Knowledge and Behaviors Related to Cervical Cancer
Do Educational Interventions Matter?

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BACKGROUND & SIGNFICANCE

- Approximately 13,000 new cases of cervical cancer are diagnosed in females every year in the US (CDC,2022).
- Cervical cancer is the most frequently diagnosed in women between age 30-44, with the average diagnosis occurring at age 50 (American Cancer Society, 2022).
- Kentucky has one of the lowest HPV vaccination rates in the US, with only 45% of eligible girls ages 13-17 who are vaccinated (Dietrich,2022).
- HPV vaccines have been successfully used, however college students account for the highest prevalence of HPV in the United States (Goldfarb and Comber, 2022).
- The significance of this study is important to measure the knowledge, attitudes, and behaviors related to HPV infection, vaccination, and future cervical cancer risk among college students.

PURPOSE & HYPOTHESIS

- The purpose of this study was to assess the knowledge, perceptions and behaviors towards HPV, cervical cancer, and HPV vaccination before versus after an educational intervention for Kentucky college students.
- It is hypothesized that upon completion of the education intervention, there will be a significant change in the knowledge, perceptions, and behavioral intentions regarding HPV vaccinations and cervical cancer screenings.

METHODS

- The following study was a descriptive, quasi-experimental study done on a convenience sample of college students.
- Participants included male and female students 18 years and older who were enrolled in a regional Kentucky university.
- Faculty teaching health courses were asked if the student researcher could present a 1-hour educational lesson to their classes. The presentation was created by the researchers regarding HPV, cervical cancer, risk factors, screening, prevention and HPV vaccination.
- 28-item pre- and post-survey (include the title of your survey here) was created by the research team to measure knowledge (17 questions), perceptions (3 questions) and behavioral intentions (3 questions). 4 demographic questions regarding gender, age, race, and year in school were included.
- Participants were given a pre/post-test along with an educational intervention created by the researchers.
- Descriptive statistics were done including frequencies, means and percentages.
- A paired t-test was done using Jamovi (Version 2.3) to measure any knowledge changes pre- versus post-intervention.

RESULTS

Table. 1. Student Demographics

Demographics	Total
Age	
18-20 years old	31(48..44%)
12-23 years old	23(35.94%)
24 years and older	10(15.63%
Ethnicity	
Black/African	10(15.63%)
Asian	6(9.38%)
Hispanic	2(3.13%)
White/Caucasian	46 (71.88%)
Gender	
Female	39(60.94%)
Male	24(37.50%)
Other	1(1.56%)
Classification	
Freshman	11(17.19%)
Sophomore	19(26.69%)
Junior	19(26.69%)
Senior	15(23.44%)

Figure 1. Student Likeliness to be Vaccinated for HPV Pre- vs. Post-Intervention

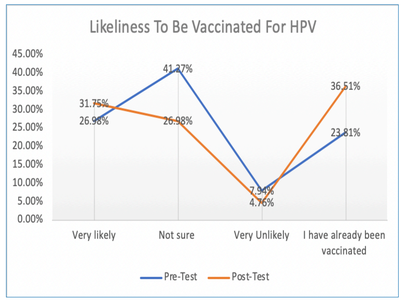


Table. 2 Knowledge Score Pre- vs. Post-Education Intervention

Descriptives

	N	Mean	Median	SD	SE
Pre-Scores	51	8.41	8.00	2.08	0.291
Post-Scores	51	11.39	12.00	1.64	0.229

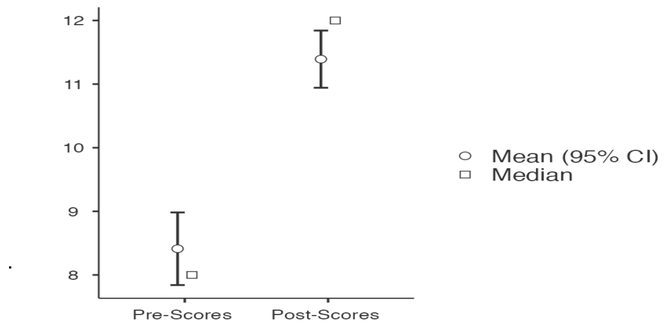
Paired Samples T-Test

			statistic	df	p
Pre-Scores	Post-Scores	Student's t	−10.3	50.0	<.001

Note. H_a $\mu_{Measure\ 1 - Measure\ 2} \neq 0$

p<.05

Figure. 2. Knowledge Score Changes Pre- vs. Post-Educational Intervention



RESULTS & DISCUSSION

- Total of 64 students attending a regional Kentucky university participated in the intervention.
- Even distribution of those who have both not been and been vaccinated for HPV (50%).
- While 12% (n=11) of participants stated they have already been screened for HPV, 26% (n=24) of participants were unaware of the need to be screened.
- 16% of individuals did not feel the need to be screened for HPV or cervical cancer. upon completion of the post-test. Upon post education presentation there was a 4.8% increase in those who said they were very likely to become vaccinated.
- After being educated those who said "yes" to believing they are at risk HPV went from 15.6% to 30.2% (p <.05).
- While 22.22% (n=13) reported to not being vaccinated for HPV at pre-test, 77.78% (n=49) reported to not being vaccinated upon completion of the post-test.
- Overall, this educational intervention improved knowledge and awareness of HPV and cervical cancer and increased intention to be vaccinated.
- There was a significant (p <.001) increase in the knowledge pre-intervention vs. post-intervention.

Conclusions & Recommendations

- The HPV education intervention was effective in increasing HPV and cervical cancer knowledge. In addition, the students in our study showed more greater intentions to be screened for HPV and cervical cancer along with being vaccinated for HPV.
- More health education interventions need to be implemented on college campuses.
- Additional research studies including larger sample sizes that address knowledge and behaviors regarding HPV and prevention strategies are needed.
- Since only 50% of the sample we studied said they were vaccinated against HPV, clearly more education and awareness of HPV and HPV prevention needs to target communities, high schools and universities in Kentucky.
- An HPV intervention can result in positive changes in knowledge and behavioral intentions regarding this disease, its risk factors, and prevention methods.
- Kentucky universities would benefit from more health education interventions and effective evidence-based programs to target this population for HPV prevention information including free or low-cost screenings and HPV vaccinations for it's students.

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