

Research Article

Level of Knowledge of the Human Papilloma Virus in Women of a Primary Care Unit in Tijuana B.C.

Hernandez-Navarro R^{1*} and Bermudez-Villalpando VI²

¹Department of Family Medicine, Family Medicine Unit #27 (IMSS), Baja California Delegation, Mexico

²Department of Family Medicine, Family Medicine Unit #33 (IMSS), Baja California Delegation, Mexico

*Corresponding author: Hernandez-Navarro Roxana, Department of Family Medicine, Family Medicine Unit #27 (IMSS), Baja California Delegation, Mexico

Received: October 04, 2020; Accepted: October 13, 2020; Published: October 20, 2020

Abstract

Background: The prevalence of the Human Papillomavirus (HPV) in Mexico fluctuates between 10-12%. Due to the low knowledge about HPV, women do not perceive the risk and ignore the possible consequences of this sexually transmitted infection.

Aim: The purpose of this study is to determine the level of knowledge of the HPV in women of the Family Medicine Unit #27 (FMU 27) of Tijuana, Mexico.

Design and Setting: Analytic cross-sectional study.

Methods: An analytical cross-sectional study was carried out, the level of knowledge of Human Papilloma Virus was measured in women from FMU 27 during August-October 2019. Qualitative variables were expressed in frequencies and percentages; central tendency and dispersion measures were used for quantitative variables. Chi-square was used for the bivariate analysis, a $p < 0.05$ was considered significant.

Results: 194 patients were analyzed, 41% had a free union, 47.9% had secondary education ($p = 0.003$), 69.1% were employed and 55.2% had a lower middle socioeconomic level ($p = 0.003$). Regarding the level of knowledge, 71.1% was high, 25.8% medium and 3.1% low.

Conclusion: A high level of knowledge about HPV was evidenced. We recommend continuing to implement educational programs at different ages to further increase awareness of this disease.

Keywords: Level of Knowledge; Human Papillomavirus

Introduction

The HPV is a virus that belongs to the papillomaviridae family [1]. It infects and replicates in the nucleus of epithelial cells, its main site of involvement is the transitional epithelium of the cervix, affecting basal cells of the squamous epithelium. It has the ability to infect on contact with the skin, by sexual and vertical transmission at the time of delivery. The benign manifestations are condyloma and genital warts produced by non-oncogenic genotypes 6 and 11 (HPV6, HPV11); oncogenic genotypes 16 and 18 (HPV16, HPV18) cause 70% of cervical cancer. The highest prevalence rates are observed in women under 25 years of age, with a significant decrease between 25-40 years [2].

Cervical cancer is the second most common cancer in women [3]. In Mexico it constitutes one of the main public health problems, with an incidence of 15.5% and a mortality of 12.8%, although it occurs in developing countries, a common denominator is the scarce economic resource and the low educational level [4]. HPV penetrates the supra-basal cells of the cervical epithelium where by viral transcription and repression of its late genes L1 and L2, it infects the keratinocyte [5]. The beginning of an active sexual life and the first pregnancy at an early age, multiparity, illiteracy, low socioeconomic level, hormonal contraceptives, smoking, a diet low in antioxidants, HIV co-infection and no access to social security, are the risk factors most strongly

associated with the development of cervical HPV-cancer [4-6].

The Department of Epidemiology of the Ministry of Health in Mexico has established that cervical cancer detection programs should focus on three factors: achieving 80% coverage in the screening of the target population; ensure diagnosis and offer adequate and timely treatment in women with abnormal results [7]. The screening method is cervical cytology (Papanicolaou), a primary tool for the detection of premalignant lesions [8]. There are two vaccines against HPV, the bivalent vaccine (Cervarix) that contains antigens for types 16 and 18; and the quadrivalent vaccine (Gardasil) with antigens for types 16, 18, 6 and 11. The schedule used in Mexico is 0-6-60 months, or a two-dose schedule (0-6 months/0-12 months) [9]. According to the World Health Organization (WHO), vaccination is recommended for girls between 9 and 13 years of age [10]. In the acceptability of vaccines, prior knowledge of the vaccine by parents could be the main determining factor for its application [11].

The level of knowledge about the human papillomavirus is defined as the result of the assimilation of information by a person about the virus that is transmitted through sex, which affects the genitalia of men and women [12]. It is important for the general population to know about HPV and related risk factors, which affect women's health [13]. Therefore, the main objective of the research was to determine the level of knowledge of HPV in women from Tijuana.

