Does viewing an educational documentary about HPV disease and vaccination on a college campus in rural Northwest PA improve the knowledge level of HPV disease and vaccine among attendees of the program?

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Dedication

My DNP project is dedicated to my family whose unwavering support and understanding enabled me to realize my dream. To my husband, for all the sleepless nights taking care of our children, listening to my frustrations and putting up with my petulance. To my children Ethan, Anthony, and Angelina Rose who give me strength and purpose. May you look back and understand the moments in your life when I was not there for your karate tournaments and playdates. And may you be encouraged and be proud of me. To my mom and dad, my number one cheerleaders, thank you for always believing in me and for pushing me to keep reaching for the stars. Your optimism, encouragement, and love have pushed me though many difficult and challenging moments. You both have been the shining light that guided me not only through my studies but throughout my life. To my siblings, whom I call on last minute for miscellaneous things. Special gratitude from the bottom of my heart to my sister Joyce for your uplifting spirit and all your help. Thank you for always being there when I need you. To my parents-in-law and my sister-in-law, Jodie, for babysitting and making sure I am healthy. As I reflect on my journey, I feel blessed that I have all of you in my life. Thank you for walking this journey with me.

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Tables and Figures

Table 1. *Test Scores Before and After Education Video*

Student	Before	After
1	4/8	8/8
2	8/8	8/8
3	7/8	8/8
4	8/8	8/8
5	7/8	8/8
6	7/8	8/8
7	5/8	7/8
8	6/8	7/8
9	3/8	7/8
10	6/8	8/8
11	7/8	7/8
12	5/8	7/8
13	5/8	8/8
14	5/8	8/8
15	5/8	8/8
16	6/8	6/8
17	7/8	7/8
18	7/8	7/8
19	7/8	7/8
20	7/8	8/8
21	8/8	8/8
22	6/8	6/8

Table 2. *Questions and the percentage of improvement post educational session*

Question	% Improvement Post Training
1. HPV is a common sexually transmitted infection.	9
2. HPV causes cervical cancer.	14
3. HPV does not cause cancers of the head or neck.	23
4. Men can become infected with the HPV virus.	9
5. Only women can become infected with the HPV virus.	14
6. Most people who contract HPV from a partner will not have any symptoms of HPV disease.	23
7. There is a vaccine available to help prevent certain types of HPV infections.	9
8. The HPV virus causes genital warts.	27

Figure 1. Paired T-Test and CI: correct pre, correct post

Descriptive Statistics

Sample	N	Mean	StDev	SE Mean
correct pre	22	6.182	1.332	0.284
correct post	22	7.455	0.671	0.143

Estimation for Paired Difference

Mean	StDev	SE Mean	95% CI for μ_difference
-1.273	1.386	0.296	(-1.887, -0.658)

μ_difference: mean of (correct pre - correct post)

Test

Null hypothesis	H_0: μ_difference = 0
Alternative hypothesis	H_1: μ_difference ≠ 0

