomavirus vaccine		
Yes	53	10.6%
No	448	89.4%

Table 3 showed that the source of knowledge in those who subjectively assumed knowledge about Pap smear 40.1% (n=67) knew about the Pap smear from internet and TV, 38.9% (n=65) from nurse/doctor, 11.9% (n=20) from a family member and 8.9% (n=15) from a friend.

Table 3. Source of knowledge about Pap smear (n=167)

Table 3	No.	%
Do you know cervical cancer screening (pap smear)		
Friend	15	8.9%
Family member	20	11.9%
Nurse / Doctor	65	38.9%
Internet and TV	67	40.1%

Table 4 showed the knowledge about the importance of Pap smear as a screening test for cervical cancer.

Table 4. The knowledge about the importance of Pap smear and HPV (n=501)

Table 4	Strongly Agree	Agree	I don't know	Disagree	Strongly Disagree
Do you think cervical screening(Pap smear) important to prevent cervical cancer					
No.	72	102	317	8	2
%	14.3%	20.3%	63.2%	1.5%	0.3%
Do you think the test should be done every 2-3 years?					
No.	23	94	356	24	4
%	4.6%	18.8%	71.1%	4.8%	0.8%
Do you think the test should start at 20 years old?					
No.	75	171	205	48	2
%	15%	34.1%	40.9%	9.6%	0.4%
Do you think that Human Papilloma Virus (HPV) can cause cervical cancer?					
No.	15	50	430	5	0
%	3%	10%	85.8%	1%	0%

Table 5. The attitude toward Pap smear and HPV vaccine (n=501)

Table 5	No.	%
Do you advise girls to take HPV vaccine?		
Yes	395	78.8%
No	106	21.2%
Have you ever had a Pap smear as Cervical Screening?		
Yes	90	18%
No	411	82%

Table 6. The attitude toward Pap smear in those who did Pap smear (n=90)

Table 6	No.	%
When was the last time you had Pap smear (cervical screening) Test?		
In the last 6 months	14	15.5%
In the last 12 months	15	16.6%
In the last 2 years	10	11.1%
More than 2 years ago	51	56.6%
Would you have it done again?		
Yes	48	53.3%
No	42	46.6%

Table 7. The attitude toward Pap smear in those who did not do Pap smear (n=411)

Table 7	No.	%
What was the reason for not having the Pap smear screening test?		
Lack of knowledge about it	203	49.3%
I don't think I need it	112	27.2%
Afraid	66	16%
Shy	30	7.2%
Are you willing to do Pap smear (Cervical Screening) done for you?		
Yes	298	72.5%
No	113	27.4%

A total of 317 women (63.2%) did not know the importance of the Pap smear. 20.3% agreed about the importance of the test. About 356 women (71.1%) did not know the frequency of the Pap smear should be done. And about 18.8% (n=94) agreed that the test should be done every 2-3 years. And almost 40.9% (n=205) do not know the best age to start the test. 34.1% (n=171) agreed that the test should start at the age of 20 years. Also 85.8% of the study population they did not know HPV as cause of cervical cancer. Table 5 showed the number of women did Pap smear as cervical screening was 90 (18%) whereas 411 (82%) didn't do it. The majority of the women n=395 (78.8%) advised girls to take the vaccine. Table 6 showed that in those women who had Pap test most of the did it before two years 51(56.6) whereas in the last 6month only14 (15.5). We found that in those who did Pap smear their willingness to have it again is 53.3%. Table 7 showed that the reason that 411 respondents didn't undergo the screening was lack of knowledge. 346 of women accepted the concept of

screening and expressed their willingness to have a cervical cancer screening.

DISCUSSION

Cervical cancer is a preventable disease. It is also highly curable when diagnosed early but most women in developing countries, including Saudi Arabia, clinically presented with advanced stages that require extensive treatment with diminished survival (Mishra, 2011). The primary reason for such advanced disease presentations can be largely attributed to lack of intensive screening program for cervical cancer and absence of formal nationwide campaigns to vaccinate females against HPV (Al Khudairi, 2017). So, it is becoming more important to raise awareness of cervical cancer in KSA. Our study was administered to 501 women aged above 20 years old. We aimed to evaluate the knowledge and attitude toward cervical cancer screening.

Based on the data gathered we found out that 66.7% of the respondents did not know about cervical cancer screening. In comparison to multiple studies worldwide we find that in Riyadh – Kingdom of Saudi Arabia 46.2% of women did not know about the screening, while a study in Bahrain 64% of women have known about Pap smear, also a study in Russia showed that 80.0% of women had a good level of knowledge about HPV and cervical cancer prevention and screening (Roik, 2017). The women with university education were more likely to have higher knowledge about HPV and Cervical Cancer prevention compared to those with lower education, which was not the case in our study. Though most of the participants are educated, they didn't have enough knowledge about Pap smear. This indicates that educational level has no major impact on knowledge of cervical cancer and its screening. The major cause could be due to lack of health education about it throughout their school and university years, unlike education in Russia in which cervical cancer screening was a subject talked about throughout the educational years (Roik, 2017). So, we should start teaching girls from a younger age about cervical cancer and HPV and its vaccination since it is recommended to be given at such a young age (11-12 years old). We found that women who had highest knowledge were those who found them self in a position where cervical screening was recommended to them by a doctor either as a diagnostic investigation or a pre-caution measure (38.9%), we also found that 40.1% of the participants use the internet and TV as a source of knowledge, this may be explained by the lack of official screening programs and of course lack of health education's programs for cervical cancer.

