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HPV Awareness and Vaccine Willingness among Dominican Immigrant Parents Attending a Federal Qualified Health Clinic in Puerto Rico

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Abstract

The purpose of this study was to describe the socio-demographic characteristics, awareness of human papillomavirus (HPV), and willingness to vaccinate among a convenience sample of 60 immigrant Dominican parents of adolescent sons in a Federal Qualified Health Clinic (FQHC) in Puerto Rico (PR). Participation involved completing a self-administered survey. Even though more than half of the parents had not received proper HPV vaccine orientation from healthcare provider (58.3%) nor asked provider for vaccination recommendation for their adolescent sons (56.7%), most parents were aware of HPV (91.7%) and HPV vaccination among males (55.0%). Among those with unvaccinated sons, willingness to vaccinate the son within the next year was high (83.8%). The low vaccination percentage (31.7%) and information exchange between the parents and the son's healthcare provider indicates an opportunity for future culturally tailored interventions to target HPV vaccination among healthcare providers and parents of foreign descent in order to increase HPV vaccine uptake among males.

Keywords

HPV Vaccine; HPV Awareness; HPV Willingness; Men; Immigrants

INTRODUCTION

In recent years, Dominican migration has become increasingly scattered through North America, the Caribbean, Latin America and Europe (1). In addition to the continental U.S., Dominicans have established sizable communities in other countries, including Puerto Rico (1). According to the 2010 US Census, there are 68,036 (1.8%) first generation immigrants from the Dominican Republic living in Puerto Rico (2). A sociologist in Puerto Rico, who has studied this group for decades, has indicated that Dominicans in Puerto Rico have created a transnational identity while retaining strong social, cultural, economic and political links with their homeland, even while living abroad for long-period of time (1). However, socio-economic disparities have been documented as well. According to the 2006–2010 American Community Survey (ACS) (3), almost half (44.8%) of the 61,679 sampled Dominicans living in Puerto Rico earn their income below the poverty level. The ACS has also estimated that 48.6% of the population 25 years and over, has less than a high school education (4).

Although the continuously rising flow of international migration has made the topic of health and migration increasingly important worldwide (5), studies exploring the effects of Dominican immigrants on health are scarce in Puerto Rico (6). In the case of Human Papilloma Virus (HPV), The HPV vaccine is provided for eligible low-income, uninsured or underinsured children throughout the Vaccines for Children (VFC) program at Federally Qualified Health Centers (FQHCs) in PR (7). This clinical setting is visited mostly by Dominicans, in which clinical services are provided despite their legal status. Since opportunities for cancer prevention and control for HPV-related cancers are possible among this group in this primary health center facility, this study examined HPV knowledge and HPV vaccine acceptability among parents of boys attending an FQHC in Barrio Obrero, Santurce, Puerto Rico, a neighborhood in which cluster of this community is highly prevalent (1).

METHODS

A cross-sectional study among 200 consecutive parents/guardians (referred to as “parents”) of young males aged 9–17 years were recruited from the HealthproMed Clinic- Barrio Obrero in Santurce, San Juan (SJ), PR, which is part of a FQHC. Recruitment was performed by the study coordinator and research assistants, through an announcement at the clinic’s waiting room. Research assistants also gave out flyers containing the study aims as well as eligible criteria and staff contact information. Eligible criteria for this study was to be (a) 21 years or older and (b) a parent of a young male between 9–17 years of age. In case that the two parents of the young male were available to participate in the study, only one parent was allowed to complete the questionnaire. Once identified, the participants were given an informative sheet to have a better understanding of the study aims, procedures, and benefits/risks. Upon acceptance for participation, the recruiter distributed a questionnaire to each subject for completion. No personal identifying information of the participants was gathered; therefore, no consent process was performed.

The self-administered questionnaire consisted on a series of questions designed to obtain information from each participant about knowledge, attitudes, willingness, and barriers regarding the HPV vaccine. The questionnaire was translated to Spanish and culturally adapted for the Hispanic population in PR from the “HPV Immunization in Sons (HIS) Study: Baseline parent survey” developed by Reiter et al. in 2010 (8). The entire procedure took approximately 30 minutes, and the questionnaire was given back to the recruiter after completion. The study protocol was approved by the Institutional Review Board of the University of Puerto Rico, Medical Sciences Campus.

Measures

Socio-demographic characteristics analyzed in the study sample of Dominican immigrant parents were age, gender, marital status, level of education, employment status, household annual income, and current healthcare insurance. Parents that reported receiving the government health insurance called ‘*Mi Salud*’ were considered in the “yes” category, while those that reported having no health insurance were considered in the “no” category. Socio-demographic characteristics pertaining to their sons, such as age and current healthcare insurance, were also considered for this study. Sons that had received any health insurance (private or public) were considered in the “yes” category, while those that had no health insurance were considered in the “no” category.