T-Value	P-Value
-4.31	0.000313

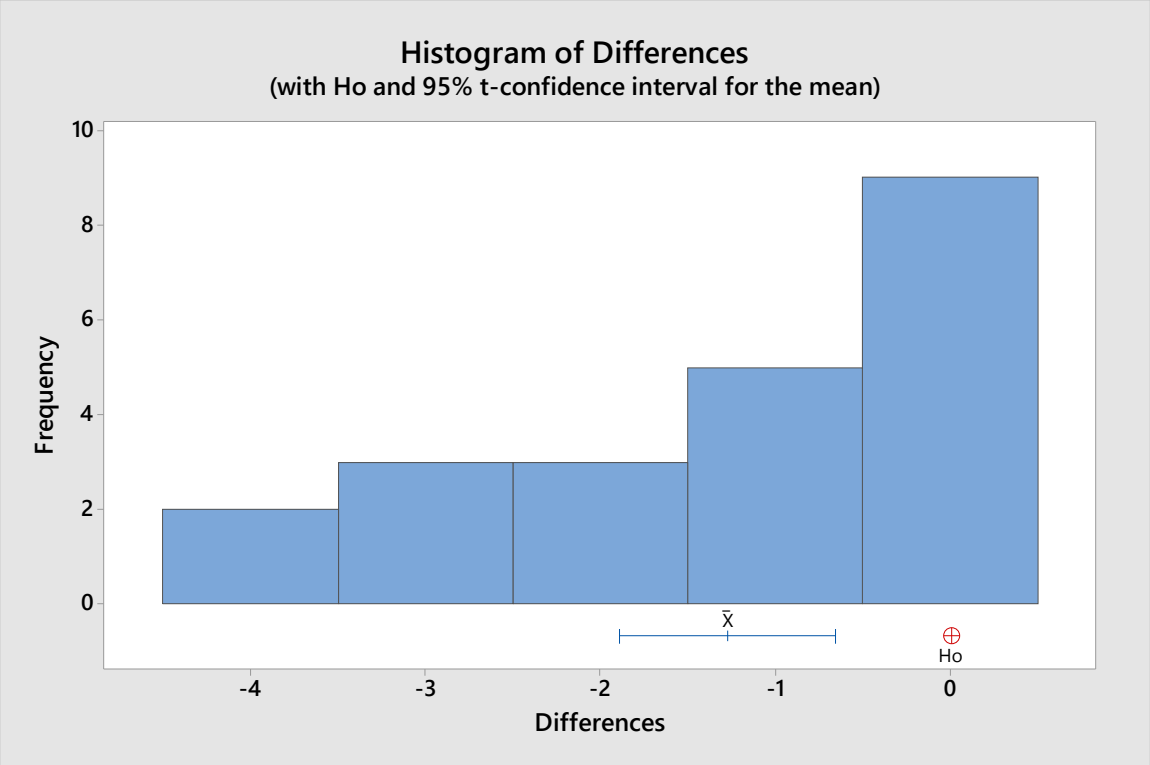
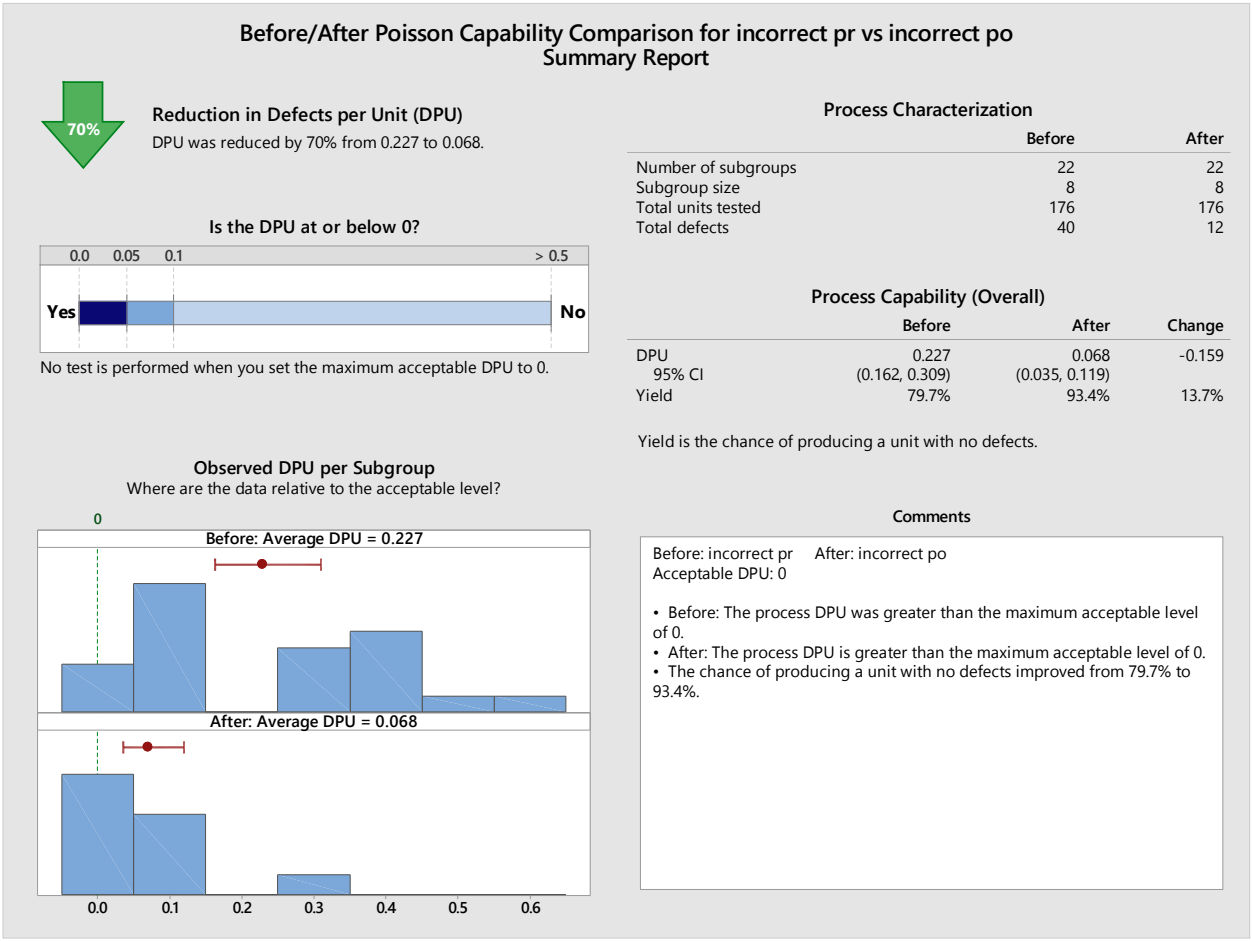


