An Assessment of Knowledge and Perception of the Human Papillomavirus (HPV) Among Female College Students

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Abstract
Nursing Research 4562

An Assessment of Knowledge and Perception of the Human Papillomavirus (HPV) Among Female College Students
Boyle, M., Evans, M., Fuqua, M., Reid, K., Sherwood, L.

**Background:** There is a lack of knowledge in college-aged females regarding the Human Papilloma Virus (HPV). Even a basic understanding of HPV risk factors, methods of its transmission, and the virus’ role in cervical cancer is low to nonexistent in populations near and far (Sandfort & Pleasant, 2009, p.141). Caron, Kispert, and McGrath (2009), stated that 99.7% of women diagnosed with cervical cancer developed the cancer from HPV, and the highest prevalence (44.8%) of HPV was found in women that were between the ages of 20-24 years old (which is the average age for college students) (Kispert & McGrath, 2009, 3).

**Purpose/Objectives:** The purpose for this research is to assess the knowledge that female dormitory residents at Northwest University have about HPV. **Research Question:** Is there a knowledge deficit about HPV for female students living in the dorms at Northwest University? **Design:** A non-experimental, non-probability convenience sample will be taken. **Setting:** Participants are residents from Guy and Beatty Hall of the female dormitories at Northwest University. **Sample:** 150 questionnaires with a consent form will be distributed under the residents’ doors. **Ethical Consideration:** A consent form with contact information to the primary investigator is provided so that the participant may be fully informed. There are no identifying information included in the questionnaire and the participant has a window of time to return the questionnaire to a manila folder on their hall so she can turn it in whenever she feels most comfortable; this is to ensure as much privacy as possible. **Methods:** The data will be collected by turned in questionnaires and the responses will be complied onto Microsoft Excel for data generation. **Data Analysis:** What descriptive/inferential statistics will we use? **Dissemination:** The findings of the study will be presented in the form of a PowerPoint presentation on December 12, 2013 to the faculty and senior students of the Buntain School of Nursing. The information will also be given to the Northwest University Wellness Center that they may then use to provide education on campus.
Background/ Problem Statement

There is a lack of knowledge in college-aged females regarding the Human Papilloma Virus (HPV). This is a problem that is principally unrecognized by the entire span of society from health care professionals, to policymakers, to the public in general. Sexually transmitted diseases cause a variety of destructive, sometimes permanent and costly clinical complications (Healthy people, 2013). Even a basic understanding of HPV risk factors, methods of its transmission, and the virus’ role in cervical cancer is low to nonexistent in populations near and far (Sandfort & Pleasant, 2009, p.141). On a global level, there are approximately 500,000 cases of cervical cancer that are diagnosed annually, of which approximately 250,000 of these women die (Caron, Kispert, & McGrath, 2009, p.2). In America, an estimated 12,340 cases of invasive cervical cancer are expected to be diagnosed in 2013, of which an estimated 4,030 of these women will die (American Cancer Society, 2013). “Although cervical cancer is a relatively rare outcome of infection from high-risk strains of HPV, the virus is the causal factor in nearly 100% of cervical cancer cases. However, as a result of the lack of widespread education about the virus, the link between HPV and cervical cancer is not common knowledge” (Sandfort & Pleasant, 2009, p.141).

College students comprise a pivotal segment of American society and are known to be a high-risk population in regard to active sexual behavior and sexually transmitted infections (Sandfort & Pleasant, 2009, p.141). The purpose for this research is to assess the knowledge that female dormitory residents at Northwest University have about HPV. The question that is being addressed: is there a knowledge deficit about HPV for female students living in the dorms at Northwest University?

Literature Review

According to the CDC, HPV is the most common sexually transmitted infection. Most people who become infected do not know they have it. It is a virus that is passed on through genital contact (CDC, 2013). Approximately 79 million Americans are currently infected with HPV and about 14 million people
become newly infected each year. In most cases, the virus goes away and does not lead to any further health problems such as genital warts or cancer. However, if the virus persists or does not go away, HPV can cause normal cells to become abnormal. There is not certain way to determine which people will infected with HPV will develop cancer or other health problems (CDC, 2013).

