Research Brief

Minority College Students' HPV Knowledge, Awareness, and Vaccination History

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The genital human papillomavirus (HPV) is the most common sexually transmitted infection (STI) affecting males and females in the United States (Centers for Disease Control and Prevention [CDC], 2017a). It is estimated that 79 million individuals are infected with HPV, and 14 million Americans become newly infected with HPV each year (CDC, 2016). HPV can be contracted through vaginal, anal, or oral intercourse, as well as by skin-to-skin contact, and can cause cervical, vaginal, vulvar, anal, and oral cancers. Several HPV vaccines have been developed to prevent infection from nine strains of the HPV virus. The vaccine is currently recommended for females and males ages 9-26 years, and was originally given as a three-dose series. Although HPV vaccination has been recommended by the CDC since 2006 as a primary prevention strategy for the eradication of HPV cancers, vaccination rates remain low among targeted segments of the population in the United States. The CDC (2016) reported that 49.8% of boys ages 13 to 17 years in the United States had gotten at least one of the recommended three doses as of 2015, up 8 percentage points from 2014, and nearly 63% of teen girls had received at least one dose, compared to 60% in 2014. However, HPV vaccination coverage for adults ages 19 to 26 years was only 40.2% for females and only 8.2% for males (Williams et al., 2016).

The low vaccination rates in young adults may be due to several factors. Young adults may lack awareness or knowledge of the HPV vaccine. A study of college males at a minority-serving university revealed that 60% ($n = 79$ of 131) of the participants did not know that an HPV vaccine was available (Fenkl, Hughes, & Jones, 2016). Thomas, Stephens, Johnson-Mallard, and Higgins (2016) explored HPV vaccination choices in Hispanic male college students and discovered significant knowledge deficiencies in perceptions and attitudes about HPV infection and HPV vaccination. A qualitative study of Hispanic college women and HPV vaccine uptake decision-making processes found that only 32% ($n = 14$) of the women had initiated or completed vaccination (Stephens & Thomas, 2014). Surprisingly, knowledge regarding HPV infection and vaccination purpose was low in the women who had received the HPV vaccination. The primary information source reported was the Internet, followed by family members and health care providers. Participants noted that although they had received information from their mothers and television, this

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information was fragmented and inadequate (Stephens & Thomas, 2014). The lower-than-anticipated vaccination rates of young adult college students warrant further exploration of vaccination uptake history, knowledge, and awareness of HPV and HPV-related illness, and the sources from which young adults receive information related to HPV.

Purpose

The purpose of our cross-sectional study was to identify HPV vaccination uptake history, explore HPV knowledge and awareness, and identify sources of HPV information in a racial/ethnically diverse sample of male and female college students.

Methods

We analyzed responses to nine HPV-related questions as part of a larger investigation on HIV/STI and substance use risk and behaviors among young adults attending college. Participants were recruited from the campuses of a public state university and a public state college. Institutional review board approval was obtained from Florida International University and from Miami Dade College. Participants received a $10.00 gift card after completion of the anonymous survey. The survey was a Health Department Community Health survey that had been adapted to include the nine HPV-related items. Inclusion criteria for participation in the study were enrollment as a student and the ability to read and write English. After the surveys were completed, they were stored in a locked cabinet in a private office. Data were analyzed using SPSS Statistics software version 22.0 (IBM, Armonk, NY).

Results

A convenience sample (n = 840) of ethnically diverse college students (male and female) attending a south Florida university campus and a state community college campus were recruited. The sample included 317 male students and 523 female students. Ages ranged from 18 to 64 years, and 68% of the male and 70% of the female participants were between the ages of 18 and 24. Table 1 addresses gender and race/ethnicity of the participants.

Major Findings

Vaccine uptake history. Overall, 554 (66%) of the 840 participants were vaccine naïve. For the 523 female participants, 323 (61.6%) had not received the vaccine, while 231 (72%) of the 317 males had not received the vaccine. Vaccination administration guidelines for HPV vaccine consists of a three-dose series. For this sample of 840 college students, 172 (20.5%) had completed the vaccination series; 49 (5.8%) completed two doses, and 65 (7.7%) received one dose.

Knowledge and awareness. Six questions addressed the participants' knowledge and awareness of HPV. The questions were answered in a *True/False* or *Yes/No* response format. A majority of participants, 454 (54%), felt that they were not at risk for HPV exposure; 239 (28%) of the participants did not know that HPV was the cause of genital warts; 276 (33%) of the sample population did not know

Table 1. Gender and Race/Ethnicity

	Female n = 523		Male n = 317		Sample Total N = 840	
Race/Ethnicity	**Frequency**	**Percent**	**Frequency**	**Percent**	**Frequency**	**Percent**
Hispanic	231	44.1	135	42.5	366	43.6
Black/African American	79	15.1	53	16.7	132	15.7
Black/Afro Caribbean	71	13.5	37	11.6	108	12.9
Black/Sub-Saharan	8	1.5	1	0.3	9	1
Black other	2	0.4	1	0.3	3	0.3
White/Other	88	16.8	55	17.3	143	17
Native American	20	3.8	15	4.7	35	4.19
Asian	24	4.6	20	6.3	44	2.3