Material and Methods

Study Design and Population

An analytical cross-sectional study was conducted between August-October 2019 at FMU 27 of the Instituto Mexicano del Seguro Social (IMSS). Women between 25-45 years old who agreed to participate in the study by informed consent were included. Patients with some mental disability or psychiatric illness were excluded from the study; patients with incomplete information were eliminated. A structured interview was conducted on a data collection form, which allowed obtaining personal, sociodemographic and clinical data.

Variables

The collection of variables was done with a standardized data form; the variables collected were age, marital status, education and occupation, which were asked directly; the knowledge about HPV was measured through the questionnaire “The Human Papilloma Virus and its health”, which has 16 questions, validated in Spanish with a Kuder-Richardson reliability coefficient of 0.76; this instrument classifies knowledge as low (0-5 points), medium (6-10 points) and high (11-16 points) [14]; finally, the socioeconomic level was obtained using the Graffar-Mendez Castellanos scale, a validated instrument in Spanish (Cronbach's alpha 0.75), it measures four dimensions and classifies the family into 5 categories, upper class (4-6 points), high average (7-9 points), low average (10-12 points), worker (13-16 points) and marginal (17-20 points) [15,16].

Statistical Analysis

Descriptive statistics were performed; qualitative variables were expressed in frequencies and percentages; mean and standard deviation were used for quantitative variables. Chi-square was used for the bivariate analysis. The results were evaluated in a 95% confidence interval, a $p < 0.05$ was considered significant. For data analysis, the IBM SPSS program, version 21 was used.

Ethics

The study was approved by the Local Committee of Ethics and Health Research number 204; with registration number R-2019-204-022. The research was conducted under the General Health Law on Health Research, the Helsinki declaration and Bioethical principles. The participants signed the informed consent.

Results

194 women were analyzed, with a mean age of 33.98 ± 6.07 years.

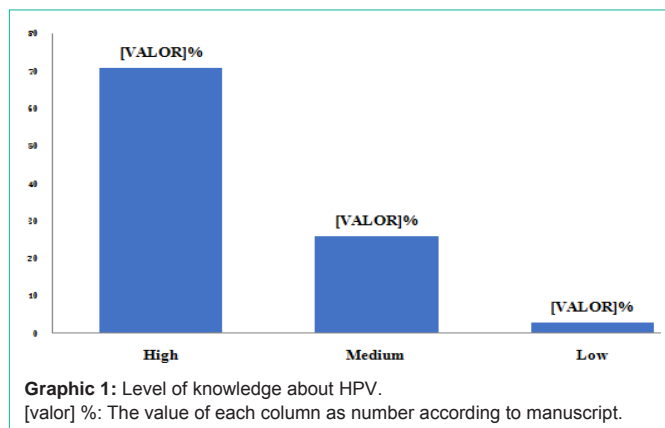


Table 1: Sociodemographic characteristics of the population.

Variables	n	%
Marital status		
Single	31	16
Married	72	37
Free union	80	41
Widow	2	1
Divorced	9	5
Socioeconomic level		
High	0	0
Medium-High	20	10
Medium-Low	107	55
Worker	64	33
Marginal	3	2
Occupation		
Employee	134	69
Merchant	11	6
Housewife	48	25
Retired	1	1
Schooling		
No education	4	2
Primary	42	22
Secondary	93	48
High school	38	20
University	17	9

According to their marital status, 41% were in free union, 37% married, 16% single, 5% divorced and 1% widowed. In schooling, 47.9% had secondary school, 21.6% primary, 19.6% high school, 8.8% university and 2.1% lacked studies. The majority were employed (69.1%), 24.7% dedicated to the home, 5.6% merchants, and 0.5% pensioners; 55.2% had a lower middle socioeconomic level, 33% working class, 10.3% middle class, and only 1.5% marginal stratum. The level of knowledge of the human papillomavirus was high in 71.1%, 25.8% medium level and 3.1% low level (graphic 1). The sociodemographic characteristics are described in Table 1.

When making an association between the level of knowledge and the variables analyzed, the following results were found: age, $p 0.36$; marital status, $p 0.62$; schooling, $p 0.003$; occupation, $p 0.19$; socioeconomic level, $p 0.003$. Only two variables showed statistically significant differences when compared with a high level of knowledge (Table 2).