Additional evidence suggests that women lack an accurate understanding of HPV (Royer & Falk, 2011). Sexually transmitted diseases are highly stigmatized. In one investigation, participants believed STD was synonymous with promiscuity, infidelity, guilt, shame, embarrassment, and even divorce (Friedman & Shepeard, 2007). Negative stigma results in significant psychosocial implications. Women diagnosed with a STD often report feeling permanent damage to their sexual selves after diagnosis; HPV-related shame is another common reaction (Gerend & Magloire, 2008; Nack, 2008). These psychosocial concerns appear to significantly affect quality of life (Nack, 2008).

There have been numerous studies done pertaining to HPV and its vaccine. The research article titled, “Human Papillomavirus (HPV) Vaccine: Attitudes, Behaviors, and Beliefs of At-Risk Women” conducted by Caron, Kispert, and McGrath (2009), was a quantitative study that was completed to assess the knowledge of HPV and its vaccine Gardasil among young, female college students. Caron, Kispert, and McGrath (2009), stated that 99.7% of women diagnosed with cervical cancer developed the cancer from HPV, and the highest prevalence (44.8%) of HPV was found in women that were between the ages of 20-24 years old (which is the average age for college students) (p.3). Caron, Kispert, and McGrath go on to state that if all women were educated on HPV and prevention more than 1,300 deaths among college age female students would be prevented (p.2). For one to be able to make educated decisions on preventative measures they must first be educated on the disease, its process, and the medical measures available to prophylactically care for themselves. Even though there has been a vaccine to prevent HPV infection in women for seven years, research states that sexually active female college students were
generally unaware of HPV until they had been diagnosed by their primary care physician (Caron, Kispert, & McGrath, 2009, p. 3). The study provided adequate evidence to suggest that if the prevalence of HPV and cervical cancer was to be decreased, then public health educators needed to be aware of the need so that they could better deliver initiatives that were intended to reduce the number of female college students diagnosed with HPV (Caron, Kispert, & McGrath, 2009, p.3). The educational strategies the researchers recommended to reach the at-risk population of female college students included: primary preventative measures such as the Gardasil vaccine, secondary preventative such as early detection of HVP through screenings (The Papanicolaou cytology test (Pap)), and patient teaching of HPV itself (Caron, Kispert, & McGrath, 2009, p.7).

A study led by Marek titled, *Incomplete knowledge-unclarified roles in sex education: results of a national survey about human papillomavirus infections*, was conducted to evaluate the knowledge of HPV among adults in Hungary. Through the questionnaire passed out to university students (785 students) the results showed that women received their information about HPV through the media such as TV (50-68%) the internet (30-45%), magazines (45.3%), gynecologist (32%), brochures (12-13%), as well as nurses (7-9%) (Marek et al., 2011, p.762). The results of the study concluded that “Overall, despite the oppressive prevalence and potentially lethal consequences of an HPV infection, a substantial amount of literature published have reflected insufficient knowledge of HPV. Primary prevention of HPV infection and thus prevention of HPV-related conditions would be important for public health” (Marek et al., 2011, p. 760). Results also showed that there was great confusion about the transmission and preventative measures to that can be taken to prevent infection and one in every ten adults were not aware that HPV could cause cervical cancer (Marek et al., 2011, p. 766).

An article written by Jessica Sandfort and Andrew Pleasant for the purpose of assessing college students’ knowledge, attitudes, and behaviors regarding the human papillomavirus (HPV) concluded that
there is a great need for public health campaigns and more education regarding HPV (REFERENCE). Results of their investigation revealed that knowledge was generally insufficient in that of: modes & transmission of HPV, methods of prevention, the prevalence of HPV, as well as the virus’ role in cervical cancer. The study also revealed a significant amount of misconceptions regarding HPV; over fifty-percent of those surveyed did not know that HPV is transmitted via skin-to-skin contact or that condom use does not fully protect against the transmission of HPV (REFERENCE). “Participants were also misinformed about the fact that most women with HPV infections will not develop cervical cancer” (Sandfort & Pleasant, 2009, p. 143). This lack of public knowledge was attributed to the fact that the scientific community itself has had difficulty understanding the virus. Furthermore, “as of 2006, researchers report that there had been no national public health campaigns to educate Americans about HPV” (Sandfort & Pleasant, 2009, p.142). Sandfort and Pleasant conclude that based on the vast prevalence of HPV (over 20 million Americans currently infected with HPV, and the estimated 6.2 million new cases annually), as well as the general lack of knowledge and misconceptions regarding the virus, leave an equation demanding a need for education and further research (REFERENCE).

