

Correlations between Attitudes and HPV Vaccination

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Study Question and Background

Currently, nearly 80 million Americans are infected with Human Papilloma Virus (HPV) and 14 million will become affected every year. HPV also causes 35,000 cases of cancer in men and women every year in the U.S. As of recently, 51% of American adolescents have not completed the vaccine series for HPV (CDC, 2020). That is a huge gap that is unvaccinated and unprotected from HPV and the cancers it causes. Is there a correlation between demographics, beliefs, attitudes, lifestyle choices and behaviors that are keeping over half of this population from being vaccinated against HPV and preventing certain associated types of cancer?

Study Population

Our study population was women in the Lubbock community. The majority of our participants were aged 18-25 and currently attending university. The population had diversified backgrounds in regards to race, ethnicity, religion, culture, geographic origin, ideology, sexual experience and other demographics. We believed this would be a good population to survey vaccination rates, beliefs surrounding vaccinations, reasons for not vaccinating, and education surrounding HPV and its associated risks and cancers.

Data Collection Methods

First-party data was collected via a survey to determine if any correlative patterns could be found between a majority of women aged 18-25 regarding their knowledge about HPV and HPV immunization rates. The survey contained questions about one's demographic background, knowledge of HPV, and immunization status. On February 28, 2020, the survey was taken by 305 women over the course of two hours at the TTU recreation center's "Women's Night" event in which only women were present at the facility.

Results

From our sample of college-aged women (n=305), 33% were fully vaccinated, 21% were partially vaccinated, 21% were unsure of their vaccination status, and 20% were not vaccinated at all (Figure 1). A correlation was found between Contraception Status and HPV Vaccination Status, wherein those with contraception were more likely to have started and/or completed the vaccine series (Figure 2). A positive correlation was also found between Number of Sexual Partners and initiation of the HPV vaccine series. Respondents with a history of 3+ sexual partners were likelier to have started and/or completed the vaccine series than those with fewer sexual partners (Figure 3). Additionally, 70% of those who identified as Democrat/Liberal had started and/or completed the vaccine series, while only 47% of those who identified as Republican/Conservative had started and/or completed the vaccine series (Figure 4). Of the unvaccinated respondents, 19.5% were unaware of the vaccine or its benefits, 10.9% were wary of vaccination risks, 10.2% did not have insurance, and 51.6% marked "Other" as reason for not receiving the vaccine.

