

## **Acceptability of Human Papillomavirus Self-testing vs. Clinician-testing in Adolescents**

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**Introduction:** Human papillomavirus (HPV) is the most common sexually transmitted infection among adolescent and young adult women, and infection with specific high-risk types of HPV may cause cervical carcinoma. HPV DNA testing is recommended in cervical cancer screening programs and is used in research protocols. Adolescents may find self-testing for HPV DNA to be more private and less embarrassing than clinician-testing; however, it will not be utilized if adolescents do not find it acceptable or prefer clinician-testing to self-testing. **Objective:** To develop a scale to measure acceptability of self-testing in adolescents, to assess acceptability of self- vs. clinician-testing for HPV DNA, and to evaluate whether acceptability and preferences for testing differ by sociodemographic factors, behavioral factors, and gynecological history. **Methods:** Sexually active adolescent girls 14-21 years of age (N=120) were recruited from an urban Teen Health Center. At a baseline visit, subjects completed a baseline survey and self-collected vaginal samples for HPV, then a clinician collected cervicovaginal samples. The survey was re-administered post-exam and two weeks later. Acceptability was measured by a 13-item scale, and preferred testing method was assessed by one item. The acceptability scale was evaluated for internal consistency, test-retest reliability, and for construct and factorial validity. Wilcoxon sign-rank tests and paired t-tests were used to assess differences between self- and clinician-testing acceptability, and linear regression was used to identify variables independently associated with acceptability. **Results:** The mean age of participants was 17 years and 84% were black. The acceptability scales demonstrated high internal consistency (Cronbach's alpha 0.84-0.87) and high test-retest reliability (intraclass correlation coefficient 0.82). Preference for and acceptability of self-testing were associated ( $p = .002$ ), supporting construct validity. Exploratory and confirmatory factor analyses of the scale revealed good model fit (goodness-of-fit index 0.89) for four underlying factors: trust of test result (2 items), accuracy of collection (3 items), comfort of procedure (5 items), and health outcomes (3 items). Scores for all 13 individual items and associated subscales measuring trust of test result, accuracy of collection and health outcomes were significantly higher (indicating higher acceptability) for clinician- than self-testing. A higher percentage of participants preferred clinician-testing to self-testing pre- and post-examination. Multivariate analysis demonstrated that race was independently associated with pre-examination acceptability of self-testing ( $p = .013$ ,  $R^2 .12$ ); mean pre-examination acceptability scale scores were higher for White participants (31.3) compared to Blacks (28.0). **Conclusions and Significance:** Adolescents in this study found clinician-testing to be more acceptable than self-testing, and preferred clinician to self-testing. It is important for clinicians and investigators to understand that some adolescents prefer clinician-testing because they may believe that they cannot obtain specimens correctly and do not trust the test results. Future studies should address whether acceptability and preferences may be modified by education about the accuracy of self-testing results.