Figure 2. *Capability Comparison Analysis*



Abstract

Human Papillomavirus (HPV) is the most common sexually transmitted infection causing cervical, oropharyngeal cancers and genital warts. In the United States (U.S.), it is estimated that one in four individuals are infected, with an additional 14 million new cases of HPV infections occurring annually. HPV contributes to 17,600 cancers in women and 9,300 cancers in men annually. HPV vaccine is the most effective way to protect against HPV related cancers. However, there is a lag in HPV vaccination due to barriers such as: health care providers hesitancy to promote the HPV vaccine, low baseline knowledge of HPV and HPV vaccine, safety concerns, cost and system barriers. Studies show that there is low overall knowledge of baseline HPV and HPV vaccine among college students. The purpose of this study is to determine if an educational video intervention increases baseline knowledge of HPV and HPV vaccine in the attendees on a college campus in Northwestern Pennsylvania. To test this, a study design consisting of an educational session that utilizes an HPV educational video, followed by a brief question and answer session was developed. A questionnaire is implemented pre- and post-intervention to analyze HPV knowledge in participants. There were 22 participants who completed the study. Comparison analysis between the pre- and post-knowledge assessments show statistically significant improvement of results after viewing the educational documentary on HPV. The likelihood of getting a perfect score on the assessment increased by 13.7%, equating to a 70 percent reduction of incorrect answers from viewing the educational video.

Does viewing an educational documentary about HPV disease and vaccination on a college campus in rural Northwest PA improve the knowledge level of HPV disease and vaccine among attendees of the program?

Background

Human Papillomavirus (HPV) is a common virus that is associated with skin warts, anogenital, oropharyngeal and cervical cancer (Centers for Disease Control and Prevention [CDC], 2017). In the United States (U.S.) alone, an estimated 79 million individuals are infected, with an additional 14 million new cases of HPV infections occurring yearly. HPV contributes to 17,600 cancers in women and 9,300 cancers in men annually (CDC, 2017*)*. HPV vaccine is the most effective and safest protection against HPV related cancers. Although there is an increase in HPV vaccination since its introduction in 2006, it remains disproportionately low in comparison to other adolescent vaccines. Four out of ten adolescent girls, and six out of ten adolescent boys are unvaccinated against HPV, and are vulnerable to cancer (CDC, 2015).

HPV is transmitted through skin to skin contact, mostly through sexual activity with an infected individual. There are over 120 HPV types that have been identified. Forty of them are associated with cervical cancer. Low risk or non-oncogenic types such as types 6 and 11 causes genital warts, and laryngeal papillomas. High risk or oncogenic HPV types results in cervical, anogenital and oropharyngeal cancers. More than 99% of cervical cancer is related to HPV; and type 16 and 19 accounts for about 70% of cervical cancers (Warren, 2009).

