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Community College Women's Perceptions of HPV and Cervical Cancer

Odella Dianne Hagan
Walden University

Walden University

College of Health Sciences and Public Policy

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Odella Dianne Hagan

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Review Committee

Dr. Suzanne Richins, Committee Chairperson, Health Services Faculty

Dr. Joshua Bass, Committee Member, Health Services Faculty

Chief Academic Officer and Provost Sue Subocz, Ph.D.

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Abstract

Community College Women's Perceptions of HPV and Cervical Cancer Screening

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Odella Dianne Hagan

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

Community college women do not obtain the HPV vaccine at the same rate as university women. The aim of this study was to discover the perceptions of community college women in relation to the human papillomavirus (HPV) and associated cancers, the perceived barriers and benefits of obtaining the HPV vaccination, and how health behavior decisions may be impacted by self-concept. A qualitative research design incorporating thematic analytic was used to analyze interviews whose questions were specifically guided by the health belief model. Student volunteers aged 18 to 45 years were recruited from a large urban community college. An inductive thematic approach allowed the development of themes and codes based on the interviews conducted with the participants. The results of the study indicated that these women had a persistent lack of knowledge about resources and were confused due to the lack of readily available information regarding HPV and who may be susceptible to the potentially serious impact of having one of the cancer-causing strains. Recommendation include building collaborative initiatives with public health organizations, providing education about HPV at the college level, and making information about prevention and treatment more easily accessible to the public using social media centered on HPV and subsequent cancer prevention. Public health initiatives where sexual health is a topic must include an emphasis on HPV education, prevention, and treatment. Implications for positive social change include advocating for better health education for college students and heightened awareness for parents and families about HPV.

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by

Odella Dianne Hagan

BSW, Hood College, 1977

MS, Frostburg State University, 1998

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Dedication

This dissertation is dedicated to the many community college women that I have grown to know over the past 15 years. Your courage, your strength and your openness have given me so much more than I have given to you. I would also like to dedicate my work to my grandmother, who died of cancer when I was small. She believed in education, even though she could not take advantage of it herself.

Acknowledgments

To Dr. Richins and Dr. Bass, thank you for not giving up on me during the past few years. During the past few years, there have been many struggles; divorce, cancer, the pandemic and deaths in my family, my mother's dementia to name a few, but knowing you are there has helped me to get to the finish line finally. Dr. Richins, I appreciate your quiet support. It has meant a lot to me.

I would also like to thank my best girlfriends, Jeanne Cloud and Christina Negrete for making fun of me when I get too serious, understanding when I needed to vent and acceptance of me totally as I am. I would be remiss if I didn't mention my fur family; my Irish Setter, Molly and the cat family that has grown over the past year. Without your friendship my life would be much less rich.

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Chapter 1: Introduction to the Study

The purpose of this qualitative study is to identify perceptions that community college women have that prompts them to get or refuse to get the human papillomavirus (HPV) vaccine. This chapter includes background information, the problem statement, conceptual framework, scope, limitations, and information about the setting. HPV is a prevalent sexually transmitted disease (STD) which is correlated with the development of cervical cancer in women (Kelly et al., 2015; National Cancer Institute, [NCI], 2016). The HPV vaccination is readily available, yet community college women are not taking the vaccine (Centers for Disease Control [CDC], 2017). Identifying effective health education methods that are designed to motivate community college women to get the vaccine is important because the virus may remain dormant for years and high correlations with cervical cancer (CCDC, 2016).

Chapter 1 includes a brief background summarizing the problem and scope of the study concerning community college women. Chapter 2 includes more detailed information about research strategies and recent literature related to the proposed study. Chapter 3 includes a description of the research methodology, research questions, instruments, and plans for collecting and analyzing data.

Although the virus can be prevented by a single vaccine during early adolescence or a series of vaccines during early adulthood, use of the vaccine remains at 53% or lower for young women (Kaiser Family Foundation, [KFF], 2018). Use of the HPV vaccine for community college-educated women is much lower than university-educated women

(Hirth et al., 2018). Community college-educated women tend to have more barriers than their 4-year college peers in terms of obtaining preventive healthcare of all types. and this is particularly true of cervical cancer screenings and followup HPV vaccines (Hirth et al., 2018). Implications for social change include development of a successful HPV vaccination campaign on community college campuses.

Spencer et al. (2019) found minority young women were more likely than White women to have received the first dose of the HPV vaccine. Differences existed when followup doses and cervical cancer screenings were reviewed, with White women more likely to follow through with HPV vaccinations and screening (Spencer et al., 2019). Hirth (2019) found disparities in HPV vaccination rates do exist for non-White young women based on geographical location. Kellogg et al., (2019) found half of young women students in Los Angeles County were not aware that the HPV vaccine was recommended for them, and did not know where they could obtain the vaccine.

Prevention of HPV and most cases of cervical cancer can be achieved through vaccination (KFF, 2018). The CDC recommends all males and females between the ages of 10 and 12 receive the vaccine. Vaccines are most effective in terms of preventing development of cervical cancer when adolescents are given all recommended doses (CDC, 2013). While receiving the HPV vaccine is essential to reduce occurrences of cervical cancer for women, use of the vaccine for women over the age of 18 is extremely low in the U.S.. Use of the HPV vaccine also varies among states, but as of 2018 rates for young women between 13 and 17 were 53.0% (KFF, 2018). National guidelines call for

catch-up vaccinations for young adults who were not vaccinated during adolescence. Four-year university campus health centers provide opportunities for university students to get recommended catch-up vaccinations among those who are not vaccinated during adolescence, but community college campuses often lack a health center, so students are not given this opportunity (Barnard et al., 2017; Hirth et al., 2018).

Background

Community college students are often in a process of transition, which includes changing healthcare providers, health behaviors, and living arrangements, so educating and supporting them regarding preventive health behaviors is vital. There is a gap in information regarding students attending community colleges, as most studies on young adults attending college focus on those attending 4-year universities. Community college students make up approximately half of all undergraduate students in the U.S. and include more diverse populations compared to 4-year colleges and universities (Hirth et al., 2018). 36% of community college students are the first in their family to attend college (AACC, 2019).

In addition to including more diverse populations, community college students comprise a higher proportion of more poor socioeconomic groups and underrepresented ethnicities (Hirth et al., 2018). Many community college students are considered nontraditional students, such as those who are working while enrolled, and face more barriers to healthcare than students attending 4-year universities (AACC, 2019). For these

reasons, an in-depth qualitative study that involved examining perceptions, barriers, and motivations of community college women related to HPV vaccination is needed.

Ragan et al. (2018) found college students' health behaviors and decision-making were influenced by having support from and conversations with their healthcare providers. Ragan et al. determined college students' decisions about health behaviors could be impacted by opinions and attitudes of their parents during their teenage development prior to attending college. Further research should be attempted with other types of college cohorts, particularly community college students.

Since cervical cancer is the 10th leading cause of death in women in the U.S., and the primary agent for the development of cervical cancer is HPV, information about factors impacting prevention and screening for HPV is important (Kelley et al., 2015). There are two strains of HPV that are responsible for 70.0% of cervical cancer (CDC, 2018). HPV is the most common sexually-transmitted infection (STI) in the U.S. and includes more than 150 different strains of the virus, 40 of which may cause cancer (KFF, 2018). While cancer in women due to HPV may include cancer of the vagina, anus, vulva, and oropharynx, cervical cancer is the most frequent type associated with HPV(CDC, 2018).

HPV vaccination rates in the U.S. vary by state, with the lowest uptake percentages at 28.8% for several states and the highest at 78.0% for six states and the District of Columbia (KFF, 2018). Two states and the District of Columbia require the vaccine for entry into the public school system (KFF, 2018). While imposing a

requirement that children have the vaccine prior to admission to public schools may result in rising numbers of adolescents getting the HPV vaccine in the future, women who were adolescents or adults when the vaccine became available in 2006, or women who have to the U.S. may have had only one or no doses of the vaccine (KFF, 2018). Hirth et al., (2018) found HPV uptake for community college students required supplementary encouragement through increasing availability of preventive health appointments outside of normal class times and providing adequate awareness and knowledge of availability and financial coverage of the HPV vaccine.

It may take years for cancer to develop as a result of HPV, and symptoms are often absent with this virus (CDC, 2018). Cervical cancer screening is a method to collect cells from the cervix via a gentle scraping during a pelvic exam, which is called a pap smear (U.S. National Library of Medicine, 2018). Scraped cells are sent to a laboratory to determine if they include precancerous cells called dysplasia or if there may be cancer cells already present (U.S. National Library of Medicine, 2018). A pap smear can determine type of HPV, and thereby determine likelihood of cellular changes that may indicate potential cervical cancer (U.S. National Library of Medicine, 2018). A discussion of guidelines for cervical cancer screening and controversies involving recommendations appears in Chapter 2.

The college years are a critical period for the development of health behaviors and decision-making processes (Nuno et al., 2016). An understanding of how cancer risks from HPV infection influence commitment to preventive health behaviors such as

vaccination during college years is needed. There are few research studies involving health behaviors in community college female populations. Since new guidelines include women up to the age of 45, it is important that this cohort obtain adequate knowledge and opportunities to receive the HPV vaccine. This study is important to highlight the need to develop a message that will empower female community college students to obtain important vaccines and preventive screenings, delineate differences between university women and women who attend community college, provide an understanding of research specifically with community college women, and decrease the number of HPV infections in this population, which will decrease incidences of cervical and other cancers.

Setting

The college that was chosen for this study was established in 1946. It is located on three campuses in an urban county in Maryland. The median income is $108,188. High school graduation rates are 91.4% with a majority minority population, and 39.3% of students speak a language other than English at home. Thirty percent of the population of this county have obtained a graduate degree or higher. By 2025, it is expected that population changes will lead to a decrease in White non-Hispanic residents by 3.0%.

This locality has a Community Need Index (CNI) score of 2.7 with a median score of 2.2, meaning it is wealthy. CNI score is used to measure overall low levels of need. College campuses included both segments low need as well as areas of medium to high need within the county. The county needs assessment includes goals and objectives for the county in collaboration with the Robert Wood Johnson (RWJ) Foundation. This

report includes goals to improve access to healthcare and social services, enhancement of physical and social environments, and achieving health equity for all residents of the county. This report is part of a plan for initiatives that are recommended for the cycle between 2016 and 2019. It documented more than adequate social services and health-related resources within the county, but noted access, affordability, and language and cultural barriers needed to be addressed in the future.

The student population at this college reflects the cultural, ethnic, and racial make-up of the county. Community college women are the majority at a large and diverse urban setting l. This college is the most diverse community college in the U.S. This population may provide information that can be applied to other diverse urban settings.

There are 55,243 students enrolled at the college as of 2018. Of these students, 53.4% are female and 46.6% are male. 27.4% of students are Black, 24.6% are Hispanic, 22.8% are White, 11.5% are Asian and 34.3% were are multiracial, Native American, or foreign or Unknown. The average age of students is 25. Most students attended on a part time basis and also worked part time.

Problem Statement

The problem is that community college women are not choosing to obtain the HPV vaccine at the same rates as university women. Some reasons for lack of vaccine uptake include lack of knowledge about how and where to get the vaccine, lack of a primary care physician or gynecologist, lack of health insurance or funds to pay for the vaccine, missed opportunities during medical visits, lack of comfort level of medical

providers in terms of discussing HPV with their patients, perceptions that women have about their body image when compared to the ideal, and negative experiences and feelings regarding for getting a vaccine (Barnard et al., 2018; Goldrick-Rab, 2016; Hirth, et al., 2018).