Discussion and Conclusion

The most important finding of our research was a high level of knowledge among the study participants, a result much higher than the study by Medina-Fernandez et al., [13] who demonstrated a good level of knowledge in 22%, 20% regular, 18% deficient and 40% very deficient. Regarding the sociodemographic characteristics, similarities were found between the frequency of secondary schooling and that married women have greater knowledge of HPV. On the

Table 2: Variables associated with the level of knowledge of HPV.

Variables	Level of knowledge			p value
	Low	Medium	High	
Age				
25-30	3 (4.4)	14 (20.9)	50 (74.7)	0.36
31-35	2 (4.2)	14 (29.1)	32 (66.7)	
36-40	0 (0)	10 (24.3)	31 (75.7)	
41-45	1 (2.6)	12 (31.6)	25 (65.8)	
Marital status				
Single	1 (3.2)	7 (22.6)	23(74.2)	0.62
Married	1 (1.4)	14(19.4)	57(79.2)	
Free union	4 (5)	25(31.3)	51(63.8)	
Widowed	0 (0)	1 (50)	1 (50)	
Divorced	6 (3.1)	3 (33.3)	6 (66.7)	
Schooling				
Primary	4 (9.5)	16 (38.1)	22(52.4)	0.003
Secondary	1 (1.1)	19 (20.4)	73 (78.5)	
High school	0 (0)	9 (23.7)	29 (76.3)	
University	0 (0)	4 (23.5)	13 (76.5)	
No education	1 (25)	2 (50)	1 (25)	
Occupation				
Employee	5 (3.7)	39 (29.1)	90 (67.2)	0.19
Merchant	0 (0)	5 (45.5)	6 (54.5)	
Housewife	1 (2.1)	6 (12.5)	41 (85.4)	
Retired	0 (0)	0 (0)	1 (100)	
Socioeconomic level				
High	0 (0)	0 (0)	0 (0)	0.003
Medium-High	0 (0)	2 (10)	18 (90)	
Medium-Low	1 (0.9)	26 (24.3)	80 (74.8)	
Worker	5 (7.8)	19 (29.7)	40 (65.2)	
Marginal	0 (0)	3 (100)	0 (0)	

other hand, Hernandez-Marquez et al., [17] in Cuernavaca Mexico, identified that 57% of women showed a medium level of knowledge, 23% low and 20% high, of which 45% had a medium socioeconomic level, and 63% basic schooling; percentages below what was identified in our study with a low average socioeconomic level of 55% and 48% with basic education, these results indicate cultural, social and health differences between the regions of our country, for this reason we can demonstrate that the level of knowledge about HPV increases with schooling.

In the same study it was detected that a higher level of knowledge is related to the acceptance of the cervical cytology sample [17], for this reason it is essential to disseminate prevention strategies in a population with limited economic resources, and to establish mechanisms that help greater source of information on the prevention and detection of this disease through cervical cytology, because in Mexico we have a detection rates of 50% [18], much lower than the international indicator for screening (80%). In conclusion, our study shows a high level of knowledge about the human papillomavirus in

women of FMU 27. Education is the key element for the prevention, detection and diagnosis of HPV infection [19]; we recommend carrying out and reinforcing dynamic educational programs that are easily adjusted to the needs of health institutions, aimed at the different age groups affected by this sexually transmitted infection. Therefore, it is necessary to carry out multicenter studies to compare the knowledge in different populations of the state of Baja California and Mexico.