In the U.S. about 11,000 women are diagnosed with cervical cancer, and about 4,400 of those women die annually (CDC, 2013). In men, oropharyngeal cancer is the most common cancer cause by HPV. HPV causes 91% of anal cancers, 75 % of vaginal cancers, 69 % of vulvar cancer, and 63 % of penile cancers (CDC, 2018). About one in 100 sexually active adults in the U.S. has genital warts at any given time. The highest rate of new HPV infections is between the ages of 15-24 years old (CDC, 2013).

The National Health and Nutrition Examination Survey (NHANES) 2011–2014, provided some statistics regarding HPV among adults aged 18 to 59 years old. The prevalence of oral HPV for adults during 2011 to 2014 was 7.3%, and high-risk HPV was 4.0%. Data from 2013 to 2014 showed that prevalence of any and high-risk genital HPV was 45.2% and 25.1% in men and 39.9% and 20.4% in women, respectively. "Prevalence of any and high-risk oral HPV was overall lowest among non-Hispanic Asian adults and was highest among non-Hispanic black adults. Prevalence of any and high-risk oral HPV was higher in men than women except for high-risk HPV among Asian adults. Prevalence of any and high-risk genital HPV was lower among non-Hispanic Asian and higher among non-Hispanic black than both non-Hispanic white and Hispanic men and women" (McQuillan, G., Kruszon-Moran, D., Markowitz, L.E., Unger, E.R., & Paulose-Ram, R., 2017).

HPV Vaccine Recommendation

The CDC and Advisor Committee on Immunization Practices (ACIP) updated the HPV vaccine recommendation in October of 2016. The new recommendation is for 11

or 12-year-old boys and girls to receive two doses of HPV vaccine instead of three doses for individuals starting the vaccination series before the age of 15 years old. Vaccinations needs to be 6 to 12 months apart. Three doses of HPV vaccine are recommended for individuals starting the vaccination series on or after the 15th birthday, and for people with certain immunocompromising conditions (CDC, 2017). ACIP recommends female vaccination at aged 13 through 26; and for males aged 13 through 21 for persons without adequate vaccination in the past. Immunocompromised individuals, transgender adults, and males who are bisexual, transgender or who plan to have sex with other men are recommended to get the three-series schedule: 0, 1-2 months, 6 months; and can be vaccinated until the age of 26. The vaccination series can still be started at age 9 (CDC, 2016). This change was recommended by the CDC and the ACIP after data showed that the antibody responses after two doses given at least 6 months apart to 9-14 years old was as good or even better than the three doses given to older adolescents and young adults, the age group in which efficacy was demonstrated in clinical trials (CDC, 2017). Ideally, vaccination should be administered prior to HPV exposure. Thus, it is recommended to vaccinate adolescents prior to their first sexual encounter (CDC, 2016).

HPV Vaccine Statistics

HPV vaccine uptake is low when compared to other adolescent vaccines. In 2015 among males, coverage with ≥1 HPV vaccine dose was 49.8% and with ≥3 doses was 28.1%. The females' coverage with ≥1 dose was 62.8% and with ≥3 doses was 41.9%. This shows that there were less series completion compliance. In 2015, among all adolescents (females and males combined), HPV vaccination coverage with ≥1 dose

was 56.1% (95% CI = 54.9%–57.4%), with ≥2 doses was 45.4% (95% CI = 44.2%–46.7%), and with ≥3 doses was 34.9% (95% CI = 33.7%–36.1%). Among all adolescents, coverage with ≥1 HPV vaccine dose was 30.3 % points lower than coverage with ≥1 Tdap dose and 25.2 % points lower than coverage with ≥1 MenACWY dose (CDC, 2016; Reagan-Steiner,2016). Thus, HPV vaccine uptake is lagging compared to other adolescent vaccines.