This will lead to information about how to best support these women in order to obtain lifesaving preventive health screenings for HPV and cervical cancer. Community college women have a greater likelihood of developing unhealthy lifestyle behaviors as well as higher levels of stress and depression compared women in the same age group who attend a 4-year university (Pelletier et al., 2016). Not only may these students develop negative health behaviors, but negative body image has been decreases the likelihood they decide to use prevention during sexual encounters or obtain preventive screenings for STDs like HPV or seek screenings for chronic diseases such as cancer (Lamont, 2015; Pelletier et al., 2016).

Purpose of the Study

The purpose of this study is to evaluate perceptions, motivations, and barriers regarding getting the HPV vaccination among community college students who were between 18 and 45. Negative body image directly affects decisions to obtain body-focused screenings involving breast and cervical cancer **(**Hirth, 2019; Ridolfi & Crowther, 2013), but the mechanisms for understanding this phenomenon are not known. Therefore, there is not a knowledge base from which to draw. To fully understand

experiences of community college women, these impressions must be explored in more depth.

Research Questions

Research questions guiding this study were:

RQ1: How do social and environmental influencers on body image affect the likelihood that community college women receive screenings for HPV and cervical cancer?

RQ2: What are perceived susceptibility and severity rates for developing cervical cancer and HPV among women attending community college?

RQ3: What are perceptions of community college women regarding HPV and cervical cancer?

Conceptual Framework

The health belief model (HBM) is a framework for influencing people to take positive health actions using the desire to avoid negative health results as the main motivating factor (Leon-Maldonado et al., 2016). The HBM has been widely used in situations where prevention-related health behaviors are studied. I used the HBM to build research and interview questions about perceptions and experiences of female community college students regarding HPV vaccinations. Interview questions involved constructs of the HBM, such perceptions of susceptibility to HPV and potential for cervical cancer, perceptions of the severity of HPV, and potential barriers and benefits to receiving the vaccine. The study is designed to address factors which may influence perceptions that lead to becoming vaccinated.

Originally devised in the 1950s by social psychologists in the U.S public health service, the HBM is used to develop health education and public health strategies for disease prevention and encourage healthy behaviors in populations. The original purpose of the HBM was to develop an explanation why people failed to participate in disease prevention programs (Hochbaum. 1958: Rosenstock, 1966).

The concept of potential negative consequences and individual feeling of susceptibility to health issues may have a significant impact on behaviors if it can be shown that benefits outweigh barriers (Sundstrom et al., 2018). In relation to HPV, the HBM has been used historically to target parents and healthcare providers who are involved in vaccinating children.

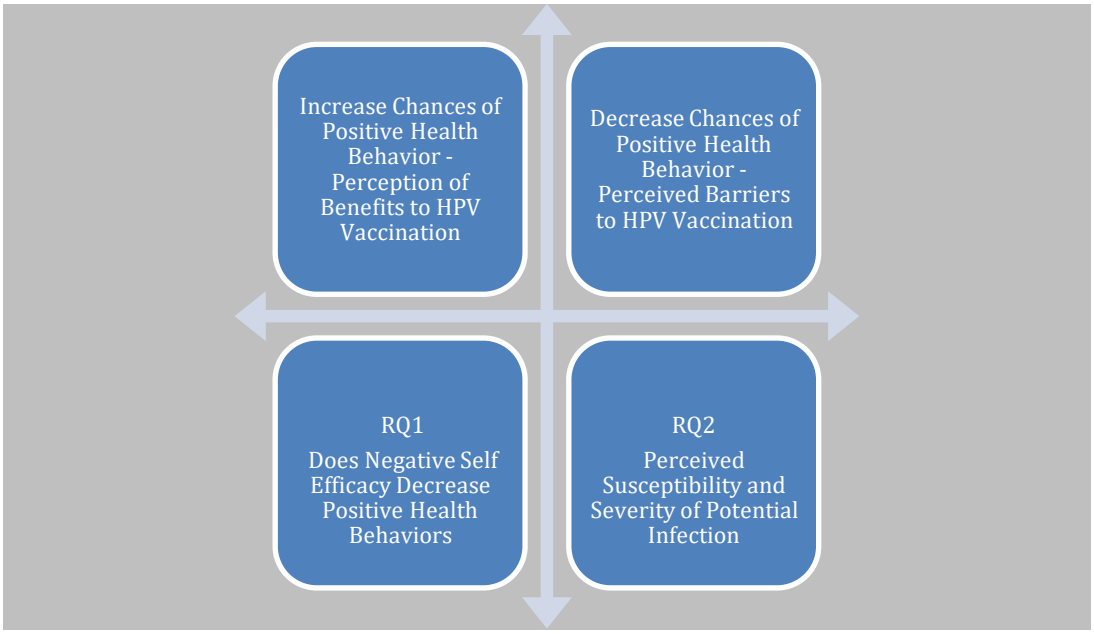
The HBM was a framework for predicting individual beliefs and subsequent behaviors as well as perceptions of their susceptibility to or risks of having a disease or condition, where the individual reviews potential barriers and benefits of behavior changes, self-efficacy to affect change, and cues to action or events in the environment that may provide motivation to make a change (Becker, 1974; Jones et al., 2015). The HBM has been used as a conceptual model in many important studies regarding women and health behaviors regarding factors contributing to obtaining or choosing not to obtain HPV vaccinations, mammograms, and cervical cancer screenings, as well as receptiveness to health communication.

Figure 1 indicates major tenets of the HBM. If an individual perceives that a disease or condition is severe or they are susceptible to having the disease or condition,

they are more likely to change their behavior in order to prevent the disease or condition (Sundstrom et al., 2018).

Figure 1

HBM Model Diagram



The social-ecological model (SEM) was developed by Urie Bronfenbrener as a way to study behaviors of children and how they interacted in places where they lived involving families, peer groups, and communities (Breckenridge, 2018). He extended the theory to include the view that public policy and programs impact health behaviors.

The SEM has been used to promote early screenings through the following levels of intervention individual level which involves how groups may be impacted through increased knowledge, access to affordable screenings, and medical practitioner encouragement, the interpersonal level which involves facilitating behavior changes through patient and provider reminders, the organizational level which involves assisting providers with feedback from patients and lobbying for insurance coverage and policies

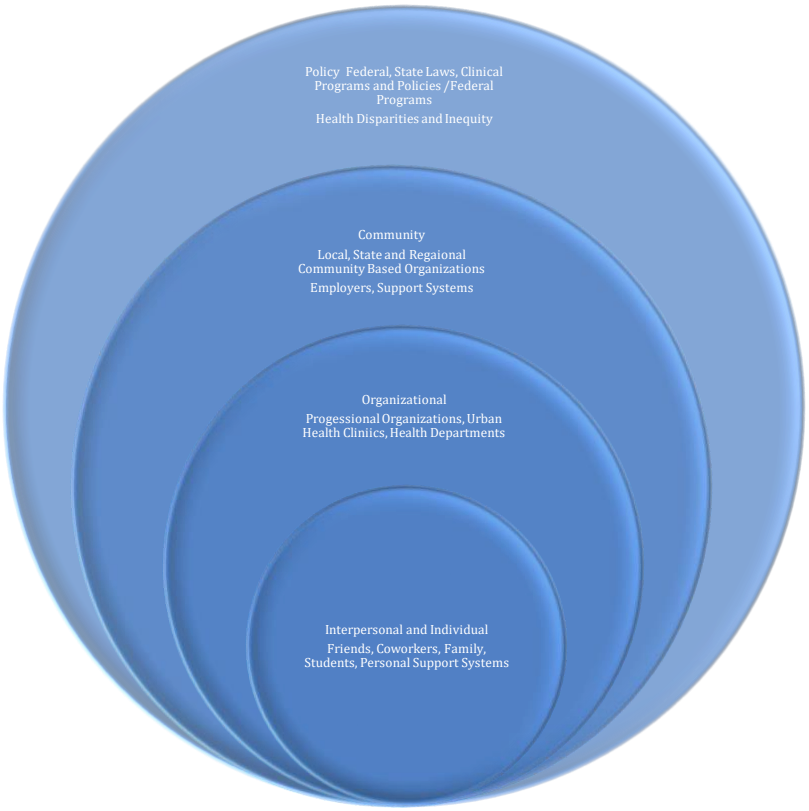
that are supported through employers, community colleges, schools, and health departments the community level which involves formation of coalitions throughout groups affected by breast and cervical cancer, including local and government agencies, and the policy level, which involves helping local and government agencies to support and communicate with the public (CDC 2016).

This model was chosen to facilitate health behavior changes on a large scale using public policies, organizational and community resources, and drawing attention and funding to a recognized problem. The SEM involves viewing individuals interacting within larger social and cultural systems of influence. This model was used to present a large-scale view of interconnected societal, cultural, public policy, and organizational factors that influence behaviors. With this, it is possible to discover potential barriers that may result in lack of uptake of HPV vaccines and followthrough with recommended screenings.

Using the SEM, interviews were designed to ascertain perceptions and subsequent decisions of community college women about health behaviors. The SEM was used to provide an understanding of mechanisms by which women decide against getting vaccinated and may help determine factors that support self-confidence related to their ability to navigate healthcare systems, and where they may obtain credible information about their health.

Figure 2

SEM Diagram



Nature of the Study

I used a qualitative thematic analysis with individual interviews. This method allowed participants to discuss their individual perceptions, experiences, and beliefs about their understanding, involvements, fears, and impressions involving HPV, cervical cancer, and the HPV vaccine. Participants were female community college women between 18 and 45 who were enrolled in a large urban community college in Maryland. Ages were chosen to include data from students who were old enough to make personal healthcare decisions and received the HPV vaccine. A qualitative thematic analytic approach was used to address perceptions and beliefs of female community college students to create public health initiatives that are designed specifically for this population. The SEM was used to engage this population.

Colorafi and Evans (2016) stated qualitative research in health sciences is preferred when there is a question of understanding regarding context or meaning of issues. This method is used to discover feelings, reasons, and factors that hinder or support human behaviors (Colorafi & Evans, 2016). Qualitative research involves providing rich and descriptive analyses of experiences of individuals (Creswell, 2013). Information for this study was gathered through individual interviews with female community college students that were audio-recorded. Themes and codes were discovered through data and themes via the SEM.

Definitions of Terms

Body image: Self-evaluation and comparison based on thoughts, feelings, and impressions of how one compares with others (Shahtahmasebi & Cassidy, 2015).

Cues to action: Circumstances that may encourage individuals to change behaviors based on prompts that are external or internal (Rosenstock, 1966).

Perceived severity: Seriousness that accompanies a disease or condition (Rosenstock, 1966).

Perceived susceptibility: The extent to which individuals believe they are vulnerable to a risk or chance of contracting a disease or having a health condition.

Self -efficacy: The extent to which one has confidence that they can execute a course of action or accomplish a task (Bandura, 1977).

Vaccine uptake: Obtaining or taking a vaccine.

Assumptions

I assumed participants were honest during interviews and shared truthful information. It is important to avoid participant bias where participants may second guess what they think the researcher may want them to say. Participants were provided with assurances that their responses were kept completely confidential.

I also assumed research questions were sufficient to address the problem.

Scope and Limitations

HPV vaccines are essential to prevent most cases of cervical cancer (Wilson et al., 2016). A thematic analytical study was conducted to address perceptions of community

college women about HPV, cervical cancer, and barriers to and benefits of receiving the vaccine. This study was limited to women attending a community college located in Maryland. Participants were between 18 and 45. I did not include women outside those age parameters, staff and faculty, or male students. I chose these ages because 18 is the age when students may freely participate in a study of this nature without parental consent and 45 is the maximum age that individuals may receive the HPV vaccine. This study includes information to help researchers and healthcare professionals develop interventions that are specific to community college women involving increasing HPV vaccine uptake and cervical cancer screenings. Data from this study may be helpful for other large and urban community college populations.

Limitations

This study involved exploring decisions and behaviors that female community college students have about obtaining the HPV vaccine, seeking cervical cancer screenings, and discussing intimate thoughts and feelings about their health. The study involved individual interviews with participants. Intimate healthcare decisions related to sexuality and body image are complicated factors that may be difficult to elucidate.