In the study “Prevalence and determinants of HPV infection among Colombian women with normal cytology,” researchers M. Morlano and H. Posso reported that females between age 18-25 were the age group that was most unaware of HPV or the need for prophylaxis measures. In their sample population of 1850 Colombian woman, the study also found that woman age 25 and younger were nearly 20 times more likely to develop the disease. The study attributed the increased risk to “having multiple sex partners and casual sexual encounters.” In addition, the study found that women with: “higher levels of education seems to predict risk.” This category was defined to include university attending woman age 18-25. This study found that in this Colombian population, the age groups at highest risk for HPV infection were adolescent and college age females.
In summary, HPV is one of the most commonly diagnosed STD and the leading causative factor for cervical cancer. College age females are the highest risk population for infection and studies show that there is a general lack of knowledge about the disease process, its risk factors and preventative strategies. Therefore, the purpose of this study is to look into the knowledge level that female Northwest University students have about HPV to assess a possible need for further information.

Definition of Terms

The study design is non-experimental with a convenience sampling. Within this study, there are three key terms that need to be defined: the population sample, HPV and the vaccine for HPV. The population sample of eligible participants for self-report are Northwest University female students who live in the campus dormitories. They were selected because they fit into the research’s age demographic of focus; young adults within the ages of 18-25. The dormitories are also the questionnaire site of choice because it has a better potential to collect responses from a broader variation of majors in comparison to a administering the questionnaire in a general studies class for example. It also provides for a certain level of anonymity and privacy that public classrooms cannot accommodate to.

In this study, the definition for the human papilloma virus (HPV) will come from the CDC’s Self Study Modules for Clinicians (Barnes, R., March, 2013). According to that source of information, HPV is one of the most common sexually transmitted diseases (STD), of which there are 40 types that can infect the genital tract. Of those 40 types, two (type 16 & 18) are known to cause cervical cancer, whereas the other 38 types are known to be transient. On the question and answers page for the CDC’s information about Gardasil, a vaccine to prevent HVP caused cervical cancer, it is explained that HPV is spread by skin to skin contact and is the main cause for cervical cancer (CDC, July 20, 2012). For this study, it is important to discover whether or not, Northwest University females are aware of the risk of cancer due to
HPV KNOWLEDGE

HPV. It is also important to know if they are aware the most types of HPV are nonpermanent and therefore not a cause for undue stress, anxiety and fear.

Finally, the definition for the HPV vaccine in this study will also come from the CDC. There are two vaccines available in the United States to prevent against certain strains (types) of the HPV virus; the cancer causing types (16 & 18) are both covered by the vaccine. As of right now, according to the CDC, the vaccine is the strongest prevention tool for cancer causing HVP strains (CDC, July, 20, 2012).

Methods and Procedures

The population being surveyed in this study is Northwest University female students ages 18-25. Using non-probability convenience sampling, participating female students must live in the dormitories on campus and be between the ages of 18-25 years old. 150 questionnaires were distributed, and ### completed questionnaires were returned. This sample of the population of students represents a #### of students within the age requirements. *Actual # of NU females between 18-25 that live in the dorms compared to off campus.

This study is focused on women since much research has shown a high correlation between HPV and cervical cancer. Vaccines have been available for females, although new ones have been approved for male use. Recruitment of participants for this study will be from the NU dormitories. Researchers of this study will distribute the surveys to the female students, who will then fill out and return the completed form. Since both the researchers and the topic population are all affiliated with Northwest University, obtaining cooperative and informed participants will be the most convenient. The measurement method used to conduct this study will be with a questionnaire. Categories that will be included are age and education.

