



Awareness and Attitude towards HPV Infection and Vaccination among Women in UAE

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Background & Aim: A large majority of cervical cancer (more than 95%) is due to the human papillomavirus (HPV). There is a need to assess the awareness & attitude towards HPV infection and vaccination among women in UAE.

Methods & Materials: A quantitative approach using a descriptive cross-sectional design was used for this study among 100 women who satisfied the inclusion criteria. The study was conducted among general public in UAE. The tools used were a proforma to elicit demographic variables of women an awareness questionnaire and an attitude checklist.

Results: Among 102 subjects 44 (47.3%) were of the age between 31-40 years and 63 (67.0%) were graduates. The mean awareness score was 9.8 with a SD of ± 2.2 which is moderately good. The study revealed that the subjects had a positive attitude with a score of 8.5 with an SD of ± 2.5 , and a positive correlation of 0.493 which was significant at $p < 0.001$.

Conclusion

The study recommends further improvement of awareness regarding HPV infection and vaccination. Health Education can be planned for women at PHCs, Outpatient departments and through social media.

Key Words: Human Papilloma Virus, HPV Infection, Vaccination, Awareness, Attitude.

I. Introduction

Cervical cancer is the fourth most common cancer among women globally, with an estimated 604 000 new cases and 342 000 deaths in 2020. About 90% of the new cases and deaths worldwide in 2020 occurred in low- and middle-income countries.¹ HPV is the most common viral infection of the reproductive tract. A large majority of cervical cancer (more than 95%) is due to the human papillomavirus (HPV). Cervical cancer is by far the most common HPV-related disease. Nearly all cases of cervical cancer can be attributed to HPV infection. It takes 15 to 20 years for cervical cancer to develop in women with normal immune systems. It can take only 5 to 10 years in women with

weakened immune systems, such as those with untreated HIV infection.^{1,2}

The Global strategy towards eliminating cervical cancer as a public health problem, adopted by the World Health Assembly in 2020, recommends a comprehensive approach to cervical cancer prevention and control. The recommended actions include interventions across the life course. There are currently 4 vaccines that have been prequalified by WHO, all protecting against HPV types 16 and 18, which are known to cause at least 70% of cervical cancers. HPV vaccines work best if administered prior to exposure to HPV. Therefore, to prevent cervical cancer WHO recommends vaccinating girls aged 9 to 14 years, when most have not started sexual activity.^{3,4} WHO has set up the targets to be reached by 2030 and to be maintained (WHA 73.2) one of which is 90% of girls are fully vaccinated with HPV vaccine by age 15.⁴ There are 50-55 cases of cervical cancer are reported annually in the UAE. There is a scarcity of data from Middle Eastern region regarding knowledge and attitude of women towards HPV infection, cervical cancer prevention and HPV vaccine.⁶ Generally, the societies in the Arab countries are characterized by sharing relatively comparable cultures and religious conservatism.⁷ This implies a conservative sexual behavior. Moreover, discussing these issues is relatively very low among people in the society with no formal sexual education including health sexual education in most Arab countries.⁸ Therefore, the people in Arab countries are facing a threatening health problem of increased cervical cancer. This is mainly due to the lack of effective screening programs and vaccination programs as well. In addition, there is low knowledge and attitude among people relating to the HPV vaccine in some Arab societies.⁹ Rapid changes in lifestyle induced by globalization have brought about changes in sexual behaviour, especially among younger generations. These changes may lead to considerable consequences on the prevalence of sexually transmitted disease, including human papillomavirus (HPV)



infection.¹⁰Hence there is a need to assess the awareness & attitude towards HPV infection and vaccination among women in UAE.

II. Methods

Aim of the study

The aim of the study to assess the awareness & attitude towards HPV infection and vaccination among women in UAE

Objectives of the study

1. To assess the awareness regarding HPV infection & vaccination among women
2. To assess the attitude towards HPV awareness & vaccination among women
3. To correlate awareness with attitude towards HPV infection & vaccination among women
4. To associate awareness & attitude with selected baseline variables

Hypothesis of the study

H01: There will no significant correlation between awareness & attitude towards HPV infection & vaccination among women at 0.05 level of significance

H02: There will no significant association between awareness & attitude towards HPV infection & vaccination among women at 0.05 level of significance

Research Approach and Design

The research approach is a Quantitative approach with a descriptive cross-sectional design

Research Setting

The study was conducted among the general public in Ajman, UAE

Population

The population for the study were women in Ajman, UAE

Sample

Women in Ajman, UAE, who satisfied the inclusion criteria

Criteria for sample selection

Women of the age 18-40 years

Women available at the time of data collection

Exclusion criteria

Women not available at the time of data collection

Sample size estimation

Based on previous study⁹ sample size is calculated: Confidence interval of 95%, margin error of 5, population proportion of 50% and population size of 150 a sample of 110 is calculated. The sample size with be 100 women who satisfy the inclusion criteria

Sampling technique

Convenient sampling technique was used for the study.

