

## Self-efficacy mediates the relationship between social norms and HPV vaccine intentions in undergraduate students

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Human papillomavirus (HPV) is the most common sexually transmitted infection in the United States. The HPV vaccine reduces incidences of genital warts and certain cancers among both men and women. Unfortunately, many undergraduate students have not been vaccinated. Previous research suggests students are more likely to report greater intentions to get vaccinated when others (e.g., friends, physicians) believe they should receive the vaccine; that is, greater social norms are associated with greater vaccine intentions. However, few studies have examined potential mediators of this association. Drawing from the Theory of Planned Behavior and the Health Belief Model, we hypothesized that social norms would be related to vaccine intentions through self-efficacy.

Undergraduate students ( $N=210$ ) who had not received the HPV vaccine completed an online survey. Participants were predominately White (72%), female (67%), heterosexual (92%), and on average 19.9 years of age ( $SD=3.2$ ). Forty-nine percent were in a romantic relationship, and 55% were sexually active within the past three months. Participants completed HPV vaccine-specific measures, including social norms regarding vaccination, self-efficacy for vaccination, and vaccine intentions. Two mediation analyses (one per gender) were conducted to examine whether self-efficacy mediated the relationship between social norms and vaccine intentions.

For women and men, greater social norms were related to greater self-efficacy, and greater self-efficacy was related to greater vaccine intentions ( $ps<0.05$ ); additionally, social norms were indirectly related to vaccine intentions through self-efficacy ( $p<0.05$ ). For women, after accounting for self-efficacy, social norms were still significantly related to intentions ( $p<0.05$ ). For men, however, after accounting for self-efficacy, social norms were not significantly related to intentions ( $p=0.75$ ).

Consistent with previous findings, social norms were positively related to vaccine intentions; however, we found that this association was mediated by self-efficacy. Future intervention studies should consider targeting social norms and improving students' confidence in their ability to obtain the vaccine.