Significance

Diverse racial, cultural, and ethnic groups are often underrepresented in academic settings (National Institutes of Health [NIH], 2016). Health in vulnerable female populations may be improved through research that impacts mechanisms that can improve their health. Health behavior decisions involve interactions between diverse

groups of women, perspectives regarding or feelings about body image, self-care, feelings about sexual behavior and personal safety and protection from disease. Collaboration with community college women to discover what they need to facilitate uptake of the HPV vaccine will lead to further best practices and improved health, particularly among vulnerable female populations.

This study reflects goals of the RWJ Foundation regarding health equity in research through inclusion of women who are part many ethnic and minority groups as well as this community college student population. This research provides an opportunity to address ethnic and racial diversity in among community college women, since this community college is one of the most diverse community colleges in the U.S.. These women have been marginalized in many aspects of their lives and are rarely included in research (NIH, 2016). With barriers against their success in terms of demands of work, family and college, these women must also learn to handle health and economic disparities during daily life (Hirth et al., 2018). Recorded experiences from this study may lead to an enlarged knowledge base about use of the HPV vaccine and help address what community college women need to increase uptake of the vaccine.

Summary

This chapter contained an introduction, background information, and purpose and problem statements regarding historical and present-day challenges that affect community college women involving HPV vaccines and cervical cancer screenings. I addressed struggles community college women face, lack of research regarding this

population, and differences between women who attend community college and those who attend universities. In addition, this chapter included definitions of terms, scope, and nature of the study, as well as the theoretical foundation. In Chapter 2, a comprehensive literature review includes literature related to concepts. The literature search strategy, conceptual framework, and research regarding the topic are presented.

Chapter 2: Literature Review

The purpose of this study was to evaluate perceptions, motivations, and barriers to getting the HPV vaccination among community college students who were between 18 and 45. The problem is these women are not choosing to obtain the HPV vaccine at the same rates as university women. This chapter includes an explanation of the search strategy and description of conceptual frameworks . The literature for this study involves concepts related to health behavior decisions made by community college women. I address health disparities in this population, body image, and barriers to HPV and cervical cancer screenings. Community college women have barriers that may interfere with their uptake of preventive services such as HPV vaccines (Lamont, 2015; Ridolfi & Crowther, 2013). Examining personal and interpersonal perceptions of HPV and cervical cancer may inform health professionals about appropriate methods to approach and collaborate with this population about their needs.

This chapter includes an overview of health inequality among women who attend community colleges in urban settings in the U.S. and vulnerability to overall negative health outcomes with a focus specifically on HPV and cervical cancer. The chapter includes a discussion of cervical screening and HPV vaccination recommendations as well as supporting prevention and self-care among women, particularly those who attend community colleges. An explanation of how women who attend community college are different than women who attend universities is included.

A qualitative thematic analysis was chosen as a strategy to help these students describe experiences leading to their decisions about obtaining the HPV vaccine or appropriate cervical cancer screening. This research involved filling a gap in literature by exploring how community college women find meaning in their experiences in terms of obtaining or deciding to forego the HPV vaccine or associated pelvic examinations. This study includes accounts of their personal experiences with healthcare decisions.

Literature Search Strategy

In this study, I used the following databases: SAGE Journals, EBSCOHost, Google Scholar, Science Direct, CINAHL Plus, MEDLINE, PubMed, and ProQuest Health & Medical Collection. I used as the following terms: *community college females*, *women and HPV*, *cervical cancer and HPV*, *female body image and HPV*, *gynecological examinations*, *health behavior and community college women*, *health belief model*, *health policy*, *social environmental model*, *disease prevention*, *health insurance in college women*, and *diversity in community colleges*. Research related to community college women was limited, so some terms were combined. Literature was published between 2013 and 2019, with the exception of some important research.

Conceptual Framework

HBM

The HBM is a health-specific social cognitive model that is used to explain how and why individuals decide to adopt particular health behaviors. The HBM includes six constructs: perceived severity (individual perceptions of the seriousness and potential

consequences of the condition), perceived susceptibility *(*individual assessment of risk of getting a disease or condition), perceived benefit (individual beliefs about whether the recommended behavior will reduce the risk or severity of impact), perceived barriers (individual assessment of difficulties and costs of adopting behaviors), cues to action (internal or external motivations promoting the desired behavior), and self-efficacy (individual beliefs about their capabilities to successfully perform a new health behavior).

The HBM has been used consistently to determine the effectiveness of cancer and STD prevention educational approaches among women. Sundstrom et al. (2018) found the HBM was effective in terms of addressing cancer prevention in women by increasing perceptions of susceptibility through the focus on HPV as a STD. Sundstrom et al. (found increasing cues to action through targeted social media could increase percentages of young women who received the HPV vaccine. Sharifikia (2019) found HBM-based educational interventions in healthcare were effective in terms of increasing female

patients' perceptions of severity, cues to action, benefits, and self-efficacy when understanding warning signs of cancer.

In this study, perceptions of susceptibility, benefits and barriers, perceived severity, and cues to action were gathered using individual interviews via thematic analytic.

Literature Review of Key Variables

U.S. Female Community College Students

Community colleges include at least 47% of all students nationwide and a higher ratio of female to male students (American Association of University Women, 2018). According to the U.S. Department of Education (2017), this population is limited in available health research, due in part to the difficulties involving studying diverse backgrounds, cultures, ages, and life circumstances. They are underserved by research when compared to their 4-year cohort. According to Nanney (2015), since there are inadequate scientific studies regarding health behaviors among community college women, this population remains consistently underrepresented in research, which contributes to issues regarding their health and factors that influence health decisions.

Health Equity

According to the RWJ Foundation (2017), health equity is a complex term that intends fairness in all the aspects of society and culture that impact health. In order to provide equitable access to health, it is important to understand the conditions that affect the health of all populations. Marginalized groups are populations that have experienced

discrimination or isolation and have not been provided with the same opportunities as other groups. Women in particular, experience inequality and minority women are especially affected by inequity in many aspects of health (Duesenbery, 2018; Maryland Department of Health, 2018). HPV associated cervical cancer rates for African American women continue to be greater than Caucasian women in Maryland (Maryland Department of Health, 2018).

Sustainable Development Goals set by the United Nations Development Programme (2018), may inform health care professionals about methods to meet the "good health and well-being" needs of a diverse group of community college women. In the proposed population for study, included are female students who are refugees of from war and poverty, some are first generation college students, and many have difficulties that may not be understood without communication about sensitive topics such as sexual health and self-care (American Association of University Women, 2018). This study also touches on topics of gender equality, empowering female students to express their thoughts, needs and feelings. Since 7 out of 10 women experience sexual or physical violence in their lifetime, this study may shed light on the ways that health care professionals may understand these experiences and how they influence health behaviors (United Nations Sustainable Development Programme, 2018).

Vulnerability to Negative Health Outcomes

Community college women are at an especially vulnerable point in many aspects of their lives, and they are more likely to experience a poorer socioeconomic status than

their 4-year college peers (American Association of University Women, 2018). There are significant differences between female community college students and female students attending a 4-year university. The literature reveals that community college women comprise a more diverse socioeconomic, racial, cultural and ethnic background compared to their cohorts at 4-year universities do (American Association of University Womeb, 2018). Community college women are often at a transitional life stage, when health habits and lifestyle behaviors are subject to change and when lifestyle change may be made to the benefit or detriment of the woman's health. During this period, a correlation has been found between health behaviors and body image in women (Lamont, 2015). In addition to the multitude of demands of work, school and family, a woman attending community college may also struggle with maintaining her physical appearance based on "ideal" standards (Lamont, 2015).

Community college educated women are particularly susceptible to the development of detrimental lifestyle habits, including those that lead to rapid advancement of obesity and the development of both short -term and long- term diseases (Rizer, et al., 2016). Pelletier, Lytle and Laska (2016) found that when compared to peers in 4-year colleges, community college students exhibit higher levels of stress and overweight and are more likely to participate in risky health behaviors, including unprotected sex and substance abuse. Negative health status was also attributed to socioeconomic disadvantage found among many community college students, which included consumption of less healthy food, food insecurity, homelessness, less physical

activity, and fewer social supports (Goldrick-Rab et al., 2018; Hirth, et al., 2018; Hirth, 2019; Rizer, et al., 2016). A lack of financial resources includes a lack of access to health screenings and vaccinations and may be attributed to the late detection of cervical cancer.

One of the reasons that community college women are difficult to study is because they do not represent a homogeneous group in terms of age or other factors (Goldrick-Rab, et al., 2018). Community college students diverge substantially in areas such as where they live and work, their socioeconomic status, and whether they have families or children (Goldrick-Rab, et al., 2018). Research about the importance these women place on their health, how their health decisions are impacted by feelings of support, empowerment, body, and self –image is difficult to find. Health -related decisions that tend to expect women to ignore a lifetime of cultural and social cues about body shape and size, impacts women in many ways. The question of how to reach this group of women continues to be neglected, in part due to the difficulty in studying this cohort. Women represent more than half of students attending community colleges and half of all students in college attend a community college before moving to a 4-year college or university (Smith, 2015).

Community college women comprise over half of all community college students. (American Association of University Women, 2018). Community college women make the choice to attend community college due to financial reasons, closeness to home and work and the various degree offerings provided by community colleges. Women who

attend community colleges tend to demonstrate a larger majority of Latino and African American students, and community college women represent the majority of parents attending higher education. In Maryland, forty to forty nine percent of students attend community colleges (American Association of University Women, 2018). At one of the two large urban community colleges in Montgomery County Maryland, minority students make up sixty seven percent of the student body (Community College Review, 2020). Of the 21,720 students in the community college for this study, fifty four percent identify as female and sixty five percent attend college part-time (Montgomery College, 2020). Research has suggested that a transitional time such as attending community college is a perfect time to help students develop health behaviors that prevent chronic disease (Chen et al., 2017; Stephens et al., 2017). Community colleges have the perfect venue to change health behaviors, perceptions and to empower women students because of the large percentage of minority women who attend these institutions.

HPV and Cervical Cancer

The human papillomavirus (HPV) is one of the most common infections in the United States, primarily transmitted through sexual activity, although there have been rare cases of HPV transmission from mother to child at birth. Nearly all cervical cancers are caused by HPV, but smoking, having multiple sexual partners, long-term use of birth control pills also increase the risk of cervical cancer (Wilson et al., 2018). HPV is a large group of viruses that may remain undetected, while others cause genital warts and the most concerning are associated with cervical cancer (Wilson et al., 2018). The viruses

that cause genital warts are not typically associated with cervical cancer and are considered “low risk” for cancer, but there is confusion about whether the diagnosis of genital warts is part of HPV. (American Cancer Society, 2019; U.S. National Library of Medicine, 2018; Wilson et al., 2018).

STD Goals 9.1 and 9.2 for Healthy People 2020 included a reduction of HPV types 6, 11, 16 and 18 in women and to reduce the proportion of women having other HPV types (Healthy People 2020, 2018). Research has shown that 83.1 percent of women who attain higher educational levels have been seen by a health provider, compared to 68.3 percent of women with less than a high school education (Healthy People 2020, 2018). Young women ages 15 to 24 tend to have more complications from sexually transmitted diseases (Healthy People, 2020, 2018). These factors are made more severe if the woman is also from a minority race or ethnic group that also is less economically stable, which also includes less access to health care (Gallagher, LaMontagne & Watson-Jones, 2018; Healthy People 2020, 2018). These goals include a developmental goal to reduce the number of women with HPV types 6, 11, 16 and 18, shown to be correlated with cervical cancer.