Research Tools and Techniques

Section A – A proforma to elicit demographic variables of women such as age, qualification, occupation, number of children, whether vaccinated with HPV vaccine, whether children are vaccinated with HPV vaccine

Section B – An awareness scale with 15 items on awareness regarding HPV infection and vaccination uptake

Section C – An Attitude scale with 10 items regarding HPV infection & vaccination uptake

Validity and Reliability of the tool

The reliability of the tool was tested on 10% of the sample

- The reliability of awareness tool was assessed by estimating Cronbach's alpha. The estimated alpha coefficient is 0.72.

- The reliability of attitude tool was assessed by estimating Cronbach's alpha. The estimated alpha coefficient is 0.96.

Pilot study

Pilot study was done on 10% of the sample, to check for the feasibility of the study and also the reliability of the instruments used.

Data collection process

Ethical clearance will be obtained from Institutional Review Board of Gulf Medical University. Subjects were selected using convenient sampling technique based on the inclusion and exclusion criteria. A written informed consent was taken from women after explaining the details of the study. Demographic data and the tool to assess awareness & attitude were collected through a google form. The subjects will be given 20-25 minutes to complete the questionnaire and checklist.

III. Results

In the present study baseline variables among 102 subjects show that 44 (47.3%) were of the age between 31-40 years, 63 (67.0%) were graduates and 33% were nurses. The mean awareness score was 9.8 with a SD of ± 2.2 with a mean percentage of 65.33% which is moderately good. In relation to awareness questions (HPV) is transmitted by sexual contact showed 82 (81.2%). A vaccine against HPV infection does exist 86 (86.9%), HPV vaccine can prevent cervical cancer 93 (92.1%) and HPV causes cervical cancer 85 (84.2%). The subjects had a positive attitude score 8.5 with an SD of ± 2.5 . The study shows a positive correlation of 0.493 which is significant at <0.001 , as awareness increases attitude increases. Post graduates had better awareness significant at 0.001. Those greater than 40years had better awareness but not significant. The study showed no significant



association between attitude and baseline variables.
Discussion

Findings related to baseline variables among women in UAE:

In the present study baseline variables among 102 subjects show that 44 (47.3%) were of the age between 31-40 years, 63 (67.0%) were graduates and 33% were nurses

In a study among Arab countries 2804 responses of which 1216 were from Jordan, 397 were from Qatar, 606 from the UAE, and 585 from Iraq. Around one third of participants (n = 1007, 35.9%) were aged between 18 and 25 years. The largest proportion of the participating females were unemployed (n = 1363, 48.6%). About half of the participating females (n = 1419, 50.6%) were studying non-medical sciences. A cross-sectional study conducted in several Arab countries among 2804, 35.9% were aged between 18 and 25 years & unemployed 48.6%.⁶ A cross-sectional survey among 640 women aged 18-50 years was conducted in Al-Ain district in UAE using convenience sampling. Women with previous diagnosis of cervical cancer, non-residents of UAE, younger than 18 or older than 50 years of age and those unable to speak Arabic or English were excluded from the study.⁷

Findings related to Awareness among women regarding HPV infection and vaccination

The present study shows that the mean awareness score was 9.8 with a SD of ± 2.2 with a mean% of 65.33% which is moderately good.

A cross-sectional study conducted in several Arab countries among 3658 individuals, 2804 responses were included in the analysis. This study revealed poor awareness and knowledge of the participants about HPV and its vaccine among all four countries' participants with relatively better knowledge among participants from the UAE.⁶ The overall median knowledge score was 2 (IQR = 5) in the whole population. The lowest median score was 1.0 (IQR = 4) for participants from Qatar while the highest median score was 3.0 (IQR = 5) for participants from the UAE.

Findings related to Awareness among women regarding HPV infection and vaccination

In the present relation to awareness questions (HPV) is transmitted by sexual contact showed 82 (81.2%). A vaccine against HPV infection does exist 86 (86.9%), HPV vaccine can prevent cervical cancer 93 (92.1%) and HPV causes

cervical cancer 85 (84.2%)

The percentages of participants who were aware that the HPV infection will not go away on its own without treatment and that the infection causes CC were 35.2% and 43.8%, respectively. Additionally, 26.9% of participants knew that the HPV infection is a sexually transmitted disease. About a quarter of participants (25.6%) were aware that the vaccine does not protect against all types of CC. Only 21.3% of participants were aware that HPV causes some side effects such as headache and nausea, and 20.3% knew that the HPV vaccine can prevent CC and decrease the chance of having changes in the Pap smear test. Moreover, the proportion of participants who were aware that the target population for vaccination is both males and females and that taking the vaccine will not infect the recipient were 20.7% and 23.6%, respectively.⁶

