HPV Vaccination Interventions Among Young Adults: A Systematic Review

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Background
HPV is the most common STD in the United States with nearly 14 million people infected annually. It is responsible for nearly all cases of cervical cancer and five other cancers.1 The CDC recommends routine vaccines through the age of 26; however, completion rates remain low, while HPV infection rates remain high among 18- to 26-year-olds.2 Educational interventions have been shown to improve immunization uptake by influencing knowledge and attitudes.3 4 However, it is not clear to what extent to which instruments used in these interventions are validated.

Purpose
The purpose of this review is to identify the outcomes measured in HPV vaccination interventions conducted among young adults and the instruments used. Additionally, we will assess the extent to which the instruments used are validated.

Methods

- **Databases Searched:** PubMed, Web of Science, Embase, Cochrane

- **Inclusion criteria:**
  - Focused on HPV vaccination interventions
  - Examined young adults aged 18-26
  - Occurred after FDA approval of the HPV vaccine in 2006
  - Conducted within the United States
  - Peer-reviewed
  - Used quantitative or mixed-method approaches

- **Reliability and Blinding:** All of the articles were double-reviewed for reliability at each stage

<table>
<thead>
<tr>
<th>Table 1. Examples of HPV Intervention Characteristics</th>
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</thead>
<tbody>
<tr>
<td>Author, Year, Journal, Study Design, Interventions, and Notes, (C)</td>
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<tr>
<td>Chan et al., 2015, Pre-experimental, Vaccine effectiveness (English &amp; Spanish), 36 male and female young adults in a low-income primary care clinic in Southern California (18-26), N=51</td>
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<tr>
<td>Oehlert et al., RCT, 2008, International Journal of STD and Venereal Diseases, Knowledge of HPV, Knowledge of risk factors for cervical cancer, beliefs about perceived susceptibility to HPV, attitudes toward HPV vaccination</td>
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<td>Brandt et al., 2016, Mixed Methods</td>
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<td>Brandt et al., 2020, Mixed Methods</td>
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<td>Fotonova et al., 2018, BMC Health Services Research, Theory-based, English version, 36 male and female young adults in a low-income primary care clinic in Southern California (18-26), N=51</td>
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Results

- **Common outcomes:** HPV knowledge, intention, susceptibility, self-efficacy, and social norms.
- Most used RCT study design and were adapted from previous research and validated models, such as the Health Belief Model
- Validity not reported for most

Conclusions

Based on preliminary data extraction:
- 33 studies met the inclusion criteria.
- Majority of these studies were conducted in populations which are often identified as having lower uptake and are at a greater risk for infection.
- Lack of validation limits comparison and raises questions about the validity of findings.
- Review will improve the quality of HPV vaccination promotion research by clarifying the status of HPV vaccination research.
- Results suggest the need for the development of validated instruments to measure HPV intervention outcomes.

Responsible Conduct of Research

The systematic review followed PRISMA protocol. No IRB approval was required.

References


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