College aged women between age 20 and 24 have the highest prevalence for HPV (Wilson et al., 2018). Although a reduction in HPV infections was seen for women between the ages of 14 to 19, conversely, college women between the ages of 20 and 24 years saw an increase in HPV infections (Wilson et al., 2018). Although women college students were aware of the risk factors such as having multiple sex partners, having

intercourse at a young age and using condoms, the same group showed a lack of understanding between having HPV and the development of cervical cancer (Markowitz, 2016; Nadarzyinski et al., 2012).

In 2018, the U.S. Food and Drug Administration (FDA) approved the use of the HPV vaccine Gardasil 9, to expand the age of coverage to include men and women aged 27 to 45 (FDA, 2018). In addition to the expansion of coverage to include a wider range of ages, a group of scientists in Mexico reported a breakthrough in discovering a cure for the HPV virus (Ortiz, 2019). The experimental use of photodynamic therapy has shown that the virus may be eliminated in a small group of women. Although the results are preliminary and still being investigated, a potential cure for HPV could change how this virus is treated.

Guidelines for cervical cancer screening may be confusing because conflicting recommendations from various organizations. The divergent advice concerning cervical cancer screening adds to the confusion about the connection between cervical cancer and HPV. American College of Obstetricians and Gynecologists, [ACOG] 2017) recommends that women between 21 and 29 years of age have a cervical cancer screening every 3 years unless there is a medical condition that would indicate more frequent screenings. According to these guidelines, women ages 30 to 65 should be screened every 3 years or have high-risk HPV testing every 5 years. Women who have had a hysterectomy with removal of the cervix and women over 65 with previous

adequate screenings and with no history of cancer are not recommended for screening (ACOG, 2017).

Research has not explained the experiences of community college women concerning their feelings and beliefs about their health, or their perception of assumptions that may be made about the female body in medical settings. Traditional age community college students are especially susceptible to the development of unhealthful lifestyle habits, including those that lead to rapid advancement of obesity and the development of chronic diseases, through lack of preventive care and lack of access to health screenings (Rizer, et al., 2016). Lamont (2015) found that women who have negative feelings about their body are less likely to receive preventive screenings and found that more data is needed to determine the relationship between body image and a woman's willingness to have HPV or cervical cancer screenings.

There are about 79 million people infected with HPV in the United States as of 2015 (Centers for Disease Control, 2015). The CDC reported that about half of young women would acquire HPV within 3 years of having sexual intercourse. Unfortunately, the United States ranks lower than Australia, Scotland, and Canada in uptake of the HPV vaccine (Gallagher, LaMontagne & Watson-Jones, 2018). In countries where there is greater than 80% uptake of the vaccine, there have been active community health promotions and endorsement by healthcare providers and educators (Gallagher, et al., 2018). In the United States uptake is lower, and there has not been a strong national community health advocacy component, nor has there been consistent medical provider

support for or comfort with recommending the vaccine to parents (Gallagher, et al., 2018). In less wealthy countries, uptake has been at the behest of pharmaceutical donations and international health entities such as the Australian Cervical Cancer Foundation (Gallagher, et al., 2018). There are clinicians who believe that the recommended age for commencement of the vaccine is too young and do not recommend it to parents for that reason (Cole, et al., 2017).

The cost to the United States in direct medical care costs average about $1.7 million and include about 14 million new HPV infections each year (Centers for Disease Control, 2017). Although this is a very common infection, not all types of HPV cause invasive types of cancer. With advances in vaccines, the chances of developing invasive cancers are reduced, if the vaccine schedule is followed and if the vaccine is taken. There are known to be over 200 different strains of HPV identified so far, and it is not known if more will be found, yet there are many aspects of HPV and the development of cancer that are not well understood (Cole, et al., 2017; Gallagher, et al., 2018). How individuals become immune to strains of HPV, risk of "precursor" lesions by type and individual factors in disease progression are examples of factors that continue to be studied and observed (Cole, et al., 2017; Gallagher, et al., 2018).

Cervical Cancer Screening Standards

The screening for cervical cancer is the Papanicolaou Smear, or Pap test (American Congress of Obstetricians and Gynecologists, 2017). The Pap test is a screening to find cellular changes in the cervix (American Congress of Obstetricians and

Gynecologists, 2017). Changes in the cervix may, over time develop into cervical cancer (American Congress of Obstetricians and Gynecologists, 2017). Cervical cancer screenings may include a test for (HPV) as well as for cellular changes in the cervix (American Congress of Obstetricians and Gynecologists, 2017). Other health factors related to the development of cervical cancer are a history of smoking and having multiple births, with HPV statistically responsible for most cancer occurrences (American Congress of Obstetricians and Gynecologists, 2017).

Although the HPV infection occurs through sexual transmission and may clear up within 3 years, there may be a 10 to 20 -year period between an HPV infection and the development of cancer (Wilson et al., 2018). There is currently a draft recommendation for pelvic examination screening strategies from the U.S. Preventive Services Task Force [USPSTF], (2018). The USPSTF (2018) recommendations state that women between the ages of 21 and 29 be screened for cervical cancer every 3 years. Recommendations for women between the ages of 30 and 65 are for either screening for high-risk HPV testing or cervical cancer pelvic exam every 3 years (U.S. Preventive Services Task Force 2018). The recommendations include a cut off for women aged 65 and older unless there has been a history of a *high-grade cervical lesion*. For women under 21, screening is not recommended (U.S. Preventive Services Task Force , 2018).

Barriers to HPV and Cancer Prevention

Ginsburg et al., (2018) demonstrated that although there has been advancement in cancer treatment, the emphasis on treatment over prevention is an important issue that

speaks to some of the inequities in cancer prevention strategies for women. The assertion the authors made is that a woman's power in society can be correlated with the treatment and prevention of cancer (Ginsburg, et al., 2018). In this case, preventive measures are lacking when compared to advances in cancer treatment. The authors also made the point that high-cost cancer treatment is where most advancements have occurred for cancers that are specific to women (Ginsburg, et al., 2018). It is important to note that a woman's socioeconomic status is associated with her rate of mortality from cervical and breast cancers (Ginsburg et al., 2018).

HPV Vaccination and Knowledge

There has been research about HPV vaccination adherence in young women with contradictory results. Some research indicates a lack of knowledge about HPV and connection to cervical cancer. Hirth et al., (2018) found that there was a very low knowledge level for community college students at a community college health fair, where only 14 % of students were able to answer HPV related questions correctly on a survey. Conversely, Navalpakam, Dany and Hussein, (2016), found that knowledge was not a barrier in a study of 192 college women, with an average age of 24 years. These women were interviewed to determine barriers to receiving the HPV vaccine, as well as to determine their concerns about susceptibility to the HPV virus and cervical cancer. The authors found that although 95.8 % of the college women were very aware of the HPV vaccine, only 46 percent of these women had been vaccinated for HPV (Navalpakam, et al., 2016). The students in this study indicated a high level of

knowledge, but a much lower level of intention or feelings of susceptibility to having HPV (Navalpakam, et al. 2016). The students were aware of the connection between HPV and cervical cancer but believed that there was a high likelihood that only fellow students would contract HPV (Navalpakam, et al., 2018). While these students felt that others would be susceptible, they did not think that they were susceptible to be infected by the HPV virus. Researchers found an increase in knowledge about HPV and cervical cancer, but a very low rate of follow through or intent to become vaccinated (Navalpakam, et al. 2016). These authors reported that barriers to receiving the HPV vaccine were a lack of knowledge about who was susceptible to acquiring the infection, the student's belief that they were not personally susceptible, misinformation about HPV itself, and financial barriers for students without medical insurance (Navalpakam, et al. 2016).

Community College Women and HPV

There is a limited amount of literature regarding body image and community college students' adherence to recommended HPV vaccine guidelines, and cervical cancer screenings. In addition, community college women are underrepresented in scientific literature regarding the impact of body image on adherence to cervical cancer screenings and HPV vaccines. Information is necessary to help develop supportive approaches to the prevention of cervical cancer through HPV vaccinations and support for further research that would direct health care practitioners to appropriate methods that would help these women feel empowered to obtain these screenings.

Based on current research, it appears that creative community- based programs are the most effective in reaching community college women (Nanney, et al., 2015). To date, studies of cervical cancer screening and college students have often tended to focus on the woman's lack of knowledge about the importance of this screening (Ackerson, Zielinski & Patel, 2015). Ackerson et al., (2015) found that women in this cohort reported embarrassment, fear of pain and threats to virginity as barriers that warranted further study. HPV vaccinations and cervical cancer screenings are examples of important preventive health care screenings, regardless of age, education, or socioeconomic status. Community college women students are an important cohort for further study since research is limited in this population (Ackerson et al., 2015; Nanney, et al., 2015). It is important to understand their beliefs, benefits, barriers, and perceptions of their vulnerability to prevent the development of cervical cancer.

Having young women get all three doses of the HPV vaccine is essential to prevent cervical cancer. National statistics demonstrate that many young women between the ages of 18 and 26 have not had all the vaccination doses, or cervical cancer screening through PAP Smear, as recommended by Wilson et al., 2018). Depending on the state, the percentage of children vaccinated at the appropriate age is sixty percent, although some states are as low as forty nine percent for children between the ages of 11 to 12 (Centers for Disease Control, 2017). 41 percent of girls in the recommended age group have received the appropriate vaccinations for the HPV virus (American Congress of Obstetricians and Gynecologists 2017).

Confusion exists over professional physician society's recommendations for cervical cancer screenings (Sawaya, et al., 2017). There is mixed information and guidance about when a woman should have a cervical cancer screening depending on which physician society one accesses. While ACOG recommends cervical cancer screenings for all women aged 21 to 65, the American College of Physicians recommends that women not have a pelvic exam unless pregnant or exhibiting symptoms of disease (American College of Physicians, 2017; Sawaya et al., 2017). This recommendation is due to evidence of harm, which this society cites as false positive results, unnecessary surgeries, and a lack of evidence of benefit to women (Sawaya et al., 2017).

Confusion over physician recommendations indicates a need for further research for best practice approaches to women's gynecological health. According to Sawaya et al., (2017), when women have all the facts and recommendations together with potential benefits and potential harm, they will be less likely to decide to have a pelvic exam. The question of whether or not divergent medical recommendations plays a part in college women's lack of trust in preventive cervical cancer screenings remains to be seen. There continues to be discussion about whether to provide women with complete information about potential harm from cervical exam screenings, and conflict about benefits to having a pelvic exam when no symptoms of disease are evident (Sawaya et al. 2017). With a lack of agreement between physician's professional societies, it is evident that conclusive research needs to occur so that women can be sure of appropriate cancer prevention strategies and the part that pelvic exams may or may not play in this prevention.

Prevention and Self-Care in Women

Research indicates a connection between a woman's body image and self -care, which includes vaccines and cervical cancer screenings (O'Neil et al., 2016). Gender specific factors in chronic disease prevention and screening have not always been viewed as significant in medical and health science research (O'Neil et al., 2016). An example of this tradition is the Framingham Heart Study (O'Neil et al., 2016). The authors found that depressed women have a much higher likelihood of experiencing a heart attack yet screening for depression is not a routine practice for female patients (O'Neil et al., 2016). Other recent research indicates that college women who are overweight are often negatively impacted when labeled as "overweight" compared to overweight women who received a label as "normal weight" (Essay, Murakami, Wilson & Latner, 2017). The authors found that their research insinuated a behavioral impact resulting from negative body image in college women labeled as "overweight" needed further study to discover alternatives to weight labels, particularly for this population.

Discussion

New approaches that affect uptake of the HPV vaccine, with an emphasis on supporting a positive female body image and create a consistent, easily available vaccine protocol are essential to increasing vaccine uptake (Essayli, et al., 2017). This research is important since negative body image is associated with less adherence to "body focused" or sensitive health screenings such as HPV vaccinations and cervical cancer screenings in college women (Kelly, Ruth & Heena, 2015; Lamont, 2015). Since body image is one of

the reasons that college women may choose not to adhere to recommended HPV vaccinations or cervical cancer screenings, it is important to determine the social environmental influencers that may affect their decision (Kelly, Ruth & Heena, 2015).

