

THE KNOWLEDGE LEVEL OF FEMALE UNIVERSITY STUDENTS ABOUT
HUMAN PAPILLOMAVIRUS

by

Joy Taylor

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by

Joy Taylor

Greenville, NC

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Approved by:

Dr. Brian L. Massey

East Carolina University

The College of Fine Arts and Communication

School of Communication

Abstract

Awareness and knowledge of Human Papillomavirus (HPV) remains a serious health issue, and an area for continued research. In this study, a survey of female undergraduates at ECU found that while respondents were aware of HPV, there were troubling deficits in their knowledge of it. Vaccination against HPV was not widespread among the respondents. These findings suggest the continued need to educate young women about the risks of HPV.

In a 2001 report, the Population Reference Bureau branded the human papillomavirus as a “hidden epidemic” (PRB, 2001). The virus, commonly known as HPV, is the most common sexually transmitted infection. Although the body’s immune system can combat HPV in many cases, there are many other cases of virus causing in genital warts and various cancers (CDC, 2015). That includes cervical cancer in women.

The overarching goal of this study was to take an updated look at the levels of HPV awareness and knowledge among college females. The role of educational attainment in awareness and knowledge is of specific interest, particularly given the link between HPV and cervical cancer. Data was gathered through a Web-based survey distributed to female undergraduates at East Carolina University, a southeastern public university. The survey instrument adopted awareness and knowledge questions from the literature, and it collected demographic variables such as age and race/ethnicity.

This study asked the following research questions:

Research Question 1: What is the level of awareness of HPV among college females?

Research Question 2: What is their knowledge level about it?

Research Question 3: What percentage of college females been vaccinated against HPV?

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Introduction

Human Papillomavirus (HPV) is the most common sexually transmitted infection. The virus is spread through sexual contact with an infected person, and it can cause genital warts and many kinds of cancer.

A major problem has been low levels of awareness and knowledge of HPV (Kaiser Family Foundation, 2000). Over the years, however, there has been an increased emphasis on HPV vaccinations (Kaiser Family Foundation, 2015). Still, questions of awareness and knowledge of HPV remain valid areas for research. The goal of this study is to take an updated look at the levels of HPV awareness and knowledge among college females.

Another major problem has been that public awareness and knowledge of HPV has been low generally and among certain demographic groups (Kaiser Family Foundation, 2000). For example, 1,032 women in a 2000-2002 study presented with generally poor knowledge of HPV (Waller et al., 2003). Marlow, Waller, and Wardle (2007) argue that “public education about HPV is urgently needed” (p. 691).

However, over the years, there has been an increased emphasis on HPV vaccinations, at least at the state level (Kaiser Family Foundation, 2015). For example, North Carolina is ranked among the top 10 states for vaccination coverage among female adolescents (Kaiser Family Foundation, 2015). However, the questions of awareness and knowledge of HPV remain valid areas for research.

Methodology

This study utilized a Web-based survey that was distributed on March 14, 2017, and closed 10 days later. Prior to distribution, ECU’s Institutional Review Board, and Survey Review and Oversight Committee approved the survey.

ECU SROC provided a random sample of 500 ECU female students, the target gender. Five true/false knowledge-assessor items were at the heart of the survey. The survey also asked for demographic and HPV vaccination data.

The survey was distributed via the Qualtrics survey application. Respondents received an invitation embedded with the survey’s link, and three “reminder” emails. Upon notification, respondents were informed the survey was voluntary and confidential.

In all, 91 completed surveys were received for a response rate of 18.2%.

Please see Appendix A for the survey questions.

Results

Demographic characteristics of the female undergraduate respondents

Age	Frequency	Percent
18	9	9.9
19	21	23.1
20	16	17.6
21	18	19.8
22	11	12.1
23	3	3.3
24+	12	13.2
Mean = 22.4	Median = 20.0	Mode = 19.0

Education Status	Frequency	Percent
Freshman	15	16.5
Sophomore	25	26.4
Junior	24	27.5
Senior	26	28.6
Other	1	1.1

Race/Ethnicity	Frequency	Percent
White (non-Hispanic)	60	65.9
Black/African American	13	14.3
Hispanic/Latino	8	8.8
Two or more races	7	7.7
American Indian/Alaskan Native	1	1.1
Other	2	2.2

Employment Status	Frequency	Percent
Full-time	9	9.9
Part-time	41	45.1
Unemployed	41	45.1

Relationship Status	Frequency	Percent
In a relationship	48	52.7
Not in a relationship	43	47.3

Short answers to research questions

- Research Question 1: What is the level of awareness of HPV among college females? **High.**
- Research Question 2: What is their knowledge level about it? **Low.**
- Research Question 3: What percentage of college females been vaccinated against HPV? **Based on this survey, roughly half.**

Knowledge assessment results (correct answer bolded)

N = 90	True	False	Don't know
Almost all sexual active <i>women</i> will have HPV.	9 (10.0%)	58 (64.4%)	23 (25.6%)
Almost all sexual active <i>men</i> will have HPV.	9 (10.0%)	54 (60.0%)	27 (30.0%)
HPV can only be spread through vaginal intercourse.	21 (23.3%)	50 (55.6%)	19 (21.1%)
Most HPV infections go away by themselves.	6 (6.7%)	71 (78.9%)	13 (14.4%)
HPV is linked to cervical cancer.	73 (80.1%)	2 (2.2%)	15 (16.7%)

