Predictors of Having HPV Vaccination Among Young Adults: A Brfss 2014 Study

Deborah Kanda
Georgia Southern University, dk01636@georgiasouthern.edu

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PREDICTORS OF HAVING HPV VACCINATION AMONG YOUNG ADULTS: A BRFSS 2014 STUDY

Deborah Kanda B.Pharm; Kelly Sullivan, PhD; and Robert Vogel PhD, MA

INTRODUCTION

- Human Papillomavirus (HPV) is the most common sexually transmitted infection in the United States (1) with nearly all sexually active men and women contracting at least one form of it in their lifetime (2). HPV can cause health problems including genital warts and cancers such as cervical cancer, oropharyngeal cancer and cancers of the vulva, vagina, penis or anus (2)
- According to the CDC, an estimated 79 million Americans have HPV and about 14 million become newly infected annually (2). About 74% of new infections occur in those aged 15-24 years (3)
- Vaccination has been found to lower the risk of HPV infection (4). The Advisory Committee on Immunization Practices recommend routine HPV vaccination for all 11 and 12-year olds (5). However, HPV vaccination rates lag behind compared to other recommended vaccines for young adults (5)
- Several studies have investigated the reasons for low HPV vaccinations and the most common cited reasons for not vaccinating were “not recommended/needed”, “not sexually active” and “safety concerns/side effects” (6). Other reasons include financial concerns, low perceived risk of HPV infection, irregular preventive care, social influences and parental attitudes and concerns about the vaccine’s effect on sexual behavior (7)
- There is a need to better understand social factors that are predictive of vaccination among young adults

PURPOSE

- **Objective:** To evaluate the association of social determinants of health on HPV vaccination rates among adults between the ages of 18-34 years

METHODS

- Data from the 2014 Behavioral Risk Factor Surveillance System (BRFSS) were used for this study. The 8 states (AL, DE, GA, IN, MA, MN, RI, and WY) that included the HPV vaccination module in their survey were included in the analyses
- There were 8,050 adults aged 18-34 years that gave valid response when asked “Have you ever had the HPV vaccination?”. This was categorized into “yes” and “no” responses and used as the dependent variable
- Social factors such as age, sex, race and ethnicity, education attainment, marital status, health insurance, PAP screening, metropolitan status and cigarette smoking were considered
- SAS 9.4 SURVEYFREQ, and SURVEYLOGISTIC regression analyses were used to assess the relationship between HPV vaccination status and the socio-demographic factors

RESULTS

Table showing results from logistic regression analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Odds ratio</th>
<th>95% Confidence Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years (25-34)</td>
<td>0.29</td>
<td>(0.23, 0.36)</td>
</tr>
<tr>
<td>Race (Black vs White)</td>
<td>0.54</td>
<td>(0.40, 0.73)</td>
</tr>
<tr>
<td>Race (Other vs White)</td>
<td>0.57</td>
<td>(0.44, 0.74)</td>
</tr>
<tr>
<td>Insurance (yes)</td>
<td>1.71</td>
<td>(1.28, 2.29)</td>
</tr>
<tr>
<td>Education (&gt;HS)</td>
<td>1.70</td>
<td>(1.36, 2.11)</td>
</tr>
<tr>
<td>Marital status (single)</td>
<td>2.06</td>
<td>(1.64, 2.59)</td>
</tr>
<tr>
<td>Metropolitan status (urban)</td>
<td>1.93</td>
<td>(1.23, 3.04)</td>
</tr>
<tr>
<td>Smoking status (yes)</td>
<td>0.87</td>
<td>(0.69, 1.09)</td>
</tr>
<tr>
<td>PAP test (yes)</td>
<td>1.67</td>
<td>(1.26, 2.20)</td>
</tr>
</tbody>
</table>

PUBLIC HEALTH IMPLICATIONS

- It is imperative to improve HPV vaccination rates by focusing on high-risk populations to prevent disparities in cervical cancer and other cancers that are associated with HPV infection
- HPV infection and cervical cancer disproportionately affect minority women (9). Efforts to increase vaccination among minority groups have the potential to reduce disparities in HPV-related diseases and cancers

STRENGTHS & LIMITATIONS

- **Strengths:**
  - The BRFSS sample size was large and allowed for a comprehensive analysis of the data
  - The study participants were from the community and extended beyond clinical populations to achieve a true representation of study participants
- **Limitations:**
  - Self-reported responses
  - The study only considered responses to ever had the HPV vaccine and not on the completion rates

CONCLUSION

- Among adults aged 18-34 years, younger age, female sex, white race, having health insurance, higher education, metropolitan residence, being unmarried, and having had pap test were found to be associated with increasing odds of receiving the HPV vaccination
- Focused educational efforts should target older adolescents, including males and other racial groups. These efforts should facilitate increase in HPV vaccination rates

REFERENCES