HPV Awareness

In order to assess awareness of HPV among the sample, the Dominican parents were asked whether they had heard about HPV prior to the survey and whether they had ever heard that the HPV vaccine could be administered to males. All parents were also asked if their sons’ healthcare provider ever recommended that their son should get the HPV vaccine and if they had ever asked the provider for vaccine information.

Willingness of HPV Vaccination

One item assessed HPV vaccine initiation for the adolescent son. All of the parents were asked if the adolescent son had received at least one dose of the HPV vaccine. Three items were then used to assess willingness to get their son the HPV vaccine only among those parents with unvaccinated sons. One item asked if the parent was willing to get the son vaccinated if it was free and the other item asked if the parent was willing to get the son vaccinated if it cost \$10. A 5-point scale was used to answer the two items, with responses of “definitely willing”, “probably willing”, “not sure”, “probably not willing” and “definitely not willing”. They were also asked how they felt about vaccinating their son in the next year (2014).

RESULTS

Parents and Son’s Socio-demographic Characteristics

The study sample was comprised of 60 parents whose place of birth was the Dominican Republic. The mean age of this group was 38.6 ± 7.2 years. The vast majority was female (91.7%), reported being employed (91.7%), and reported having the government health insurance called ‘*Mi Salud*’ (70.0%). More than half reported attaining a level of education

of high school or less (58.3%) and having been married or cohabitating (55.0%). Almost half (40%) reported low annual household income earnings of less than \$5,000. Regarding the sons' characteristics, the mean age of the youngest son was 12.9 ± 2.6 years. Most of the parents reported that their adolescent son had visited a healthcare provider in the last year (80.0%) and had any type of health insurance (68.3%).

HPV Infection Awareness and Vaccine Willingness

Most parents had heard about the HPV infection (91.7%) and about the HPV vaccine administration in young males (55.0%). However, most of them reported that their adolescent son (within the ages 9–17) had not been vaccinated against HPV (61.7%). Approximately one third (31.7%) reported also not having any of their daughters (within the ages 9–26) vaccinated. The parents mainly reported not having asked the healthcare provider (56.7%) nor received a provider (58.3%) recommendation to get their son the HPV vaccine.

On the other hand, HPV vaccine willingness among parents with unvaccinated sons ($n=37$) demonstrated favorable results for the most part. The vast majority of these parents were willing to get their sons vaccinated in the near future (83.8%). More than half of them were probably/definitely willing to vaccinate their sons if the vaccine was set for free (78.4%) or even if they had to pay \$10 per dose (81.1%).

DISCUSSION

The purpose of this study was to assess awareness of HPV infection and willingness for HPV vaccination among Dominican immigrant parents of 9–17 year old sons attending a FQHC in Santurce, PR. Overall awareness of HPV infection and the vaccine administration in males was high even though it was a sample of reported low levels of education and income. When compared to similar populations, like a sample of immigrant Hispanic fathers in the US who called the National Cancer Institute's (NCI) Cancer Information Service Spanish-language call center (9), the HPV infection awareness among immigrant parents in our study resulted higher (91.7% vs 48.2%). However, despite these favorable results, more than half of our study participants had not vaccinated their sons (61.7%).

Among those parents with unvaccinated sons, a high percentage of the parents was willing to vaccinate their sons in the next year (83.8%). These findings are consistent with the willingness to vaccinate percentage among immigrant Hispanic fathers of sons in the US who called the NCI Cancer Information Service Spanish-language call center (87.5%) (9). Also, the willingness to vaccinate among our study participants remained high even though more than half had not received a healthcare provider recommendation (58.3%) nor had asked their provider to get their son vaccinated (56.7%).

The high willingness percentage despite the lack of counseling by the healthcare provider is an interesting finding. It may demonstrate that this population in this type of setting recognizes the importance for vaccination and are lacking the opportunity for effective cultural interventions regarding HPV vaccination. As such, physician recommendation has been shown to be an important predictor of vaccination (7, 10, 11, 12), and one of the main sources of HPV vaccine information for parents (13). This demonstrates the essential role

healthcare providers play when informing their patients and the opportunity they represent for increasing vaccination rates among populations. Even more, by providing relevant information or using evidence-based practices such as vaccination reminder systems (14), the healthcare providers can help manage the uncertainty related to the vaccination, represented by the 13.5% of the parents that did not know how they felt about vaccinating their sons in the next year.