References

- Picconi MA, Picconi, Maria Alejandra. Detección de virus papiloma humano en la prevención del cáncer Cérvico-Uterino. *MEDICINA*. 2013; 73: 585-596.
- Mateos-Lindemann MAL, Pérez-Castro S, Rodríguez-Iglesias M, María Teresa Pérez Gracia. Diagnóstico microbiológico de la infección por virus del papiloma humano. *Enferm Infecc Microbiol Clin*. 2017; 35: 593-602.
- Sánchez-Anguiano LF, Lechuga-Quiñones AM, Milla-Villeda RH, Lares B. Conocimiento y aceptación de la vacuna contra el virus del papiloma humano entre madres de estudiantes de la ciudad de Durango, México. *Ginecol Obstet Mex*. 2013; 81: 77-85.
- Ochoa-Carrillo FJ, Guarneros de Regil DB, Velasco-Jiménez MT. Infección por virus del papiloma humano en mujeres y su prevención. *Gaceta Mexicana de Oncología*. 2015; 14: 157-163.
- Alfaro-Castro A, Fournier-Pérez M. Virus del Papiloma Humano. *Revista médica de Costa Rica y Centroamerica*. 2013; 80: 211-217.
- Iñiguez RF, García de Alba García JE. Cáncer Cérvico uterino y Vacunación anti Virus del papiloma humano. *RevMed UV*. 2013; 13: 13-16.
- Torres-Lobatón A, Bustamante-Iglesias JI, Torres-Rojo A, Juan Carlos Oliva Posada, Miguel Ángel Morales Palomares, Edgar Román Bassaure. Cáncer Cervicouterino. Perfil epidemiológico en 1,217 pacientes. *Seguro Popular. Ginecol Obstet Mex*. 2013; 81: 71-76.
- Notejane M, Zunino C, Aguirre D, Paula Méndez, Loreley García, Walter Pérez. Estado vacunal y motivos de no vacunación contra el virus del papiloma humano en adolescentes admitidas en el Hospital Pediátrico del Centro Hospitalario Pereira Rossell. *Rev Méd Urug*. 2018; 34: 8-13.
- Humerez MS. Vacunas contra el papiloma virus humano. *RevSoc Bol Ped*. 2014; 53: 105-114.
- Salazar-Fajardo LJ, Benavides-Delgado MR, Boogaard S, Sabine and MARIN, Yolanda. Estrategias latinoamericanas para la vacunación contra el virus del papiloma humano - una revisión temática. *Hacia promoc. salud*. 2017; 22: 129-143.
- Chaparro RM, Vargas VE, Zorzo LR, Genero, Sebastian; Cayre, Antonieta. Aceptacion de la vacuna contra el virus del papiloma humano y los factores asociados en la ciudad de Resistencia, Chaco. *Arch Argent Pediatr*. 2016; 114: 36-43.
- Contreras-Gonzalez R, Magaly-Santana A, Jimenez-Torres E, R Gallegos-Torres, A Xequé-Morales, G Palome-Vegad A, et al. Nivel de conocimientos en adolescentes sobre el virus del papiloma humano. *Enfermeria Universitaria*. 2017; 14: 104-110.
- Medina-Fernandez IA, Gallegos-Torres RM, Cervera-Baas ME, Rudy Antonio Cob-Tejeda Jenny Jimenez-Laces Omar Ibarra-Escobedo. Conocimiento del virus del papiloma humano y su vacuna por parte de mujeres de una zona rural de Queretaro, Mexico. *Enfermeria Actual en Costa Rica*. 2017; 32: 1-14.
- Valdez-Castillo EG. Relacion entre el nivel de conocimiento y las actitudes preventivas sobre la infeccion por virus del papiloma humano en usuarias del centro de salud "chancas de Andahuaylas" de santa Anita, primer semestre del 2015. [Tesis]: Peru: Universidad Nacional Mayor de San Marcos, Facultad de Medicina. 2015.
- Millan A, D'Aubeterre ME, Calvanese N. Propiedades psicometricas de la escala de preferencias vespertinidad/matutinidad en una muestra multiocupacional de trabajadores venezolanos. *Revista Cubana de Salud y Trabajo*. 2012; 13: 37-49.

16. Mendez-Castellanos H. Sociedad y Estratificación. Metodo Graffar-Mendez Castellano. 1994.
17. Hernandez-Marquez CI, Salinas-Urbina AA, Cruz-Valdez A, et al. Conocimientos sobre virus del papiloma humano (VPH) y aceptación de auto-toma vaginal en mujeres mexicanas. Rev salud publica. 2014; 16: 697-708.
18. Mendoza-González Z. Programa de detección del cancer cervicouterino: políticas publicas y experiencias de los actores que implementan el programa en el estado de Veracruz, Mexico. Salud Colectiva. 2017; 13: 521-535.
19. Valle-Covarrubias EJ, Ruiz-Gonzalez G, Vidal-Solorzano LC, et al. Effect of an Alternative Educational Strategy in the Knowledge of Human Papilloma Virus in Adolescents. J Fam Med. 2019; 6: 01-04.