Pennsylvania (PA) is above the national vaccine coverage average with coverage among males, coverage with ≥1 HPV vaccine dose was 55.9% and with ≥3 doses was 47.8%. The females coverage with ≥1 dose was 62.2% and with ≥3 doses was 47.8% (CDC, 2016). However, HPV vaccine uptake remains low with low compliance to complete the vaccination series. Therefore, strategies to increase HPV uptake is vital in preventing HPV-related disease (CDC, 2016).

Economic Burden

HPV infections causes economic burden. An estimated $8.0 billion annual direct medical cost is spent on prevention and treatment of HPV infections (Chesson et al., 2012). Although genital warts and other low-grade types are medically benign, and can resolve on its own, diagnosis of genital warts or an abnormal Pap smear is costly, and results in emotional distress. Another study by Soper (2006) estimated that $3.4 billion is spent annually on diagnosis and treatment of HPV infection and its associated cervical diseases. About 90% of the estimated cost is due to preventative measures such as treatment of precancerous lesions and routine Pap tests. The remaining 10% is attributed to treatment of cervical cancer.

Most of the burden of HPV associated healthcare cost is seen in adolescents and young adults. According to Sober (2006), the estimated lifetime total medical cost of HPV infection for men and women aged 15–24 is $2.9 billion. Additionally, an annual total direct medical cost for treatment of anogenital warts in all age groups for the year 2000 was $167.4 million. It is apparent that HPV related infection produces a significant economic burden. HPV vaccine can help prevent HPV infections which will increase quality of life, decrease health care cost significantly, therefore producing a healthier population. Promotion of HPV vaccine and effective strategies to tackle the low uptake of HPV vaccine disease is vital (CDC,2017).

Barriers

According to CDC, missed clinical opportunities is the most important reason for the low HPV vaccine uptake. Many vaccine-eligible adolescents do not receive HPV vaccines, while receiving at least one other vaccine. Other factors contributing to the low utilization of HPV vaccinations include:

- health care providers hesitancy to promote and vaccinate due to knowledge gap
- lack of overall knowledge of HPV leading to misinformation
- discomfort of practitioners regarding sexual behaviors
- cost
- safety and efficacy

System barriers such as lack of tools to remind practitioners, time constraints are prominent contributing problems. (Holman et al., 2014). In the underserved populations, limited knowledge about the vaccine is more pronounced, cultural

differences, insurance coverage and immigration status increased resistance to HPV vaccination (Garcia, 2013). Barriers to vaccination in the college students noted were side effects, costs, and lack of basic knowledge regarding HPV and HPV vaccination (Burke et al., 2010).

Strategies

Strategies used to combat this public health threat includes effective education, implementation of tools such as the AFIX approach recommended by the CDC, reminder and recall systems, assessment and feedback, and other tools reminding providers to check immunization history, as well as strong consistent recommendation and promotion by providers for the HPV vaccine (CDC, 2018). Increase in collaboration and communication within health care providers are also imperative. One of the Healthy People's objectives for 2020 is to increase HPV vaccine series among U.S. female age 13-15 years old by 80 percent. Efforts that address system-level barriers to vaccination will help to increase overall HPV vaccine uptake (Holdman et al., 2014). Health care providers need to actively take on the responsibility and make HPV vaccination a public health priority in order to save lives.

HPV knowledge, perception, and vaccination rate among college students

Knowledge of HPV and HPV vaccine in college students is low. A study by Lambert (2001) evaluated knowledge in two groups of college students who were subjected to HPV focused education that consisted of pre and post intervention questionnaires three months apart. The results showed that the participants had low overall knowledge regarding HPV disease. However, there was a statistically significant improvement of HPV knowledge post interventions. Dillard and Spear (2010) assessed

knowledge of HPV and perceived barriers to being vaccinated against HPV virus at Penn State University and found that although awareness of HPV and HPV virus was high; only 65% had knowledge of HPV related facts. The lack of knowledge about HPV is a common barrier to HPV vaccine uptake (Sheaves, 2016)

The perception of low risk for HPV and institutional barriers were cited as the most common reasons for parent's refusal to vaccinate their children (Navalpakam et al., 2016). A literature review regarding attitudes and sexual behavior among women college students in the U.S. showed that the women perceived HPV infection as a serious health risk and had a positive outlook on HPV vaccine; but many do not perceive themselves at risk (Ratanasiripong, 2012). This is also echoed by another study at Oakland University of female college students with the majority of the participants perceived that HPV is life threatening and prevents cervical cancer; however, about 50% of the participants did not believe they were at risk (Navalpakam et al., 2016). Effective unbiased education regarding HPV and HPV vaccine to increase knowledge with the emphasis of risk to the individual is an important aspect of HPV focused education.