If the known barriers could be overcome through thoughtful, research-based changes in the current system; more women would be empowered to participate in the uptake of the vaccine (Kelly, Ruth & Heena, 2015). Greenslade, Fitzgerald, Barry and Power-Kean, (2013) found that women diagnosed with cervical cancer explained that there were formidable barriers to having a cervical cancer screening. They included a concern for a lack of privacy, discomfort with the PAP smear itself, relationship status and discomfort with their health care provider.

According to research, community college women can be reached by improving their knowledge base and through thoughtful initiation of an HPV vaccination program on campus (Hirth et al., 2018). Even with those initiatives, the vaccination rates remained only at 22 percent (Hirth et al., 2018). Combined with a low baseline knowledge level, and significant financial and time constraints, the percentages of college women who are both knowledgeable and who also have received all doses of the vaccine is 14 percent according to Kester et al., (2014). Some reasons that students have listed for not receiving the vaccine are inability to ascertain where to get the vaccine, lack of time since more than 60 percent of community college students also work full or part-time, 29 percent have children and many do not have health insurance to cover the cost of the vaccine (Hirth, et al., 2018). The time and effort that it takes to find a provider

distributing the vaccine, one who also takes their insurance or is affordable, has a time slot available between the student's work and school schedule, is an issue that discourages many from obtaining the vaccine at all (Hirth et al., 2018).

By discussing the factors that are known to prohibit uptake of the vaccine and discovering what factors interfere with vaccine adherence, researchers may be closer to developing a plan that will impact the issues specific to community college students, which will increase uptake of the vaccine and prevent many cases of cervical cancer later in life (Hirth et al.,). Hirth et al., (2018) found that there is a need to establish a welcoming procedure for approaching women about having regular preventive screenings such as PAP tests. This will add to information for health care providers that will help them to understand and work to eliminate women's fears.

In addition to developing information on known barriers, new qualitative research may illuminate additional issues for students that may be overcome with changes to the current system of vaccine administration and education about the importance of the vaccine. Establishing methods to empower women toward acceptance of self-care through cervical cancer screenings and HPV vaccinations is vital to decreasing the incidences of cervical cancer.

Summary and Conclusions

This chapter contained information about search parameters and an overview of issues and recommendations for further research. Chapter 3 includes the purpose and information about the research design and methodology. Female community college

students are different from university students when it comes to factors such as race and ethnicity, socioeconomic factors, availability of healthcare resources, and social and economic support. Literature for this vulnerable group is absent because this cohort is much less homogeneous compared to university women, making them more difficult to study. This study involved filling a gap in literature regarding this group of women in terms of their health behaviors and decisions regarding HPV vaccination and screening. In Chapter 3, the methodology, data collection procedures, ethical protections, and support for participants are discussed.

Chapter 3: Research Method

The purpose of this study was to evaluate perceptions, motivations, and barriers to getting the HPV vaccination among community college students who were between 18 and 45. The problem is that community college women are not choosing to obtain the HPV vaccine at the same rates as university women. This study involved comprehending perceptions that this population had about getting the HPV vaccine, feelings about how vulnerable they believed they were to get HPV, and what impact the ways they viewed themselves and their bodies had on their health decisions. Information was used to develop community health interventions and effective education and support to increase vaccine uptake for this population. This chapter begins with a description of qualitative thematic analysis, with the HBM and SEM as frameworks. In this chapter, my role, participant selection, and sampling strategies are discussed. This is followed by a description of procedures and instruments for data collection and discussion of trustworthiness and ethical concerns.

Research Design and Rationale

In this section, a detailed description of the proposed research plan is discussed. Information regarding the research tradition and framework, participant selection and criteria for selection, data collection, software use, and ethical protections are provided.

HBM

The HBM was used to clarify beliefs about health behaviors, perceptions of severity, susceptibility to disease, and factors that help motivate individuals to change

behavior or cues to action that provide support for practicing preventive behaviors. The HBM also involves considering self-efficacy in terms of participants' assessments of their skills or confidence in obtaining the vaccine and navigating a complex medical establishment.

This model was chosen to address intricacies of health behavior. Factors related to decisions that community college women made were demonstrated through questions concerning barriers and benefits of health behaviors. The goal of this research is to address perceptions, meanings, and perspectives the participants using the HBM. These perceptions may be difficult to record unless research is adapted to reflect their unique perspectives.

The HBM was used to examine experiences about preventive health practices. It was developed as a model to address decisions to or not to participate in preventive health actions (Rosenstock, 1966). This model helped to explain behaviors that were related to the importance participants placed on the seriousness of diseases and likelihood of contracting them as weighed against perceived barriers to participating in prevention activities and health-related screenings.

SEM

Using the SEM, factors attributed to successfully getting the HPV vaccine and barriers to obtaining the vaccine may be assessed in terms of interpersonal, cultural, community, and systemic public policy views. Since community college women have unequal barriers to obtaining preventive healthcare when compared with university

women, the SEM may be helpful in terms of establishing where breakdowns happen throughout all levels of society.

The SEM has been useful in terms of analyzing vaccine coverage on a large scale. Kumar et al. (2012) found all levels of the SEM had a role in determining levels of vaccine adherence during the H1N1 outbreak in 2009. The CDC routinely used the SEM as a framework to understand and prevent suicide, and create a multilevel framework to prevent human trafficking . The SEM has been the framework of choice to address multilevel behavior change approaches to promote breast and cervical cancer screenings.

Research Questions

Research questions guiding this study were:

RQ1: How do social and environmental influencers on body image affect the likelihood that community college women receive screenings for HPV and cervical cancer?

RQ2: What are perceived susceptibility and severity rates for developing cervical cancer and HPV among women attending community college?

RQ3: What are perceptions of community college women regarding HPV and cervical cancer?

Thematic analysis was chosen for this study to address experiences of community college women because this approach is an appropriate design to answer the research questions. The goal of this study is to address best ways to expedite the development of programs that empower community college women to participate in preventive HPV

vaccines and appropriate cervical cancer screenings. A mixed methods approach was not appropriate since there were no variables that could be manipulated. According to Merriam and Tisdell (2016), qualitative research involves seeking meanings that participants place on experiences or phenomena. Qualitative thematic analysis is appropriate when researchers seek to understand meaning, perceptions, and experiences involving a phenomenon (Creswell, 2014). Community college women between 18 and 45 years represent an underserved population.

Role of the Researcher

For this study, I was the instrument for collection of data. In qualitative studies, the researcher is one of the data collection instruments (Denzin & Lincoln, 2003). For this reason, researchers must describe personal biases and experiences, expectations, and assumptions so readers can determine their position. I have relationships of trust with students in my classes, where I maintain a role of evaluator. Students enrolled in classes that I taught or would teach in the following semester were not allowed to participate in this study. Since this study took place at my place of work, participant protections were approved by the Institutional Review Board (IRB) at my workplace and Office of Institutional Research.

Methodology

Participant Selection

The participants in this study were community college women attending a large urban community college in Maryland. Information about the college cannot be released

to protect the confidentiality of the participants and the organization. They were recruited from the current population of female students at the community college. Women ages 18 to 45 were be asked to participate in face-to-face interviews.

Women within these age parameters were chosen because they can make their own decisions about their healthcare and because the newest guidelines for age limits for the HPV vaccine include individuals up to age 45 (Centers for Disease Control, 2019). Participants for this study were community college educated women who volunteer for the interviews and are between the ages of 18 and 45. A request for participants was sent via announcement through the community college communication systems. These systems include email, in -class announcements, and a college wide system of communication used for announcements and college events. Individual one-hour interviews were conducted. Female students were asked about their perceptions of HPV vaccines, including barriers and benefits of getting the vaccine, perceptions of their susceptibility to getting HPV, and their perceptions of severity of HPV and potential for the development of cancer because of the many HPV strains.

The interviews will help to determine what these women believe about how the HPV virus is spread, how they perceive pelvic screenings for cervical cancer and what would help them to obtain suggested screenings. Face to face interviews provide a rich, descriptive context on which further investigations may build (Merriam & Tisdell, 2016). Interviews helped to shed light on the comfort level and knowledge these women have

regarding self-care in the form of protected sexual activity, gender specific preventive care and vaccinations.

Sample Size

According to foundational work by Creswell, (2013) a suggested guideline for sample size is not intended to provide the ability to generalize the data, but to focus on the specifics of the participants. Saturation in qualitative research means that no additional data are found to further develop the study or when no new codes are being found (Saunders et al., 2017). Several researchers, including foundational guidelines by Creswell (2013), suggest that the ideal size to assure saturation for qualitative studies using individual interviews ranges from three to 10 individuals (Dukes, 1984; Reiman, 1986; Creswell, 2013). For this study, the sample size will be dependent on the number of volunteers but will be limited to no more than 10 participants. This will enable exploration of perceptions of participants with the depth and richness of description intended to maintain credibility. In-depth interviews are found in phenomenological research with the primary purpose being the description of the meaning of a phenomenon for a group of individuals (Creswell, 2013).

Instrumentation

The researcher-developed instrument includes questions based on each of the tenants of the HBM (Rosenstock, 1974). Interview questions were developed by using each of the values of the HBM including benefits and barriers to uptake of the vaccine, perception of severity and susceptibility of HPV and cervical cancer and potential cues to

action that might influence decision making regarding the vaccine (Hagan, 2019; Rosenstock, 1974)

Validity

Leung, (2015) suggested that validity in qualitative research necessitates that appropriate context must exist. Methodology must support detection of phenomena in a suitable context for it to be considered valid (Leung, 2015). There is contention about appropriate methods to determine validity in qualitative research, but agreement in general of the importance of establishing trust in the interpretations made from qualitative studies (Fitzpatrick, 2018). Procedures, methods, and sampling must be appropriate to the research questions (Leung, 2015). According to Creswell and Miller (2000), thick, rich description and triangulation are common methods to assure validity in qualitative research.

Pilot Study

A pilot study was conducted to ensure validity. The purpose of the pilot study is to assess the feasibility and viability of the approach that will be used on a larger scale (National Institutes of Health, 2020). Two female participants between the ages of 18 and 45 were interviewed using the questions designed for the study. (See appendix B) The pilot study was used to determine if the information gathered is organized, analyzed, and may be coded for validity (Merriam & Tisdell, 2016).

Procedures for Data Collection

Participants were recruited through college wide announcements at a large, urban community college near Washington D.C. Recruitment included text, email, and classroom notices to attract participants. Women aged 18 to 45 were recruited. Each participant was provided with information about the purpose of the study and was provided with a consent form and detailed description of the interview process.

When participants have chosen to be part of the study, everyone met with the researcher in a private Zoom meeting room. Participants were informed that a follow up interview of 30 minutes may be requested. Interviews were recorded using Zoom with a backup smart phone recording for accuracy. Participants were asked verbatim questions from the interview form located in appendix B. Participants were asked to expand on their answers and if they would like to add general thoughts or comments. When the interview was concluded, participants had time to review their answers and were told that their answers and comments will be kept confidential. The transcripts from the videotaped interview were uploaded to a qualitative software program for thematic analysis and coding.

COVID-19 Precautions

Alternatives to in-person interviews followed Walden University guidelines and met Maryland state procedures for colleges during the COVID-19 pandemic. In this case, students were asked to participate in video conferencing interviews and video conferences for follow up interviews.

Confidentiality has been assured by using a number instead of individual name or any other identifying information. Participants were informed that their answers will be kept in a secure location for 5 years and that they are free to ask questions or clarify their comments for the week following the interview.