A study in Al Ain, UAE, showed only 29% of our sampled women have ever heard of HPV infection. Only 15.3% women recognized it as STI. Only about 22% women have also heard of the HPV vaccine. Three quarter of the women in our study thought that cervical cancer can be prevented. About 28% recognized vaccine as a preventive measure against cervical cancer. Age (AOR 1.049, 95%CI 1.02-1.08) and husband's level of education were found to be significant (p value 0.015) after adjusting for women's age. The knowledge of HPV infection and vaccine is low in the UAE. Few women recognized HPV as sexually transmitted infection. Increasing age and husband's education are associated with better knowledge of HPV infection.⁷

Findings related to Attitude among women regarding HPV infection and vaccination

The present study findings show that the participants had a positive attitude score 8.5 with an SD of ± 2.5 .

A study was conducted among 401 females in Ottawa, Canada. Also revealed that the overall attitude of study participants towards the vaccine was positive, vaccinated respondents had a more favourable attitude towards the vaccine than non-vaccinated respondents.⁵

Findings related to correlation between awareness and attitude among women regarding HPV infection and vaccination

The study shows a positive correlation of 0.493 which is significant at <0.001 , as awareness increases attitude increases.

A study was conducted among 401 females in Ottawa, Canada. Also revealed that the overall



attitude of study participants towards the vaccine was positive, vaccinated respondents had a more favourable attitude towards the vaccine than non-vaccinated respondents.⁵

Findings related to Awareness with selected baseline variables among women regarding HPV infection and vaccination

In the present study post graduates had better awareness significant at 0.001. Those greater than 40years had better awareness but not significant.

In a supporting study the analysis identified the following groups to be more aware about HPV and its vaccine: (a) young participants ≤ 25 years old, (b) participants from the UAE, (c) participants who have a postgraduate degree, (d) participants with education related to the medical field. The study found higher knowledge and awareness about the HPV and its vaccine among students in the medical field. Furthermore, younger age was associated with higher knowledge and awareness regarding HPV and its vaccine.

Findings related to Attitude with selected baseline variables among women regarding HPV infection and vaccination

The present study showed no significant association between attitude and baseline variables.

IV. Conclusion

The present study findings have revealed that the awareness is moderately good and the women have a positive attitude towards HPV infection and vaccination. It also shows a positive correlation between awareness and attitude. The study recommends to further improvement of awareness regarding HPV infection and vaccination. Health Education can be planned for women at PHCs, Outpatient departments and through social media

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Conflict of Interest

The authors declare that there is no conflict of interest in writing this article.

Author's contribution

All authors have contributed to this research article

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Tables

Table 1: Mean, standard deviation & mean percentage of Awareness and Attitude scores towards HPV infection and vaccination of women UAE.

N=100				
Variable	Max score	Mean	SD	Mean %
Awareness score	15	9.8	± 2.2	65.33
Attitude score	10	8.5	± 2.5	85

The table 1 shows that the mean awareness score was 9.8 with a SD of ± 2.2 with a mean% of 65.33% and attitude score was 8.5 with an SD of ± 2.5 with a mean % of 85%

Table 2: Pearson’s correlation and p value to show correlation between Awareness and Attitude scores towards HPV infection and vaccination among women UAE.

Variable	Mean ± SD	Pearson Correlation	P-Value
Awareness Score	9.8 ± 2.2	0.493	<0.001
Attitude Score	8.5 ± 2.5		

Table 2 shows a positive correlation of 0.493 which is significant at <0.001, as awareness increases attitude increases

Table 3. Association of Awareness scores of women towards HPV infection and vaccination with selected baseline variables UAE

Parameters	N	Awareness Score (Mean ± SD)	P-value
Age			
<=30 years	21	9.0 ± 2.7	0.180



31-40 years	44	9.5 ± 2.2	
>40 years	28	10.2 ± 1.8	
Education			
High School	8	6.0 ± 2.6	
Diploma	13	9.8 ± 1.9	<0.001
Graduate	63	9.9 ± 1.8	
Postgraduate	10	11.0 ± 2.1	

Table 3 Shows that age and gender are significant at 0.001 & 0.05 respectively

Table 4: Association of Attitude scores of women towards HPV infection and vaccination with selected baseline variables UAE

Parameters	N	Attitude Score (Mean ± SD)	P-value
Age			
<=30 years	21	7.6 ± 3.5	
31-40 years	44	8.5 ± 2.3	0.220
>40 years	28	8.9 ± 2.1	
Education			
High School	8	7.1 ± 4.0	
Diploma	13	8.5 ± 2.5	
Graduate	63	9.0 ± 1.2	0.120
Postgraduate	10	8.9 ± 2.4	

** Not Significant

Table 4 shows there is no statistical significance between age education and years of experience