A study assessing HPV vaccination and its correlation among culturally diverse 18-26-year-old community college women in Los Angeles, looked at what proportion of the respondents have started the HPV vaccine, and what proportion have completed the vaccine series. Additionally, it looked at what variables such as demographics, psychosocial, and health care related issues are linked to vaccines initiation for the respondents. The results show that those who started the vaccine series were younger, more often had a health-related academic major, believed that HPV vaccine was safer,

perceived HPV severity lower, and perceived higher social approval for the vaccine than those who were unvaccinated. All the respondent who initiated the vaccine received recommendation for the vaccine from their health care provider (Marchand et al., 2012).

In addition, a study of a southeastern university showed that out of the 875 survey respondents, only 78.6% indicated that they would get vaccinated. Out of the respondents who self-identified as not yet sexually active; only 60.7% plan to get vaccinated. Respondents concern about vaccine safety, side-effects, cost and lack of knowledge were common barriers noted (Burke et al., 2010). Thus, increasing knowledge regarding HPV and HPV vaccine through focused educational efforts is needed to improve HPV knowledge, and decrease HPV related infections.

HPV initiatives in Pennsylvania

In an effort to increase HPV awareness and promote HPV vaccination, the PA Department of Health (DOH) has created a powerful documentary called "*Someone You Love: The HPV epidemic*". The video follows five young women with HPV and shows how HPV infection has affected their lives. The PA DOH has utilized healthcare organizations to use the video as a tool to increase HPV knowledge and HPV vaccination uptake. In 2016, the PA DOH had set up a program called PROTECT Against HPV: A collaboration for community and provider outreach under Crawford Health Improvement Coalition (CHIC) to utilize the video as a tool through a school-based campaign, a healthcare campaign and a community campaign (Crawford County Health Improvement Coalition, 2016).

A post survey is completed following the showing of the video. According to the data collected and presented on June 13, 2017, "*Someone you love: The HPV*

epidemic" video was shown in six locations in PA: Dietrich Theater Trunkhannock (N=42), Meadville (N=34), Temple University in Harrisburg (N=13), Titusville (N=8), Mechanicsburg (N=1), and online (N=1). The total sample size was N=99 participants. Most of the participants heard about the program through others: email, phone blast, school (36.4%), friends (21.8%), flyer (17.3%), Newspaper (8.2%), health care provider (7.2%), social media (6%) and movie ad (4%). Only N=93 of the participant responded to the questionnaire.

The participants average age is approximately 38.7 years old, consisting of parent/guardian (28.5%), community member (21.5%), health care provider (17.7%), student (15.1%), grandparent (9.1%) and educator (8.1%), with total responders of N=98. There was a significant increase of support for HPV vaccination post viewing. "Very supportive" of HPV vaccination increased from 45.9% to 85.9%, "supportive" from 29.6% to 11.15%, and "still undecided" decreased from 5% to 3%. Prior to the viewing, 9.2% had no knowledge of HPV and HPV vaccine. No individuals in the study were "not supportive" pre and post viewing. The total respondents pre-viewing was N=98 and post-viewing was N=99. Post-viewing, 58.6% chose "I will encourage those I know to get the HPV vaccination", 31.5% chose "I will get myself/my child all 3 HPV shots", and 9.9% chose "I will talk to my healthcare provider about getting the HPV vaccination". The last question was not mutually exclusive, so respondents can pick one or more answer to the question. Data from the effort show an increase in support for HPV vaccination post-viewing. Knowledge however, was not assessed specifically post-viewing. Strategies incorporating focused educational videos have proven to be an effective tool to increase knowledge (Krawczyk, 2011).