Study findings should be interpreted with caution. The small sample size and the recruitment of participants in a FQHC located in a predominantly low-income neighborhood in Santurce, PR, limits the generalizability to other populations or settings. As such, the study participants might not represent the overall Dominican population that attends other FQHCs located in the island. Nevertheless, this clinic receives annually a great amount of patients and provides services to Puerto Ricans, Dominicans, and other minority Hispanic groups. Also, Santurce is one of the predominant areas for Dominican residency (1). Therefore, this FQHC presents an ideal venue for increasing HPV vaccination among immigrants in the island, especially Dominican, by promoting the vaccine among healthcare providers and patients, particularly parents of adolescent sons. Finally, parental willingness levels also relied on self-reported data, and these may overestimate future vaccination behavior since intent does not always lead to behavior (15).

NEW CONTRIBUTION TO LITERATURE

This is the first study to describe HPV awareness and HPV vaccine willingness among Dominican immigrant parents of adolescent sons attending a FQHC in PR. Few studies have evaluated the effect of immigration on health in Puerto Rico. Since parents have the authority over their minors to get vaccinated, the assessment of the different components involved in the parental decision-making process is crucial for improving HPV vaccination uptake (16). As such, the focus on parents for this study provides insight information that can help guide primary prevention efforts aimed at Dominican immigrant parents and increasing vaccination rates among their adolescent sons. This study showed that there is a need for continued HPV promotion and education efforts among the Dominican community living in PR. Health care providers are key to HPV vaccination efforts, in a group of parents which although willing to vaccinate their sons, report lack of understanding and counseling of the importance of the HPV vaccination for their sons.

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Table 1

Socio-demographic characteristics of Dominican immigrant parents and 9–17 year old sons (n=60)

Parent characteristics	Number	Percent (%)
Age (years)^a		
21–29	5	8.3%
30–39	31	51.7%
40+	23	38.3%
Gender		
Female	55	91.7%
Male	5	8.3%
Marital Status^b		
Single, never married	12	20.0%
Married/cohabiting	33	55.0%
Divorced or separated	13	21.7%
Level of education		
< High School	20	33.3%
High School	15	25.0%
> High School	25	41.7%
Employed^c		
No	2	3.3%
Yes	55	91.7%
Familiar Annual Income^d		
< \$5,000	24	40.0%
\$5,000–14,999	18	30.0%
> \$15,000	7	11.7%
Healthcare Insurance^e		
No	11	18.3%
Yes	42	70.0%
<hr/>		
Son characteristics*	Number	Percent (%)
Age (years)^f		
9–10	13	21.7%
11–12	12	20.0%
13–15	19	31.7%
16–17	11	18.3%
Visited healthcare provider in the last year^g		
No	8	13.3%
Yes	48	80.0%
Healthcare Insurance^h		
No	14	23.3%
Yes	41	68.3%

^aMissing data for 1 participant,

^bMissing data for 2 participants,

^cMissing data for 3 participants,

^dMissing data for 11 participants,

^eMissing data for 7 participants

* 60 parents answered the questions about their adolescent sons' characteristics,

^fMissing data for 5 participants,

^gMissing data for 4 participants,

^hMissing data for 5 participants,

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Table 2

HPV infection awareness and vaccine willingness characteristics of Dominican parents (n=60)

Characteristic	Number	Percent
HPV infection awareness		
Have you heard about the HPV infection?ⁱ		
No	2	3.3%
Yes	55	91.7%
Have you heard about the HPV vaccine for males before?^j		
No	23	38.3%
Yes	33	55.0%
Have you ever asked a provider to get your son the HPV vaccine?^k		
No	34	56.7%
Yes	24	40.0%
Have you ever received provider recommendation to get your son the HPV vaccine?^l		
No	35	58.3%
Yes	20	33.3%
HPV vaccine willingness		
Has your son received at least one dose of the HP vaccine?^m		
No	37	61.7%
Yes	19	31.7%
Daughter(s) (9–26 years old) got the HPV vaccine		
No	19	31.7%
Yes	16	26.7%
How do you feel about getting your son vaccinated against HPV in the next year (2014)?[*]		
I don't want him to be vaccinated	1	2.7%
I want him to be vaccinated	31	83.8%
Don't know	5	13.5%
Willingness on getting their sons vaccinated against HPV (if it's for free)^{n*}		
Definitely not willing	0	0.0%
Probably not willing	0	0.0%
Not sure	7	18.9%
Probably willing	4	10.8%
Definitely willing	25	67.6%
Willingness on getting their sons vaccinated against HPV (if it's \$10 per dose)[*]		
Definitely not willing	0	0.0%
Probably not willing	2	5.4%
Not sure	5	13.5%
Probably willing	7	18.9%
Definitely willing	23	62.2%

ⁱMissing data for 3 participants,

^jMissing data for 4 participants,

^kMissing data for 2 participants,

^lMissing data for 5 participants,

^mMissing data for 4 participants,

ⁿMissing data for 1 participant,

* Among those unvaccinated sons (n=37)

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