Data Analysis Plan

Creswell's six steps for data analysis (Creswell, 2014) will be used as a guide for managing data. Interviews will be semi-structured, videotaped, and transcribed. A journal will be kept during and after the interview for research notes and context. The first step is organizing and categorizing transcribed interviews and field notes (Creswell, 2014). Following the first step, data will be reviewed for overall impressions and general ideas that participants have provided. Next, data was coded or organized through grouping of information that arises from the transcribed data (Creswell, 2014). Codes were developed using information that comes from participants and not pre-determined prior to interviews (Creswell, 2014). The coding process preceded a description of the setting and serve to develop themes for the research (Creswell, 2014). Creswell (2014) recommends between five to seven themes that will help to organize data to form a general description of finding from the data collected. The final steps were to provide a discussion of themes and interpret meaning and findings (Creswell, 2014).

Data has been organized after interviews with a review of recorded data, including listening to audio recordings, and utilizing the "word frequency" tool that will include a "word cloud" and "word tree" (QSR International, 2022). By these methods, it

is possible to visualize words, phrases, and the context in which they are used and organize by frequency (QSR International, 2022). When words, phrases and contextual information is organized, the next step is to choose labels, or "codes" assigned to concepts or categories of information based on research questions (QSR International, 2022). NVivo has an "explore" function that performs a variety of visualizations, maps, "cluster trees", charts and relationships that helps to provide additional clarity and validity to the information found in the interviews (NVivo, 2022).

A qualitative thematic analysis includes a series of steps to develop themes (Miller, 2020). The first step is for the researcher to read and re-read data gathered in interviews. Researchers should listen to recorded interviews and take notes, but refrain from coming to any conclusion (Miller, 2020). Following this step, the researcher begins to code or group data by theme based on research theory. This data may support, or it may contradict the research theory. During the next step, data is re-examined to determine whether they fit into a theme. At this point, the researcher may need to recode data if it does not make a logical connection to a broad-based theme (Miller, 2020). The researcher then begins to assign meaning to data and to develop a descriptive narrative that includes connections between data points. Finally, a formal commentary is developed that includes examples of data and thematic points and provides clarity for the reader (Miller, 2020).

Trustworthiness

Creswell (2013) stated that validation incorporates the researcher's understanding the topic area and self-reflection, to provide clarity about the subject and robust reporting of interactions with participants, so that readers can understand and judge the experience for themselves. There is contention about the use of validity in qualitative research (Guba & Lincoln, 1985). Some qualitative researchers believe that validity is not something that can be assured, since perception will always be a personal reflection of experiences and current assumptions and that one cannot separate themselves from these perceptions (Guba & Lincoln, 1985). Credibility, transferability, dependability, and confirmability are essential factors in providing trustworthiness (Guba & Lincoln, 1985). Angen, (2000) stated that validation involves the readers "judgement of the trustworthiness of or goodness of the piece of research" (p. 387). For this research to provide validity, credibility, dependability and confirmability, the Social Ecological theoretical framework will be used to provide a larger and more complete view of health and women in public policy and society. Thematic analysis will help to provide credibility through comparing theories that emerge through the interviews. Credibility is enhanced through saturation of participant interviews (Guba & Lincoln, 1985). To provide saturation, 10 participant interviews are necessary (Guba & Lincoln, 1985). Trustworthiness necessitates that the data from this research remain accessible for 5 years (Yin, 2011). After 5 years, the data will be disposed of in a confidential manner, but

disposing the data potentially creates limitations in credibility and in trustworthiness concerning the future use of the research (Yin, 2011).

According to the Robert Wood Johnson Foundation (2008), triangulation includes the use of multiple sources of data and methods to help provide better understanding. The reason that researchers utilize multiple data sources is to provide a robust, rich and comprehensive view of the topic (Robert Wood Johnson, 2008). Triangulation can involve multiple settings, time periods, methods and theories that will shed light on the topic and provide credibility to the research by providing a variety of understandings (Patton, 1999). Member checking is a method that will be used in this study. After coding and providing tentative themes for the results, a final 30-minute interview may be conducted to share preliminary results and to have participants examine a rough draft of conclusions. This method will provide credibility to the results and allow participants to ensure the accuracy of the reporting (Creswell, 2013).

Clarifying researcher bias is another method for providing accuracy and meaning to a qualitative study. This method will be used for this study to provide a deeper understanding of assumptions, past experiences that may contribute to the approach to this study and to the interpretation of results (Creswell, 2013). Creswell (2013) considers validation the attempt by the researcher to create an accurate recounting of the results to the best ability of the author, but that it remains a reflection of the author. Creswell (2013) considers this a strength of the qualitative method in that the rich description, the amount of time taken to reflect, and spend time with participants all contribute to the

accuracy of the research. The ability to maintain external validity (transferability) in qualitative research is enhanced using description in such detail that the reader may be able to identify patterns in context (Lincoln & Guba, 1985).

Ethical Procedures

An informed consent was provided to each prospective participant with a complete description of the study and the methods through which they will be protected from harm. Participants provided their signature by email and their verbal understanding of the interview process and procedures. They were told that they can leave the study at any time and do not need to provide a reason for leaving.

Procedures due to COVID-19 included emailing the informed consent in the body of an email to each participant. According to Walden University directions, the participant may respond by simply stating "Yes". If participants do not wish to receive an email, or do not have access to email, the consent will be read to the participant and their consent received by recorded video.

Participants will be provided with the opportunity to review their interview transcripts and to make changes in their recorded conversation. Written transcripts of spoken conversation were provided to the participants to improve accuracy and credibility and to include additional time for clarification of meaning. Participants were asked to review preliminary results of their transcripts to ensure accuracy and dependability of the findings prior to completing the final draft of the conclusions.

Informed consent was provided to each participant as part of a system for understanding the relationship between participant and researcher and to assure participants of their protections. The nature of the study, the scope and participant's right to refuse to participate at any time was explained in writing and verbally. Participants understood their confidentiality was protected using numbers and by having no identifying information in the written materials. Participants were assigned a numerical code that will be kept in a password protected computer. The Walden IRB review process suggests that information be kept secure for a minimum of five years (Walden University, 2022). This will be the guiding protocol followed for this research. Video recordings will be kept in a computer locked with a passcode and any recordings not on a computer will be destroyed professionally.

Summary

This chapter included an outline of the research methodology and research questions. Information regarding research procedures, data collection, interview questions, and participant requirements was included. A qualitative thematic analytic plan was used to address perceptions of community college women related to HPV and cervical cancer. A discussion of the research design and methodology was included along with descriptions of the HBM and SEM. This chapter included a discussion of participant selection, procedures for collecting data, and ethical protections. Chapter 4 includes results of the study, data collection, explanation of data analysis, and themes in participant interviews.

Chapter 4: Results

The purpose of this qualitative study was to identify perceptions that community college women had that prompted them to get or refuse to get the HPV vaccine. Research questions were as follows:

RQ1: How do social and environmental influencers on body image affect the likelihood that community college women receive screenings for HPV and cervical cancer?

RQ2: What are perceived susceptibility and severity rates for developing cervical cancer and HPV among women attending community college?

RQ3: What are perceptions of community college women regarding HPV and cervical cancer?

This chapter includes an overview of results of the study via in-depth interviews and analysis of data. Chapter 4 includes information regarding the setting, data collection process, and data analysis.

Research Setting

I conducted this qualitative study during October, November, and December 2022 using Zoom for interviews and transcripts. Participants were volunteers and given no incentive to participate. I posted flyers, spoke to various classes about the study, declared to women and gender studies faculty and counseling, and emailed previous students from the last year. Since the IRB from the partner organization granted final approval late in the spring, it was difficult to get volunteers, as most students were off for the summer

months. During the fall, I asked other faculty to announce my request for volunteers and was able to recruit the first two students who then helped to recruit others via word of mouth. I scheduled interview times to suit students and was able to obtain 10 participants. None of the students who volunteered to be interviewed withdrew. I sent consent forms for their signature. These forms detailed the interview process and information about the study. I scheduled interviews when students were available. The community college partner did not allow me to collect any demographic information. Only information offered by students was included.

The college is located on three campuses in an urban county in Maryland. The median income is $108,188. The high school graduation rate is 91.4%. The county has a majority minority population and with 39.3% of persons speaking a language other than English at home and 30% of the population of this county obtained a graduate degree or higher. By 2025, it is expected that in minority populations will increase and there will be a decrease in White non-Hispanic residents by 3.0%.

The student population at this college reflects the cultural, ethnic, and racial make-up of the county. This college is the most diverse community college in the U.S.. This population may provide information that can be applied to other diverse urban settings.

There are 55,243 students enrolled at the college as of 2017. The average age of students is 25. Most students attend on a part time basis and also work part time.

Data Collection

Pilot Study

A pilot study was conducted to ascertain if interview questions were clear to volunteers. The pilot study allowed for me to practice study procedures and reflect on whether adjustments to the study design or methods were needed. I followed Walden University IRB and partner IRB guidelines. Two female participants were recruited using the study flyer (see Appendix C).

Pilot study results were conducted separately from interviews and were not included in this dissertation. Interviews were conducted online using Zoom. Transcripts from interviews were downloaded to Microsoft Word and students were identified using pseudonyms.

The data collection process involved interviews with 10 community college women between 18 and 45. Those interested in participating contacted me through the email address that was provided in the recruitment flyer that was posted throughout college campuses, approved by Walden, and college IRB committees, or by stopping by my office on campus. All interview times and dates were scheduled at the convenience of volunteers and held within 7 days. All interviews were held using a personal Zoom account that I purchased for the purposes of this study. Volunteers were sent an electronic invitation to meet at their proposed time and date. Interviews lasted from 20 to 45 minutes in length, and all participants provided verbal and written consent to have interviews recorded and transcribed on Zoom.

Once consent was received, participants were provided with a brief description of the purpose of the study (see Appendix B). Per the college IRB, I was not allowed to collect any demographic information, except to ensure volunteers were over 18. I posed all questions and followed up with a debrief to be sure each participant had information about the HPV virus and appropriate vaccination information. All information was stored on my personal Zoom account, and transcriptions were moved to Word documents that were labeled alphabetically to protect identity. These documents are stored on a password-protected computer in my home, and I am the only person with access. At the end of each interview, participants were informed they would receive a copy of the final research project by email. Participants were sent copies of their transcripts to ensure answers during interviews were accurate.

College IRB approval happened at the end of the spring semester when students were leaving for summer break, so recruitment took 6 months, from June until December. It was difficult to recruit participants initially. When I explained that knowledge of HPV was not necessary to participate, participants decided to volunteer. I was able to recruit 10 students by the end of the fall semester.

Demographics

All participants were current students at the college and between 18 and 45. Due to the requirements of the college's IRB, I was not permitted to gather any other demographic information from the students, such as race, ethnicity, immigration status, income, college major, marital status, or exact age. Comments by students about their

country of origin did occur during the interview but were not part of the interview questions. Students who discussed their experiences in another country freely offered the information as a means of comparison with their experiences in the United States. Only one student had previous knowledge of the HPV virus.

Data Analysis

After collection of data from transcripts, an inductive thematic analysis approach was employed. An inductive thematic approach allowed for the development of themes and codes centered on the interviews. The inductive process helps the researcher establish patterns and themes developed from transcripts without a pre-conceived template (Braun & Clarke, 2006; Creswell & Creswell, 2018). Reflective notes helped to identify my own bias, thoughts and feelings and also helped to create codes and themes found in the interviews. From the interviews I was able to tell that 8 students were embarrassed that they did not have prior knowledge of HPV, HPV vaccines or risk factors for HPV. The questions from the interviews were designed to address the following areas of concern: (a) knowledge and perception of HPV in severity and susceptibility (b) knowledge of HPV and perception of support of family and friends (c) self-efficacy in terms of the participant's ability to find credible information, know how to seek medical screenings and understand potential barriers and benefits of obtaining the HPV vaccine.