The tool to acquire, measure and evaluate the self-report is in the form of a questionnaire (See Appendix B). The beginning of the questionnaire asks for age. This to assess for and recognize potential
outliers (participants older than 25 living in the dormitories). The remaining part asks questions concerning the participant’s understanding and belief about the human papilloma virus (HPV). Part of these questions are originally designed by Heather R. Royer, PhD, FNP-BC, who performed a similar research study titled, *Young Women’s Beliefs Regarding Human Papilloma Virus*, which was published in 2011 (Royer, & Falk, 2011). Her questions are based on the common sense model (CSM) and are helpful in more accurately representing what the participants believe about HPV. To assess the answers provided in the questionnaires, percentages of each response will be calculated.

**Risks**

There are minimal risks associated with this particular study. Some people may be uncomfortable with the topic and with answering questions about the topic. They will remain anonymous to the researchers.

**Ethical Considerations**

Informed consent will be assumed when a participant returns their survey to the manila envelope. In an instructional letter (See Appendix A), there is the statement, “By turning in this questionnaire, you are giving permission to use your responses in this research study. Researchers will provide a manila envelope to the RA’s for the dormitories on campus for the participants to return the questionnaire. This will ensure anonymity between the researchers and participants upon completion of the questionnaire. Confidentiality will also be ensured as the researchers will not ask for nor associate any personal information to the submitted forms or results.

**Data Collection Plan**

Permission will be asked of Sarah Jacobson, the Assistant Director of Residence Life and Area Coordinator of Apartments (See Appendix C). Questionnaires will be distributed to each of the female residence halls on Northwest University’s campus on November 20, 2013. Data collection will be done
in written form in which participants will fill out supplied questionnaires by hand. After the female
students have completed the questionnaire they will return them to the manila envelope (which will be
provided by the researchers), which will be located with their resident hall RA in order to anonymously
collect the questionnaires. The researchers will then collect the manila envelopes from each of the female
resident halls by 5:00 PM on Friday, November 22, 2013 to then be compiled and analyzed. Once
collected, the raw data will be compiled and organized into a comprehensive Excel spreadsheet. All
questionnaires collected will be destroyed on December 13, 2013.

**Final Analysis Plan**

The first set of calculations that will be made is a demographics analysis of the participants
involved. This will allow the researchers to better understand the sample set. Next, calculations will be
made regarding perceptions and whether or not there were positive or negative correlations made based
on how participants identified with the question. The process of converting data will be done by taking
the number who answered in favor of a certain answer divided by the entire number of people involved to
calculate percentages for each data set.

**Study Limitations**

Limitations to this study include the reliance on self-reporting, and the possibility that participants
may attempt to respond in a misleading fashion or in such a way they believe the researcher might want to
hear. Also, another limitation in this study is that data is only being surveyed and collected from one
small private university, and females living in dormitories, so the findings may not be as representative of
female college students around the United States or the rest of the world.

**Plan for Communication of Findings**
Once data is collected and analyzed, the plan for communicating the findings of the study is to present it in the form of a PowerPoint presentation on December 12, 2013 to the faculty and senior students of the Buntain School of Nursing. The information will also be given to the Northwest University Wellness Center that they may then use to provide education on campus.

Upon completion of this study, results can be investigated further to lessen HPV knowledge deficiency. In regard to future research, this study can be provided for further and more in-depth investigation into teaching young people about sexually transmitted disease and the effect of HPV on health. ---where would this go? Or should we just cut it out completely?
References


Molano, M., Posso, H., Weiderpass, E., van, . B. A. J., Ronderos, M., Franceschi, S., Meijer, C. J., ...HPV


Appendix A

An Assessment of Knowledge and Perception of the Human Papillomavirus (HPV) Among Female College Students

Consent Form

Nursing 4562-Research Methods and Application
Northwest University Buntain School of Nursing

You are invited to participate in a research study conducted by senior nursing students in the Buntain School of Nursing. The study is being conducted as a class requirement for the senior level nursing course NURS 4562, Nursing Research: Methods and Applications. The purpose of this study is assess the knowledge and perceptions regarding the Human Papilloma Virus (HPV) among female students at Northwest University.

If you agree to participate in the study you will answer a one page questionnaire that will take about 5 minutes to complete. Do not include your name or any identifying personal information. Answer all the questions honestly. When the questionnaire is complete, place the questionnaire into the manila folder that will be located with your resident hall RA no later than 5:00pm on Friday November 8, 2013.

There are minimal risks associated with participation. Some individuals may be uncomfortable answering personal questions. Some may not know the answer to the question or how they feel about what is being asked. The information from this study could become a contributing factor for health education on campus.