Statement of the problem

HPV vaccine uptake has been lagging compared to other adolescent vaccines. Studies show that knowledge of HPV and HPV vaccine in college students are low. This is concerning since vaccination is the best prevention measure against HPV infections. In Pennsylvania, only 48.2 percent of females between 13 and 17 years old and 26 percent of males received all three shots in 2014. While in the Pittsburgh region, 27 percent of girls and 21.8 percent of boys ages 14-17 were fully vaccinated in 2014 (Rosenblatt, 2016). The objective of this scholarly study is to add to the literature by examining whether a focused educational video on HPV and the HPV vaccine such as the video, *"Someone You Love: The HPV Epidemic",* increases baseline knowledge among the participants. A secondary goal is to aid and contribute to the PA DOH's data collection in an effort to spread awareness though the promotion on the educational video.

Synthesis of evidence

A search of literature was performed to answer the question: Does viewing an educational documentary about HPV disease and vaccination on a college campus in rural Northwest PA improve the knowledge level of HPV disease and vaccine among attendees of the program? The search was performed using Cumulative Index of Nursing and Allied Health Literature (CINAHL), Medline, PubMed and EBSCO databases. The search terms that were used were: "HPV vaccine", AND "increase knowledge", and "educational video". Limits placed included: English language, items with abstracts, full text articles, time frame range from 2001-2017, geography to USA. Inclusion criteria included articles related to increasing HPV vaccination, educational

videos, increase knowledge. Exclusion criteria included any article that did not pertain to increasing knowledge with the use of educational or training video, and any studies done outside U.S.

The search engines yielded 1452 results; of which 1440 was excluded after duplication, title and abstract screen. Thirty-four articles were reviewed after screening for relevance. Twenty-two abstracts were analyzed and nine were used for inclusion in this review. Based on Johns Hopkins Nursing Evidence-Based Practice appraisal form (Appendix C) (Johns Hopkins Medicine, 2013), three out of the ten studies were levels IB, and six out of ten were IIB evidence level and quality grade. Six out of the ten studies utilized an HPV educational video as an intervention. Two of the ten studies utilized HPV focused educational sessions, and one study analyzed 34 studies to look at interventions used to increase community demand for HPV vaccinations that included utilization of video technology in delivering messages about HPV vaccine.

Four of the articles included were quasi-experiment, two were randomized-controlled study, one cross-sectional voluntary pilot study, one was a review of literature using randomized-controlled study and the last one was a review of literature of peer reviewed articles. Most of the studies were done in a college campus, assessing knowledge post intervention. Two studies were implemented in an OBGYN or women's health clinic across the U.S. Sample size varied from sixty participants to four hundred and four.

Most studies utilized pre- and post-intervention tests; and examined knowledge level before and after HPV educational video, HPV focused education or utilization of technology or multimedia. Two studies found that there is a low baseline knowledge of

HPV and HPV vaccine in college students. Most of the studies showed that utilizing an educational video increased knowledge post intervention, and retention of information in college students from one to three months.

The literature review and data analysis showed that educational video is an effective tool that can be used to increase HPV knowledge and retention. Therefore, the documentary called "*Someone You Love: The HPV epidemic"* can be used effectively to educate and increase knowledge of HPV and HPV vaccine.

Methods

Setting

The Edinboro University Institutional Review Board approved the study protocol and a university conference room was set up for the project implementation. The educational session was scheduled for March 26, 2018 from 11am- 2pm and 5-7pm.

Study Design

This is a quasi-experimental study, consisting of an eight pre-intervention and post-intervention test.

Participants Recruitment

Participants were recruited from a university in northwest PA and surrounding communities. The total enrollment for 2016 at the university was 6,181students. The student population is diverse coming from 34 countries, 49 states, and 67 Pennsylvania counties. There are 61.8% Women, and 38.2% Men enrolled. The Ethnic composition was 82.3% White, 14.3% African American, Hispanic, Asian and other 3.3% Multi-racial/ethnic. In-state residents is campus was 82.5%, out of state is 16.1% and 1.4%

are international students (Edinboro University, 2017). Any willing and interested participants were also included.