During the interviews I made notes such as "wow, she is really angry this information is not promoted more" and the notation that "2 students seemed to feel it was

important that they were not having sexual relationships, is that what they think I want to hear?". Other notes related to the students who were new to the United States and came from African and South American countries. I noted that they had no information or education on HPV from their home countries. I also noted trust issues in relation to vaccines in general. This was due in part to their concerns that the college required students attending in person classes to be vaccinated for Covid-19 during the pandemic, and their hesitancy to trust information from the college in this regard. This data was unexpected, as I had assumed that lack of uptake of the HPV vaccine would be more along socio-economic lines, but that turned out not to be the most significant factor for students not accessing the vaccine. Another consistent theme in the interviews was the question "Why isn't this information out there in social media? I hear about HIV, but I've never heard of HPV!" A complete sample of an interview transcript is included in Appendix C. Transcripts were divided by research question along with my notes and may be found in Appendix D.

I used NVivo, and manual coding via Microsoft Word. I began to use NVivo for coding but found the plethora of options to be an impediment. The change to manual coding helped me to see the data in a concrete form, while the software programs helped in generating common words, word clouds and other methods to visualize the data, I felt that I was better able to represent meaning through manual coding. I used pre-coding prior to the coding process to note words and quotes that seemed important to the participants. Pre-coding is a way to note quotes or words that strike the researcher or

seem impactful during the interview (Saldana, 2016). Following this, I organized conversations by research question to establish the first set of codes. As I re-read the transcripts by question, I created sentences using my notes, then re-reading again to narrow the information. I used manual descriptive coding to summarize findings. "Trust", "Frustration" "Embarrassment" "Lack of Public Health Initiatives" "Sexuality" and "Knowledge" were the first themes that were created. I chose to read transcripts many times over a period of several weeks to allow time and space between reviews. This provided time for me to process the information fully.

Evidence of Trustworthiness

The ability to acknowledge potential bias while also having data that is reliable and repeatable sets the intention of trustworthiness. This study combined credibility, dependability and transferability. Ethical considerations are important to establishing trustworthiness.

Credibility

I had participants review and discuss their transcripts to ensure their meaning was accurately portrayed. I supported participants' taking as much time as needed to answer each question and was clear that they may choose not to answer or to simply say "I don't know". I encouraged them to answer to the best of their knowledge and assured them that this was not a "test" of their skills, but an inquiry into the information available to them. When a student did not understand a question, I clarified, but was careful to not

lead the conversation. Follow up questions allowed me to be sure of the meaning the participant intended.

Transferability

External validity was achieved by participants identifying as women students at a community college. Participant responses may be important considerations for any large, urban community college where students travel from home to class. Transferability will provide for helpful communication initiatives for other community college women. The sample size of 10 women required that a rich level of detail be obtainable and that the process be carefully followed with each participant.

Dependability

To provide saturation, 10 participant interviews are necessary (Guba & Lincoln, 1985). I decided that 10 participant volunteers was the goal for this study. I was able to interview 10 women community college students, meeting my goal. Student participant responses were similar during the study, with the exception of the one student whose mother was diagnosed with cervical cancer as a result of HPV. There were differences in participants in country of origin, life experience and years in college. In that regard, this study would likely provide similar results if repeated at another community college in an urban area, as those demographics would be similar.

Confirmability

Because of the pandemic restrictions, Zoom interviews were conducted. The setting was comfortable for all students who expressed that they were “used to Zoom”

and that would be preferred over meeting in person. This saved them from lengthy travel across the Washington D.C, Maryland, and Northern Virginia metropolitan area, which is always difficult. The setting allowed students privacy and focus during the interviews.

Results

The purpose of this study is to evaluate perceptions, motivations, and barriers to getting the HPV vaccination among community college students 18 to 45 years of age. After analyzing participant responses, I found themes that emerged from the data. Table 1 provides a summary of the findings.

Table 1

Emergent Theme	Research Question	Code
Unaware of HPV and not aware of connection with cancer. HPV must not be serious.	What are perceptions of CC women regarding HPV and cervical cancer?	Shock, Denial, Anger, Confusion
None of my friends talk about sex. People will think I'm promiscuous. I'm not comfortable.	How do social environmental influencers on body image affect the likelihood that community college women will obtain screenings for HPV and cervical cancer?	Secrets, Judgement, Fear, Embarrassment Parental Opinions
Fear of judgement. Embarrassment in lack of knowledge. Anger at the college for lack of information.	What is the perceived susceptibility of women attending community college to developing cervical cancer and HPV?	Discomfort about topic of sex, Hesitancy, Unsure, Frustration, Anger

The prevailing assumption for those women who had not heard of HPV is that it must not be serious, or they would have heard of it. These women felt a sense of trust in "authorities" (ie: parents, doctors, educators) to let them know what they need to know. Although I could not ask for demographic information, the women who felt this way appeared to be Caucasian. They discussed being new to college. Some women who were new to the United States were hesitant to get a vaccine that they had not heard of in their home countries. Two women had heard of the vaccine, and one had obtained the vaccine because her mother had contracted HPV and subsequent cervical cancer. P# said:

> I only have one sister and she's 10. But when she grows up, I would definitely advise her to practice safe intimacy. I would advocate for her to get it. Um, my cousins, I would probably bring it up. It probably won't be the best conversation because again we don't, it's a taboo since most of them are in Kenya and they have grown up with the backwards mentality.

The women who expressed that they and their friends were not sexually active assumed that only heterosexual intercourse caused STD's and that would be true for HPV as well. This was unfortunate and I found myself becoming angry that these young women could have such a lack of information. The fact that there is a vaccine that could prevent cancers from HPV shocked several of these women. P# said:

> I feel like nowadays everything causes cancer. <laugh>, <laugh>, like according to the internet, people say, don't eat this or don't do this, or, you know, so I mean,

> I'd say the chances are pretty high cuz of all like the chemicals and carcinogens and almost every day-to-day lives, like in the food we consume, the pollution in the air that we breathe, so.

Factors such as body image was not as big an influence as social media in making these decisions. The women students felt that they could access information on the internet although they did not feel that information was always accurate. They felt less confident in talking with health care providers in part because they were unsure of the questions to ask that would help them gather information. Feeling humiliated or embarrassed was of paramount concern for most participants. This was a concerning factor because they chose not to ask questions rather than appear uninformed to their health care provider if they had one. P# said:

> I don't know if this is a community college thing or just in general. Like my sister's college, it's like an on, like, it's a, um, a college where you live on campus. I know they have a health center mm-hmm. you can get tested. Yeah. Um, but I don't know if they offer like preventative measures and I don't, I don't even know if MC does. I know we have a health center, but that's where you get like covid shots. So, I don't know where I would go if I didn't want like my, like if I didn't want, if I didn't want like my parents or something.

Summary

Findings of this study highlight that conversations about sexual health between healthcare providers, college educators, and public health entities are vital to stop the spread of preventable cancers due to HPV infections. Data from this study demonstrated lack of awareness regarding HPV among students contributes to the continuation of HPV-caused cancers. Understanding responsibility that educators have in regard to HPV education can lead to the creation of programs to help prevent HPV.

Participants addressed the need for comprehensive sexual health education for all students in community colleges. Sexual health education in a supportive community college community can eliminate barriers. Lack of adequate education perpetuated current lack of preventive measures.

Chapter 5: Discussion, Conclusions, and Recommendations

This qualitative thematic analytical study was conducted at a large urban community college in Maryland. Data were collected through virtual interviews with 10 female community college women between 18 and 45. Through applying the HBM, I addressed dynamics that impacted knowledge, perceptions, and HPV vaccine uptake as well as correlations between HPV and cervical cancer.

This study involved addressing how the virus was contracted, factors that might make getting the vaccine more difficult, and reasoning behind health behaviors related to HPV.

Participants expressed their frustration and confusion regarding understanding risk factors and locating accurate information about HPV. Most participants did not know how to prevent the virus, although they guessed that it was contracted through sex. Most participants had never heard of HPV. Those participants who wanted me to know they were not sexually active felt that they would not be at risk as they claimed HPV was a sexually-transmitted virus. With one exception, participants could not tell me how severe HPV could be, did not know it could cause cancer, and lacked information about how they could discuss the virus and risk factors. Eight participants claimed HPV was not serious, because they reasoned that if it were, they would know about it. In addition to not having adequate sex education in college, they did not know how to know if they had

HPV, what symptoms were, and if the virus got worse over time. Participants did not feel comfortable talking to friends about this topic.

Participants did not know if they were susceptible to the HPV virus. Some assumed not being sexually active would prevent them from acquiring the virus. Other participants claimed asking their partner if they were clean would help to prevent the virus for them. One participant was aware that HPV may have no symptoms, but other participants were not aware that they could contract HPV through other sexual acts besides heterosexual intercourse. Most participants did not know if they were at risk or that HPV can cause cervical cancer. P# said:

> I feel like nowadays everything causes cancer. laugh>, <laugh>, like according to the internet, people say, don't eat this or don't do this, or, you know, so I mean, I'd say the chances are pretty high cuz of all like the chemicals and carcinogens and almost every day-to-day lives, like in the food we consume, the pollution in the air that we breathe, so.

Participants also downplayed the question regarding their friends and HPV. P# said, “My friends are like me. We don’t like to talk about this stuff, and if we did, we would find we don’t really need to do that because none of us are sexually active.” P# guessed about half of her friends had HPV or another STD.

A.

Participants, with one exception, reported they and their friends did not discuss sexuality in any form. P# said, “I assume it’s an STD so we wouldn’t discuss it.” Students must elect to take a personal health or sexuality course in order to have access to basic sexual health information. Aside from those options, participants felt vulnerable in terms of protecting themselves and embarrassed about not having information. They reported being reluctant to find answers to their questions because they did not know what questions to ask and lacked confidence in terms of who they might trust or how to access vaccinations.

Most participants did not know there was a vaccine for HPV. When participants understood there was a vaccine available, they expressed relief. P# said, “Just like a breath of fresh air, one less thing I have to worry about.” P# remembered hearing that HPV did cause cervical cancer and if a vaccine was available, she would get it. Other participants felt a sense of frustration that they had not heard about the vaccine. They did not think they got the vaccine as a child, but did not feel comfortable discussing it with family. Participants claimed vaccine hesitancy was because of political polarization during COVID-19. When discussing the potential to speak with female siblings or cousins, they had some concerns about the topic of vaccines because of differing opinions of family about vaccines. P# said:

> I wouldn’t encourage a vaccine. I would have her talk about the virus, my experience, um, and share that I have been vaccinated this far. I am okay. I don’t have any extra weird limbs growing out. I don’t have any weird disability

> happening. I don’t have any weird allergic reactions…I’m the same as I was before the vaccine.

When it came to a younger female sibling, P# said:

> I only have one sister and she's 10. But when she grows up, I would definitely advise her to practice safe intimacy. I would advocate for her to get it. Um, my cousins, I would probably bring it up. It probably won't be the best conversation because again we don't, it's a taboo since most of them are in Kenya and they have grown up with the backwards mentality.

Other participants still felt discomfort with having any conversation about HPV with younger family because they were “religious.” P# said:

> I feel like it would be different for her cause she like is in the field knowing about that stuff, constantly being informed about that stuff. It's not, uh, a situation where like, I guess she's just like a person, like a normal person type of thing.

Student participants felt generally confident in their ability to find information on the internet, but not confident when it came to finding a primary care physician, navigating insurance, and knowing what questions to ask. About one half of the women participants had a primary care physician and felt comfortable discussing sexually transmitted diseases and vaccines. “I believe that my medical provider is supposed to watch out for me if I express these concerns”. Even though seeing a physician caused anxiety, “I probably am not the best person for this because then I do not like hospitals. <laugh>, <laugh>, I don't, I don't, I don't at all. And I am horrified of needles, so getting

my blood drawn…" Others were not as certain because they weren't sure what questions to ask, "Not comfortable because I don't know what to ask".