Vaccination Status

	Yes	No
Were you vaccinated against HPV? (N = 90)	51 (56.7%)	39 (43.3%)
Did getting vaccinated benefit your health? (n = 45)	36 (80.0%)	9 (20.0%)

Vaccination influencers	Frequency	Percent
Influenced by doctor(s).	9	9.9
Influenced by doctor(s). Influenced by media (ads, news stories, etc.).	1	1.1
Influenced by parents.	9	9.9
Influenced by parents. Influenced by doctor(s).	18	19.8
Influenced by parents. Influenced by doctor(s). Influenced by media (ads, news stories, etc.).	6	6.6
Influenced by parents. Influenced by doctor(s). Other.	1	1.1
Other.	1	1.1
Personal reasons. Influenced by parents.	3	3.3

Influenced by doctor(s).		
Personal reasons.	2	2.2
Influenced by parents.		
Influenced by doctor(s).		
Influenced by media (ads, news stories, etc.).		

Discussion

The demographic results of the survey were reflective of the university it was administrated. The education status was evenly spread at roughly a quarter of respondents per college classification level. These results allow for a more accurate projection of the ECU female student community.

Based on the results of the survey, the awareness level of female students is high (98.9%). This shows improvement from past studies (Waller et al., 2003). These results suggest awareness efforts have been successful. However, the general knowledge level of female students is low. Awareness is being conscious of HPV, while knowledge is understanding how and who can contract HPV, short-term and long-term effects, and proactive protection methods.

Over half of respondents (56.7%) had received the HPV vaccination. Out of those respondents, 80% said the vaccine had benefitted their health. Out of the 91 respondents, only 1 case of HPV was reported in the survey. This individual was not vaccinated against HPV. Furthermore, the 51 respondents who had received the vaccination had not contracted HPV.

A question about vaccination influence was one of the more interesting results of this survey. Parents and doctors were cited as the primary influence of receiving the HPV vaccination. They were “opinion leaders” for respondents and as such, they should be key target audiences of awareness/knowledge campaigns. Media such as ads and news stories

were also cited heavily as influencers. Only 5 respondents listed “personal reasons,” as an influencer of receiving the HPV vaccination.

Additional comments concerning sexual health, education, etc., included:

- “Sex education is greatly lacking here in the US.”
- “There are over 50 different strains of HPV. The Gardasil vaccine only prevents the 4 strains that cause cervical cancer.”
- “Sex ed is super centered around heterosexuals. Even in health class at ECU the only thing even briefly mentioned was vaginal intercourse. If you want all people to be safe you should educate all of them as the LGBT community has fairly limited resources elsewhere.”
- “I think sex education should be a topic college focus on more and become more aware of the risks associated with unprotected sex.”
- “i do not know much about HPV or STDs other than just hearing about them so it would be really helpful to work on informing college women (or youth in general) about this crucial matter.”

There is great room for improvement of the general and sexual health education system for young people. Awareness of STI’s and STD’s is pushed in health classes and programs. Knowledge level urgently needs to increase, and be implemented before individuals are sexually active. Abstinence is the only way to truly protect oneself from STI’s, STD’s, unwanted pregnancies, etc. Sexual competence is detrimental to the health of all people, but especially college students.

The strengthening of middle school and high school sexual education programs is a step in the right direction. An educational and judgment-free learning environment is key for young people to feel comfortable asking questions.

Government public-awareness campaigns can utilize social media, television media, and public classroom settings. Health is a required course in most public middle schools, high schools, and universities. A required sexual health class would make a significant, positive impact on the overall student health of college students.

Many positive strides have been made in the past half century, however HPV knowledge and awareness is still an urgent public health issue.

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Appendix A: Survey Questions

Demographic questions

Q1: Please tell me your age. Write it in the space below.

(blank space)

Q2: What is your year in school?

Freshman

Sophomore

Junior

Senior

Other (please specify)

Q3: Please tell me about your race/ethnicity.

American Indian or Alaskan Native

Black or African American

Hispanic or Latino

White (non-Hispanic)

Two or more races

Other

Q4: Do you have a job, other than school?

Full-time

Part-time

Unemployed

Q5: Please tell me if you are in a relationship.

Yes | No

Awareness question

Q6: Now I'd like to ask you about your level of awareness of a health issue.

That issue is the Human Papillomavirus, or HPV. So, have you heard about HPV?

Yes, I've heard about it.

No, I haven't heard about it.

Knowledge assessment questions

Q7: Is this statement true or false? Almost all sexually active women will have HPV.

Q8: True or false? Almost all sexually active men will have HPV.

Q9: True or false? HPV can only be spread through vagina sexual intercourse.

Q10: True or false? Most HPV infections go away by themselves.

Q11: True or false? HPV is linked to cervical cancer.

Personal HPV questions

Q12: Now I'd like to ask you a few personal questions about HPV. So, have you been ever been vaccinated against the Human Papillomavirus (HPV)?

Yes | No

Q13: How old were you when were you vaccinated against HPV? Write your age in the space below.

(blank space)

Q14: What influenced your decision to get vaccinated against HPV? Click as many answers as apply to you.

Influenced by doctor(s).

Influenced by media (ads, news stories, etc.)

Influenced by parents

Personal reasons

Other

Q15: Did getting vaccinated against HPV benefit your health. Please explain your answer, briefly.

(blank space)

Q16: Have you ever been diagnosed with HPV?

Yes | No

Q17: How many sexual partners have you had in the past 12 months in any form? Write a number below.

(blank space)