Recruitment methods included posted event fliers around the campus and community, and mass emails of the event sent to students and faculty at the university. Anyone interested in the event self-selected to participate. A cover letter was given to participants explaining the purpose of the study and assuring confidentiality and anonymity. It also explained that completion of questionnaires was implied consent to participate in the study. A separate survey from the DOH was given to participants, which were shared with the DOH for data collection.

Inclusion and Exclusion Criteria

Inclusion criteria included anyone age18 yrs. old and older and able to speak, read and understand English. Exclusion criteria is anyone who under 18 years of age and is not able to speak, read and understand English.

Participants Demographic

There was a total of twenty-two participants. Seven were males and fifteen were females. Twenty-one were in between ages 18-26 years old. Seventeen of the participants were white/Caucasians, two were Hispanic/Latino, one Black/African American and two identified themselves as “other” in regard to race and ethnicity. Sixteen of the participants had some college credit, no degree as highest level of education achieved. Three selected diploma or the equivalent (GED), one with Bachelor’s degree and one with Doctorate degree.

Instrument

The instrument used for knowledge assessment consisted of eight questions that were self-authored based on the review of literature, and previously used tools in other research studies. The questions created were regarded by the author to be the best tool to assess the knowledge level where knowledge would be low.

Intervention

An eight-question survey was giving prior to the educational session which consisted of viewing "*Someone You Love: The HVP epidemic*", followed by question and answer session from a panel of experts on HPV. Following the session, the same eight question test was given to participants. An additional survey questionnaire created by the PA DOH was taken by participants post intervention.

Data Analysis

The pre- and post- test were compared for change in knowledge. Table 1. lists the scores of the pre- and post-tests. Table 2. lists the questions and the percentage of improvement post educational session per question. Figure 1. is the summary results of a paired t-test for the two datasets at 95% confidence interval. The histogram of differences between previewing scores and post viewing scores is also included. Figure 2. is the before and after Poisson capability comparison analysis summary.

The average score of the test before viewing the educational video is 77% and 93% after the educational session. The paired t-test indicate a significant statistical difference between the two results with p-value of < .005 (.0003) and a t-value of -4.31 which represents the magnitude of variation in the test scores. The capability

comparison test on the incorrect data to determine the effect viewing the educational video show the change of getting a perfect score on the post- test improved from 79.7% to 93.4%. When the incorrect answers are regarded as a defect among the 22 tests, showing the educational video reduced the incorrect answers by 70%.

Question 8: the HPV virus causes genital warts, question 2: HPV does not cause cancers of the head or neck and question 6: Most people who contract HPV from a partner will not have any symptoms of HPV disease were the most frequently missed question; and had the most percentage improvement in post-test. This supports the research that there is low knowledge regarding HPV, and low perceive risk.

Discussion

The study's result showed an increase in knowledge among the participants post educational intervention. This has implications on learning; that a focused educational video on HPV can be utilized to increase knowledge. A limitation to this study is the small sample size, thus it cannot be generalized. In addition, causality in this case can't be suggested in a pre- and post-test design with a small sample size. However, the study reflects current literature that a focused educational video aids in increasing knowledge in participants. In addition, the instrument used is self-authored and did not undergo rigorous reliability and validity test. But in a study of this magnitude, this is not necessary. The questions however, were reviewed and approved by a content expert on HPV.

Conclusion

Seventy-nine million Americans are infected with HPV virus that can cause cancer. The use of media to enhance teaching and learning, and ultimately knowledge has been used for decades. An educational video can be a powerful learning experience by increasing student's engagement and knowledge retention. It also complements and diversify traditional approaches to learning. Increasing knowledge of HPV and HPV vaccine can aid in decreasing the prevalence and incidence of HPV infection.

The study results showed a statistically significant increase in the participants knowledge after the focused educational intervention ($p = <.005$). Therefore, the use of an educational video such as *"Someone you love: The HPV epidemic"* along with a brief question and answer can be utilized as a powerful tool to increase knowledge. Further study is needed to assess generality by increasing the number of participants in varied settings. Future research is needed to assess whether increase knowledge of HPV and HPV vaccine leads to increase vaccination and compliance to series completion.

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