Participation in this study is voluntary. You may choose not to participate in this study at any time. All responses are anonymous; therefore it is important that you DO NOT put your name on your response sheet. You may keep this consent form for your records. By turning in this questionnaire, you are giving permission to use your responses in this research study.

The results from this study will be presented in PowerPoint presentation on December 12, 2013. All questionnaires collected will be destroyed on December 13, 2013. The results of this study may be used for teaching purposes. Nothing can be identified back to you.

If you have any questions about this study, contact Molly Evans at molly.evans10@northwestu.edu. If you have any further questions, please contact our professor, Suzanne Barsness, RN, MSN, CCRC at suzanne.barsness@northwestu.edu.

Thank you for your consideration of this request!

Molly Evans, Senior Nursing Student
Molly Boyle, Senior Nursing Student
Marissa Fuqua, Senior Nursing Student
Krysta Reid, Senior Nursing Student
Lanisha Sherwood, Senior Nursing Student
Suzanne Barsness, RN, MSN, CCRC, Faculty Advisor
Appendix B
An Assessment of Knowledge and Perception of HPV among Female College Students
Nursing 4562 Research Methods and Application
Northwest University Buntain School of Nursing

Check the appropriate box in each area:

Age: □ 18-24 □ 25-30 □ >30

Previous Education: □ Public school □ Private school □ Home school □ other __________

The following questions deal with your knowledge of HPV.

1. Do you know what HPV is? □ Yes □ No

   If yes, how/where did you learn about HPV? (Check all that apply)
   □ Parents □ School □ Doctor □ TV □ Friends □ Health classes □ Own personal research □ Other __________

2. How is HPV transmitted? (Check all that apply)
   □ Toilet seats □ Sexual contact □ Contact with any infected body fluids □ Sharing food/ drinks □ Other __________

3. Who is susceptible? □ Male □ Female □ Both

For the following questions, rate each statement by placing a check in the box that best describes your perceptions of HPV.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not likely</th>
<th>Somewhat Likely</th>
<th>Likely</th>
<th>Very Likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having HPV means I would always have to take medication</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPV causes cervical cancer.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having HPV would mean that I would always need medical treatment.</td>
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<tr>
<td>If I had HPV and it was treated, it could come back.</td>
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<tr>
<td>If I had HPV, it would last my entire life.</td>
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<tr>
<td>If I had HPV, there would be nothing I could do about it.</td>
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<tr>
<td>If I had HPV, it could be cured.</td>
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</tr>
<tr>
<td>I could die from HPV.</td>
<td></td>
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<td></td>
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</tbody>
</table>

Please place this questionnaire in the manila envelope (describe as you did in the consent form) Please complete no later than 5:00pm on Friday, November 22, 2013.

Thank You for your assistance with this research topic!
Appendix C

This is a formal e-mail that was sent to the directors for the dorms. Verbal approval was given by their boss, Sarah Jacobson.

Dear Alison Bradley and Matt Hux,

My name is Molly Evans and I am a senior nursing student. I hope all is well and that you both have had an enjoyable weekend.

My purpose in writing to you is to request your permission to pass out a questionnaire to all the female students living in the dormitories. The purpose for this questionnaire is to assess the knowledge and perception of the human papillomavirus (HPV) among female college students. This study has been approved by the school's IRB and participation will be completely voluntary. I have also attached the consent form and the questionnaire, those two things along with a manila folder for each floor will be the only material that myself and my group will be distributing.

We plan to distribute the consent form and questionnaire by placing them under the students' doors. If they choose to participate in the study, they can turn in the completed questionnaire to a manila folder that is located in the hallway. We would like to pass out the paperwork on a Wednesday and collect the manila folders with the completed questionnaires on a Friday.

If we have your approval, I have a few logistic questions:
1. About how many girls do you have living in the dorms?
2. What would be the best way for us to get access into the dorms?
3. Would you like for us to contact the RAs?

Thank you for your time. Have a good Monday!

Sincerely,
Molly Evans

If you have any further questions, feel free to contact me by this e-mail address.
You can also contact my professor Suzanne Barsness at Suzanne.barsness@northwestu.edu