In our study only 18% of our study population did Pap smear this percent is low when we compared to Bahrain where about 40% of the women did it (18). 0.6% of the participants in our study and 3.7% in Bahrain had heard of the HPV vaccine (18). The lack of screening programs of cervical cancer in Saudi Arabia could be an expected reason. This study found gap in the knowledge that might decrease number of women undergoing cervical cancer screening, as most women did not know the recommended age to start screening and even fewer knew the recommended Frequency of screening for the disease. The majority of participants in both studies reported the positive attitude toward the cervical screening. Despite the lack of knowledge of the HPV vaccine, 78.8% voted yes when asked if they would advise girls to take the vaccine which was the dominant answer, meaning the vast majority of women were accepting the vaccine. The majority of the women (78.8%) advised girls to take the vaccine and was happy with the introduction of the HPV vaccine.

Conclusion

From our study, the knowledge of cervical cancer screening among women in Hail City-Kingdom of Saudi Arabia was far behind that in developed countries. There is a need to educate and promote awareness among women regarding cervical cancer screening by educational programs throughout the entire Kingdom, which would be highly likely to promote the knowledge of cervical cancer and encourage women for early cervical cancer screening.

Acknowledgements

We are thankful to all the women who participate in our study.

Declarations

Funding: None

Conflict of interest: None declared.

Ethical approval: Not required.

REFERENCES

- Acharya Pandey, R., Karmacharya, E. 2017. Cervical cancer screening behavior and associated factors among women of Ugrachandi Nala, Kavre, Nepal. Vol. 22, *European Journal of Medical Research.*, London; 2017.
- Al Khudairi, H., Abu-Zaid, A., Alomar, O., Salem, H. 2017. Public Awareness and Knowledge of Pap Smear as a Screening Test for Cervical Cancer among Saudi Population in Riyadh City. *Cureus [Internet]*. 2017;9(1):1–8. Available from: <http://www.cureus.com/articles/6160-public-awareness-and-knowledge-of-pap-smear-as-a-screening-test-for-cervical-cancer-among-saudi-population-in-riyadh-city>
- Al-Muammar, T., Al-Ahdal, M.N., Hassan, A., Kessie, G., Dela Cruz, D.M., Mohamed, G.E. 2007. Human papilloma virus-16/18 cervical infection among women attending a family medical clinic in Riyadh. *Ann Saudi Med.* 2007;27(1):1–5.
- Al-Shaikh, G.K., Almussaed, E.M., Fayed, A.A., Khan, F.H., Syed, S.B., Al-Tamimi, T.N., 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):1223–30.
- Alzahrani, H.H., Thabet, H.A., Zahrani, A. Al. 2018. Knowledge , Attitudes and Practices in Relation to Cervical Cancer Screening among Female Employees at King Abdulaziz University. (3).
- Basu, P., Banerjee, D., Singh, P., Bhattacharya, C., Biswas, J. Efficacy and safety of human papillomavirus vaccine for primary prevention of cervical cancer: A review of evidence from phase III trials and national programs. *South Asian J cancer.*, Oct;2(4):187–92.
- Chigbu, C.O., Aniebue, U.U. 2011. Non-uptake of colposcopy in a resource-poor setting. *Int J Gynaecol Obstet.* May;113(2):100–2.
- Jassim, G., Obeid, A., Al Nasheet, H.A. 2018. Knowledge, attitudes, and practices regarding cervical cancer and screening among women visiting primary health care Centres in Bahrain. *BMC Public Health.* 18(1):1–6.
- Kitchener, H.C., Symonds, P. 1999. Detection of cervical intraepithelial neoplasia in developing countries. *Lancet (London, England).* Mar;353(9156):856–7.
- Melan, K., Janky, E., Macni, J., Ulric-Gervaise, S., Dorival, M-J., Veronique-Baudin, J. et al. 2017. Epidemiology and survival of cervical cancer in the French West-Indies: data from the Martinique Cancer Registry (2002–2011). Vol. 10, Global Health Action.
- Mishra, G.A., Pimple, S.A., Shastri, S.S. 2011. An overview of prevention and early detection of cervical cancers. *Indian J Med Paediatr Oncol [Internet].*, 32(3):125–32. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3342717/>
- Mishra, G.A., Pimple, S.A., Shastri, S.S. 2015. HPV vaccine: One, two, or three doses for cervical cancer prevention? *Indian J Med Paediatr Oncol [Internet].* 36(4):201–6.

- Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4711216/>
- Paavonen, J., Naud, P., Salmeron, J., Wheeler, C.M., Chow, S-N, Apter, D., et al. 2009. Efficacy of human papillomavirus (HPV)-16/18 AS04-adjuvanted vaccine against cervical infection and precancer caused by oncogenic HPV types (PATRICIA): final analysis of a double-blind, randomised study in young women. *Lancet* (London, England). Jul;374(9686):301–14.
- Roik, E.E., Sharashova, E.E., Nieboer, E., Kharkova, O.A., Postoev, V.A., Odland, J. 2017. Knowledge about human papillomavirus and prevention of cervical cancer among women of Arkhangelsk, Northwest Russia. *PLoS One*. 12(12):1–13.
- Sait, K.H. Attitudes, knowledge, and practices in relation to cervical cancer and its screening among women in Saudi Arabia.
- Saslow, D., Runowicz, C.D., Solomon, D., Moscicki, A.B., Smith, R.A., Eyre, H.J., et al. 2002. American Cancer Society guideline for the early detection of cervical neoplasia and cancer. *CA Cancer J Clin*. 52(6):342–62.
- Tovar, J.M., Bazaldua, O.V., Vargas, L., Reile, E. 2008. Human papillomavirus, cervical cancer, and the vaccines. *Postgrad Med.*, Jul;120(2):79–84.
- Vorsters, A., Arbyn, M., Baay, M., Bosch, X., de Sanjosé, S., Hanley, S., et al. 2017. Overcoming barriers in HPV vaccination and screening programs. *Papillomavirus Res.*, 4(July):45–53.