Gardasil 9 Vaccination Status of Sample

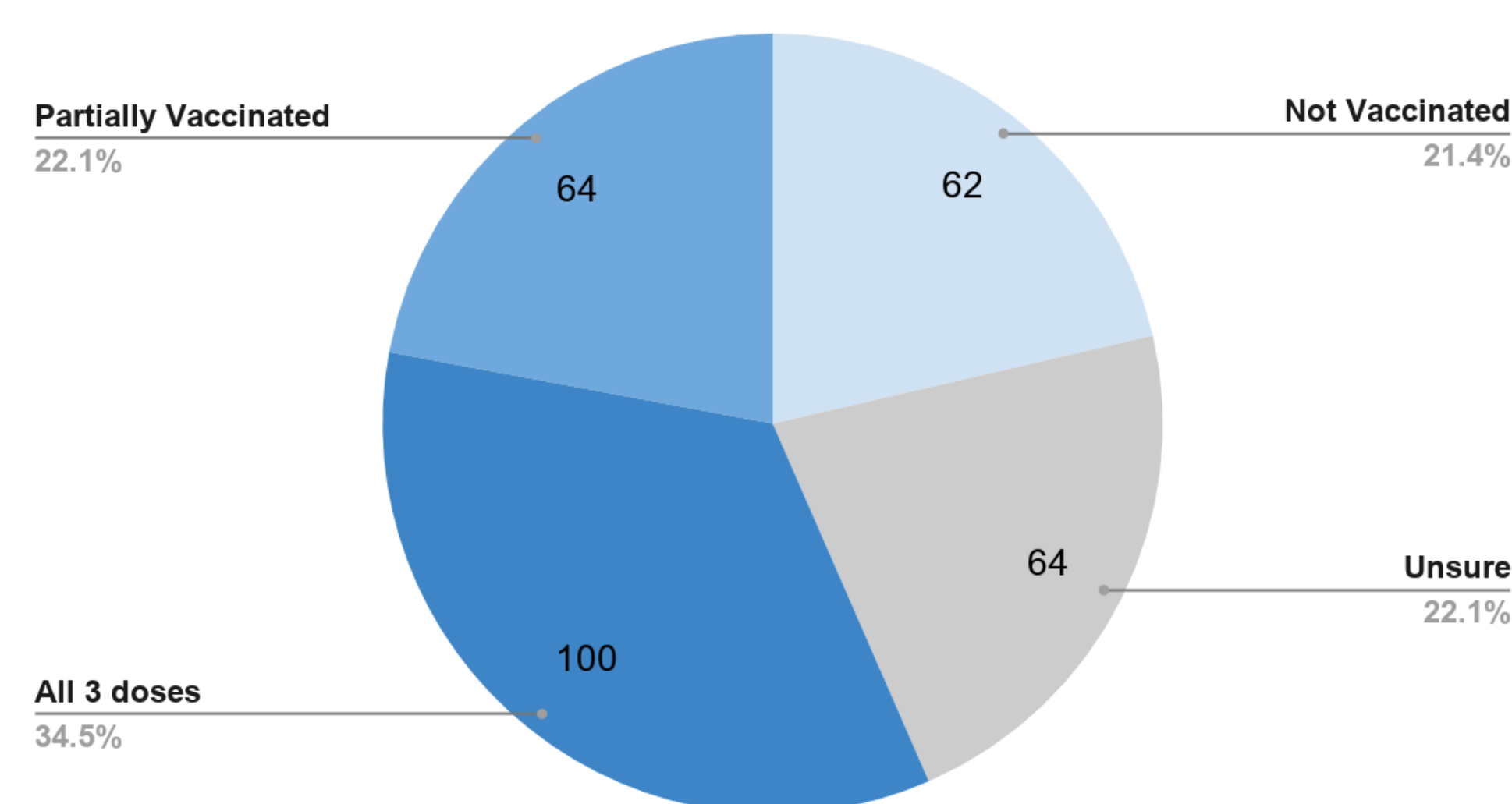


Figure 1: Gardasil 9 Vaccination Status of Respondents

Contraception Status and HPV Vaccination Status

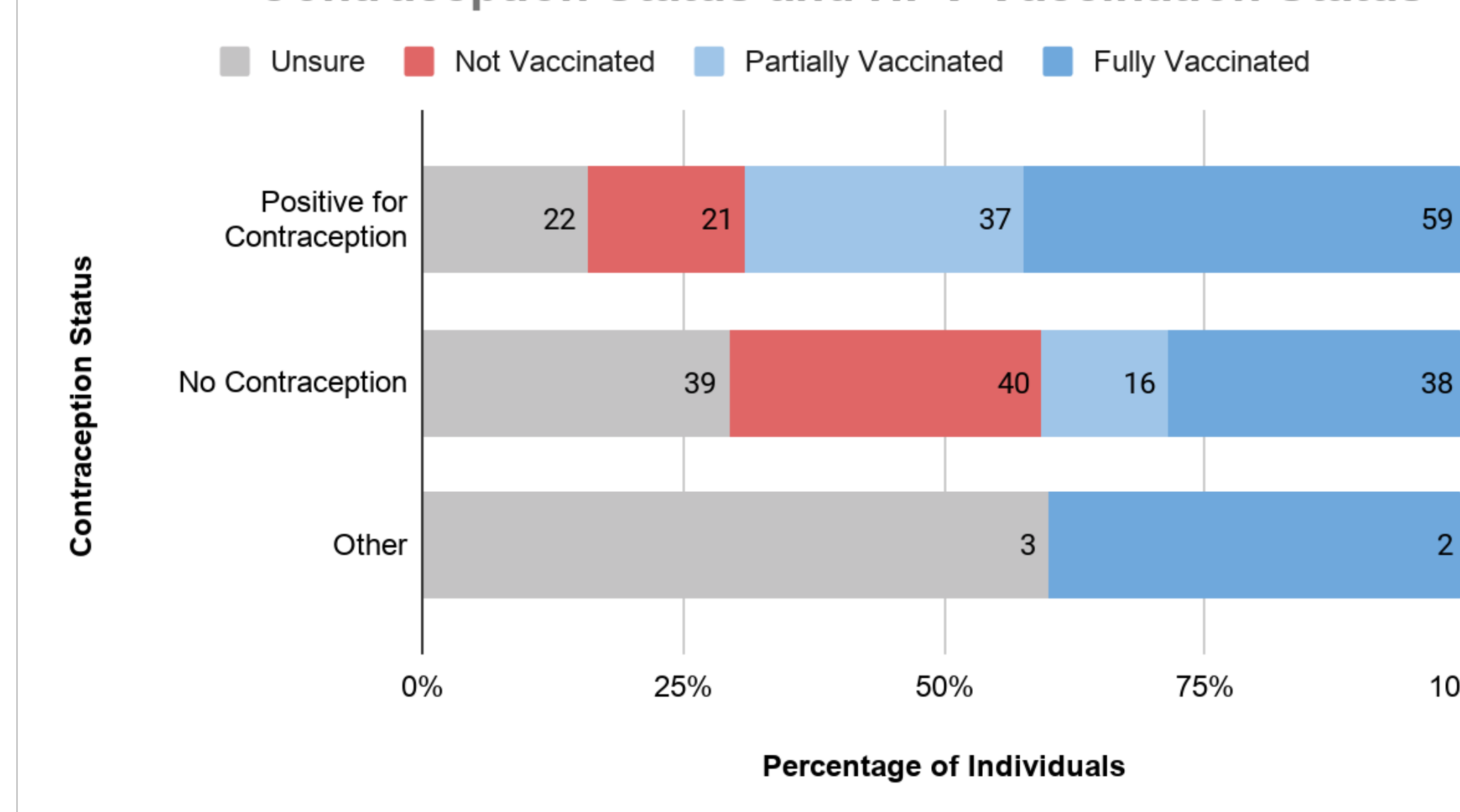


Figure 2: Contraception Status and HPV Vaccination Status

Number of Sexual Partners and HPV Vaccination Status

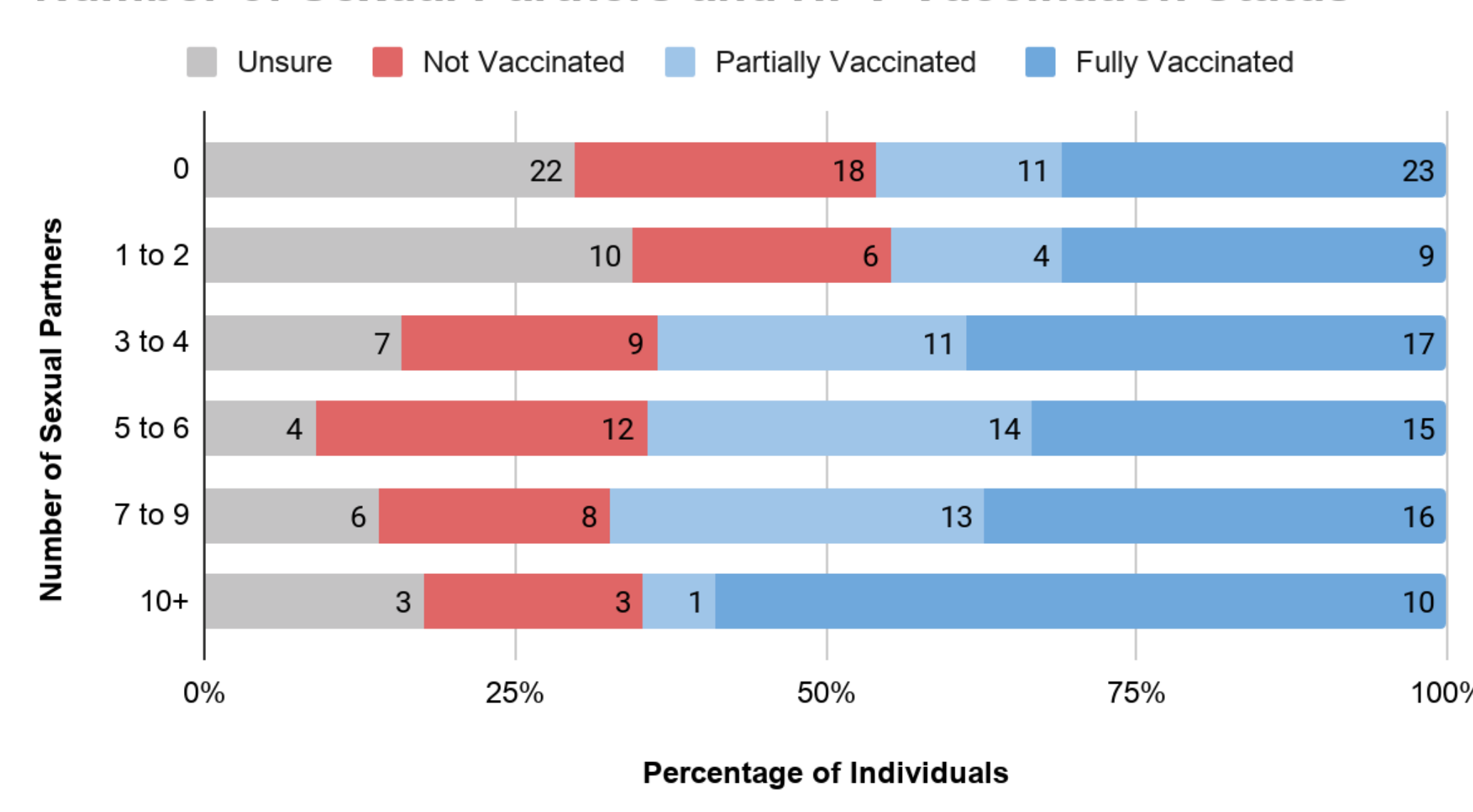


Figure 3: Number of Sexual Partners and HPV Vaccination Status

Political Leaning and HPV Vaccination Status

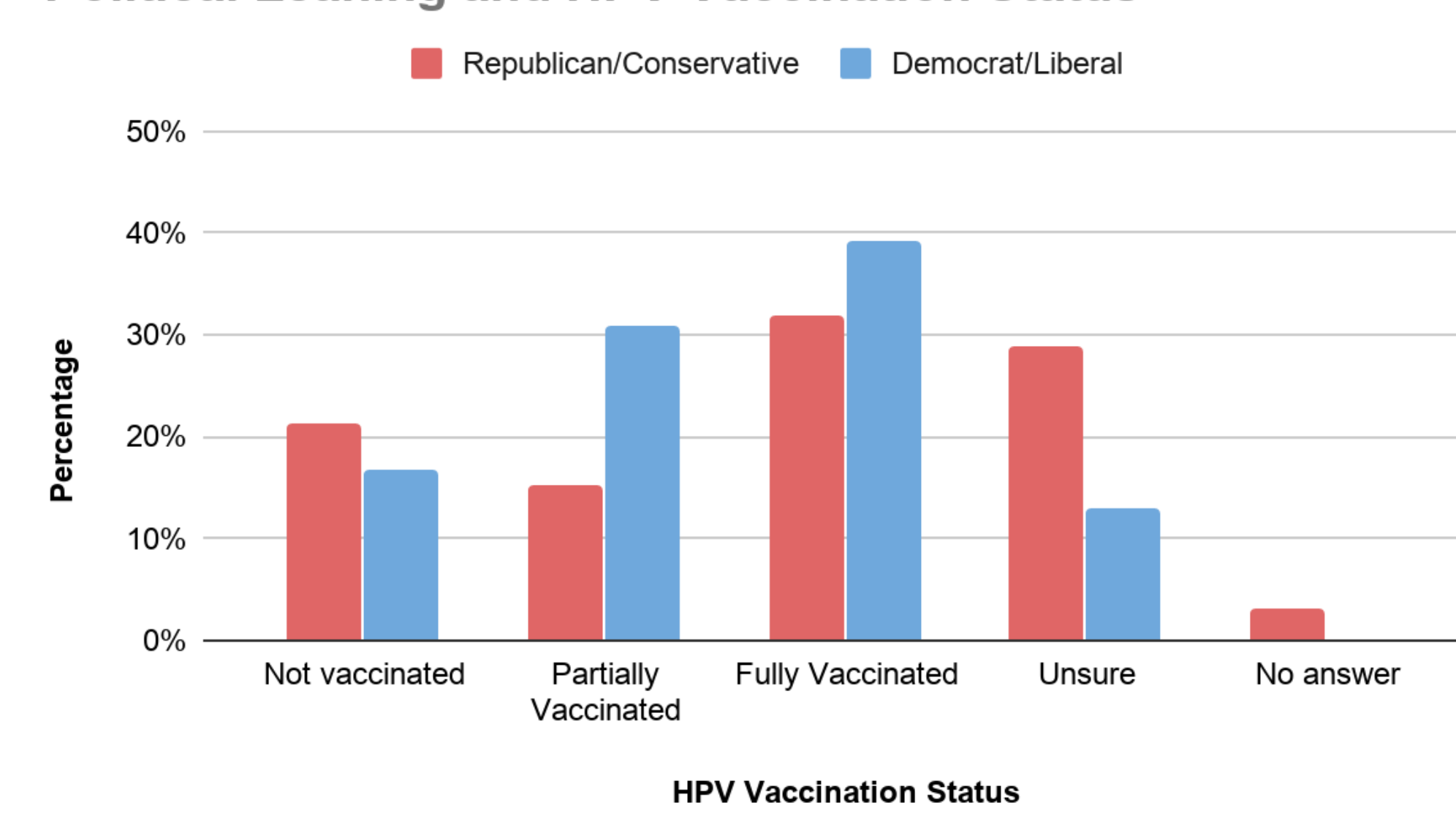


Figure 4: Political Leanings and HPV Vaccination Status

Conclusions

Results indicated that those more sexually active and those using contraception were more likely to have received the Gardasil 9 vaccination. With these populations more susceptible to sexually transmitted infections, such as HPV, receiving the Gardasil 9 vaccine will protect them from various strains of HPV associated with most cases of vulvar, vaginal, cervical, and anal cancer. Results also showed that a higher percentage of Democrats were vaccinated against HPV and a higher percentage of Republicans were unsure of whether or not they received the vaccination. There may be a stigma against the Gardasil 9 vaccine in various cultures or political groups due to the association of HPV with sex.

Roughly 20% of the sample population were unsure of whether or not they had received the HPV vaccination. Although this may limit the accuracy of our comparison data, it does give us an indication of the public's knowledge of HPV and Gardasil 9.

Next Steps

- We appreciated a significant portion (22%) of our population was unsure about their vaccination status.
- This points toward a notable deficit in patient education.
- Over 22% percent of women, not including those who have willingly opted out of vaccination, are needlessly at risk for developing and perpetuating cervical cancer.
- We aim to contact a TTU course or student organization in order to educate the target population. A pre/post survey will be given to assess for improvement in patient education.