Poverty and Race/Ethnic Disparities in Human Papillomavirus Vaccine Series Resistance in guardians of female teens in the United States

UTSA Demography

Alexis R. Santos Lozada, M.A.
Department of Demography
The University of Texas at San Antonio
alexis.santos@utsa.edu

Introduction

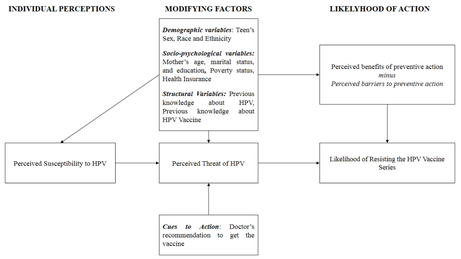
In 2006, the Federal Drug Administration (FDA) approved the first vaccine against Human Papillomavirus. Poor and race/ethnic minorities are more likely to be infected with HPV and to have cervical cancer detected in later stages. As minority populations continue to grow these persistent differences could play a burden to the US healthcare system and to them. The objective of this research is to study poverty and race/ethnic disparities in HPV vaccine resistance in guardians of female adolescents in the United States.

Research questions

Are there differences in the level of resistance in guardians of female adolescents in the United States by race/ethnicity? Are there differences in the level of resistance of guardians of female adolescents by poverty status (level)?

Health Belief Model

This study is framed in the traditional Health Belief Model. This model has been previously used to frame preventive care and it postulates that the likelihood of accepting or resisting a preventive care intervention is directly influenced by the perceived threat of the disease and the benefits of the intervention. The perceived threat is influenced by Individual Perceptions and Modifying Factors, this directly influence the likelihood of action.



Data

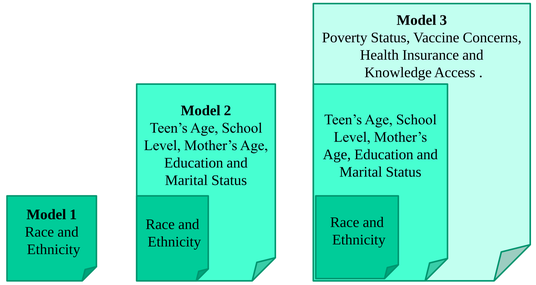
Data for this analysis come from the 2011 National Immunization Survey – Teen. The NIS-Teen is a cross sectional survey of civilian, non-institutionalized population between the ages of 13 and 17 years in all states and the US Virgin Islands (Center for Diseases Control and Prevention 2011).

Methods

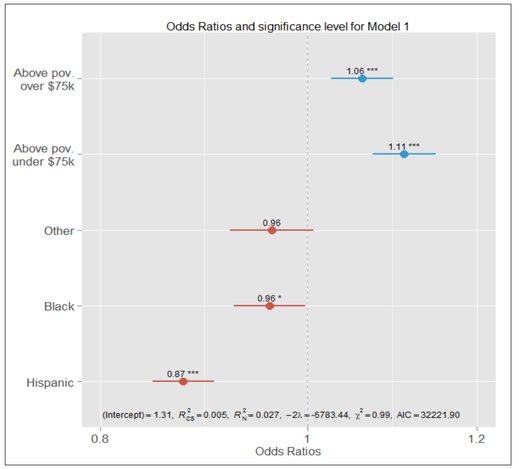
Binomial logistic regression models were fitted in a nested manner for the outcome variable. Models are adjusted for stratification, clustering and unequal probabilities of selection (weights).

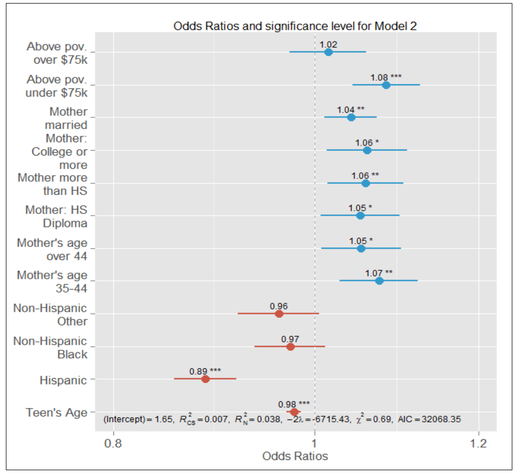
The R statistical software was used to complete all statistical processes. Logistic regression models were fitted using the SURVEY library to incorporate complex survey adjustments.

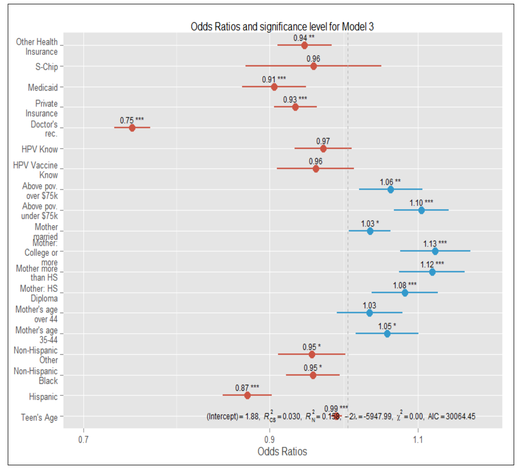
Structure of the Models



Results







Conclusions

Groups who live above the poverty line are significantly more likely to express resistance to the HPV vaccine series. Guardians of Non-Hispanic Blacks, and Hispanics were less likely to express resistance to the HPV vaccine series than guardians of Non-Hispanic White adolescents. Consistent with previous research is associated with lower odds of resistance to the HPV vaccine series.

Mothers with higher levels of education are more likely to express resistance than those in the reference group (less than High School).

Health Insurance, diseases knowledge and vaccine knowledge is associated with lower levels of resistance to the HPV vaccine..