P# said:

> And I think that if there was more quick informations, uh, even like in in classrooms or, uh, would be helpful, uh, because I dunno much and emails come from college. Yes. But they don't put a lot of effort …. but if you are not keeping on track on your emails, you will be losing this information and, uh, being a student's not easy because you need to focus on your studies.

The lack of clear information on campus continued to be a concern, as was the concern about parental approval. P# said:

> I don't know if this is a community college thing or just in general. Like my sister's college, it's like an on, like, it's a, um, a college where you live on campus. I know they have a health center mm-hmm. you can get tested. Yeah. Um, but I don't know if they offer like preventative measures and I don't, I don't even know if MC does. I know we have a health center, but that's where you get like covid shots. So, I don't know where I would go if I didn't want like my, like if I didn't want, if I didn't want like my parents or something.

Participants felt that they were confident that they could find credible information about HPV, but they have become angry that this information is not readily available to them on campus. P# said, "They need to do better in spreading the news about everything. Just being informed about it, like proactively that, that hasn't happened until

now." The women participants who had siblings and friends in the university remarked about the differences between the community college and the university system in terms of outreach to students. This year, Maryland University has started requiring several basic health education webinars to all students as a requirement for entry. Even though students felt somewhat comfortable finding credible information, they would like for the campus to become more proactive regarding topics like sexuality. P# said:

> So, the fact that I've probably never come across that information casually is saying a lot that they need to do better in spreading the news about everything. So, if we didn't know, we probably wouldn't find that information. Cause you see like they could be doing more, like a lot of people watch YouTube, a lot of people listen to Spotify. They could have some ads there. I don't know if people still listen to the radio, they can put that there so people are driving or maybe like billboards as people drive by, they can pass and see it. Like, oh, that's important. I should probably look into it.

Another student remarked that it was hard to know which information on the internet was reliable and they felt alone. P# said, "I feel like since there is a lack of like, uh, information about where to go, you kind of just have to figure it out for yourself".

Interpretation of Findings

The process for analyzing data began with coding the data where codes and themes were propagated. Themes were then condensed to align with the research questions. Themes were frustration and anger with the lack of knowledge about HPV,

anger that the college and public health entities were doing little to provide information, feelings of embarrassment and humiliation because of the lack of knowledge, anger upon finding the existence of a vaccine, and lack of knowledge about how to access the vaccine.

Eight participants did not know if they were susceptible to the HPV virus. Some assumed that not being sexually active, meaning no intercourse, would prevent them from acquiring the virus. Other participants felt that asking their partner if they were clean would help to prevent the virus for them. One student was aware that HPV may have no symptoms, but the other students were not aware that they could contract HPV through other sexual acts besides heterosexual intercourse. Most students did not know if they were at risk or that HPV can cause cervical cancer.

The uptake of HPV vaccines is much lower than expected and continues to be difficult to increase uptake to target levels (Peterson et al., 2021). The factors that influence uptake mirror those described by the students in this study. Stigma, according to Peterson et al., (2021) include "fear of social judgement, rejection, self-blame and shame", and female gender and social norms contributed to negative feelings about self. In the study by Peterson et al., positive factors that could affect increased uptake of the vaccine include social norms toward getting the vaccine and screening. In this study, Peterson et al., (2021) suggested further study to determine how stigma affects the uptake the HPV vaccine and of cervical cancer prevention screenings. Kasting et al., (2022) found that perceived benefits of getting the HPV vaccine was associated with the

intention to become vaccinated, and that one of the strongest predictors of whether a college woman would get the vaccine was the recommendation of their medical provider Kasting et al., 2022).

Recommendations

Human Papillomavirus is a cause for many cases of anogenital and oropharyngeal cancers as well as genital warts and about 13,000 cases of cervical cancer each year (Centers for Disease Control and Prevention, 2018, 2019.). Additionally, half of the 14 million cases of new HPV infections occur in the teen to young adult years (Hamborsky et al., 2015), and college women are at especially high risk, compared to other age groups (Lewis et al., 2018). Although the HPV vaccine has been in existence since 2006, uptake of the vaccine remains low, with 51.5% of women and 21.2% of men between the ages of 19 – 26 having one dose. This result is far below the Health People 2020 goal of 80% completion of the series. (Kasting et al., 2020, Ryan et al., 2020).

Kastin et al., (2020) found that one of the most important factors in determining if a college student obtains the HPV vaccine is not appeals to fear and threat, but encouragement and education from respected adults, doctors, nurses or health educators. This supports the vehement frustration of the students in this study; that they should have known about this virus and that the college and other health professionals have let them down. The social ecological model provides multiple levels where vaccine uptake may be affected (Ryan et al., 2020). The results from a comprehensive study using the Social Ecological Model included participants from multiple states in the United States (Ryan et

al., 2020). These results indicated that a multi-tiered approach to having young adults immunized for HPV, including policy and organizational levels (Ryan et al., 2020). This research mirrored most of the misconceptions about HPV and distrust of information and of vaccines of the participants in my research. Ryan, et al., (2020) found that a multilevel approach should include comprehensive education, factual communication between providers and patients and clear, factual information provided to young adults through multiple platforms; social media, educational entities, medical and public health approaches (Ryan et al., 2020).

Since community college women tend to be more likely to not have a primary care physician, organizations like Planned Parenthood hold great promise for this population of women. Collaboration between county public health agencies, community colleges and organizations like Planned Parenthood that are focused on women's health may provide a community support system for women who may not have access to either information or to a primary care physician.

Future Directions

Future qualitative studies might examine ways to increase self-efficacy, social support and other protective supportive measures to increase the perception of benefits for getting the HPV vaccine.

Social Change Implications

This study explored the perceptions community college women have about the HPV virus. The recommendations can increase sensitivity of large community colleges

to the need for creating comprehensive sexual health education programs. The data gathered by this study may also help health care providers in understanding the lack of awareness of this population when it comes to sexual health and HPV in particular. Findings can help support the need to advocate for community support for educational awareness. The positive change that may result from this study may support the need for better health education for college students, heightened awareness for parents and family about the necessity for HPV cognizance.

Conclusions

My research enumerated the importance of having sexual health education for community college women. The experiences of these women discovering that HPV existed, that it could have no symptoms and that there was a vaccine that could prevent subsequent cancers was illuminating for most. Their anger directed at the college should be a wakeup call for community college faculty and administrations. The CDC suggests that the HPV vaccine be given to children ages 9 to 12, but many young people may have missed getting the vaccine because they grew up in another country where it is not routinely provided or had parents who chose not to get the vaccine for their child, or couldn't afford it, or health care providers did not suggest it. While college is a primary source of opportunities to support sexual health education, the issue of preventing HPV also has public policy implications. Educational institutions have a duty to their students, but also do national public health initiatives that support sexual health education. These may include public service announcements on social media, internet and television to

make HPV more visible to everyone. By collaborating with public health agencies, community level clinics, medical providers and policy makers, we can increase the rate of vaccination and decrease the rate of cancers because of HPV infections.

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Appendix A: Informed Consent Form

CONSENT FORM

IRB Approval # 01-25-22-0316055

You are invited to take part in a research study about how ***community college*** women perceive and understand the human papillomavirus (HPV), the vaccination for HPV and cervical cancer. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study seeks 15 volunteers who are:

- community college women who are students at Montgomery College and are between the ages of 18 and 45.

This study is being conducted by a researcher named Odella Dianne Hagan, who is a doctoral student at Walden University. You might already know the researcher as a professor, but this study is separate from that role.

Study Purpose:
The purpose of this study is to see if there are ways that can help women feel comfortable and have as much knowledge about the HPV virus as is available so that they have all the facts about this virus and about the vaccine. I want to learn about how community college women feel about getting the vaccine and about going to their doctor or medical health professional for the vaccine and/or for cervical cancer screening. I also want to learn about ways that health professionals can make these screenings and vaccinations easier for women to obtain them.

Procedures:
This study will involve you completing the following steps:

- take part in a confidential, recorded interview using Zoom (phone option available) (1 hour).

- review a typed transcript of your interview for accuracy and ask questions (if needed) (10 minutes)

Here are some examples of the type of questions that will be asked:

A. What are some reasons college women do not get the HPV vaccine?
B. What do you think your family's feelings are about you getting the vaccine if you decide to do so?
C. What do your friends tell you about getting the vaccine or not getting the vaccine?
D. What is your perception of how easy it is for you, your friends, and other students to get information about where to go how to pay for or how to get the HPV vaccine?

Voluntary Nature of the Study:
Research should only be done with those who freely volunteer. Everyone involved will respect your decision to join or not. No one at Montgomery College will treat you differently based on whether you volunteer or not.

If you decide to join the study now, you can still change your mind later. You may stop at any time. The researcher will follow up with all volunteers to let them know whether they were selected for the study**.**

Risks and Benefits of Being in the Study:
Being in this study could involve some risk of the minor discomforts that can be encountered in daily life such as sharing sensitive information or opinions. With the protections in place, this study would pose minimal risk to your wellbeing. If you wish, counselors are available through EveryMind by texting or calling this number:
EveryMind 301 738 2255

Chat Line: http://www.everymind.org/chat/

This study offers no direct benefits to individual volunteers. The aim of this study is to benefit women in society by adding to the knowledge base about how community college women understand HPV and have access or lack of access to the HPV vaccine. Once the analysis is complete, the researcher will share the overall results by emailing you a summary and providing you a link to the complete publication of results.

Payment:
There is no payment for your participation in this study.

Privacy:

The researcher is required to protect your privacy. Your identity will be kept confidential, within the limits of the law. The researcher is only allowed to share your identity or contact info as needed with Walden University supervisors (who are also required to protect your privacy) or with authorities if court-ordered (very rare). The researcher will not use your personal information for any purposes outside of this research project. Also, the researcher will not include your name or anything else that could identify you in the study reports. If the researcher were to share this dataset with another researcher in the future, the dataset would contain no identifiers so this would not involve another round of obtaining informed consent. Data will be kept secure by keeping it in the researcher's private computer with password protection known only by the researcher. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:
You can ask questions of the researcher by emailing Odella D. Hagan at odelladianne.hagan-jones@waldenu.edu. If you want to talk privately about your rights as a participant or any negative parts of the study, you can call Walden University's Research Participant Advocate at 612-312-1210. Walden University's approval number for this study is 01-25-22-0316055. It expires on January 24, 2023.

You might wish to retain this consent form for your records. You may ask the researcher or Walden University for a copy at any time using the contact info above.

Obtaining Your Consent

If you feel you understand the study and wish to volunteer, please indicate your consent by typing your name in the signature line below.

Appendix B: Interview Questions

Perceived Severity

A. How serious do you believe HPV is among community college women?
B. What is your perception of which women get the HPV vaccine?
C. How do you feel about how severe HPV is in women?
D. What have you heard about HPV and your friends and other students?

Perceived Susceptibility

A. Do you know your chances of getting HPV?
B. How important do you feel getting the HPV vaccine is to you?
C. What do you feel about your chances of getting cervical cancer?
D. How many of your friends do you think have HPV?

Perceived Barriers

B. What are some reasons college women do not get the HPV vaccine?
C. What do you think your family's feelings are about you getting the vaccine if you decide to do so?
D. What do your friends tell you about getting the vaccine or not getting the vaccine?

Perceived Benefits

A. What are some benefits of getting the HPV vaccine?
B. How would you feel about talking with your sisters or cousins about getting the HPV vaccine?
C. In your group of friends, what do you think they feel are the benefits of getting the HPV vaccine?

Self -Efficacy

A. How confident do you feel about knowing which preventive health screenings you should get, and where to go to get them?
B. How do you feel about discussing information about sexuality, HPV and screening for cervical cancer with your primary care practitioner?

Cues to Action

A. How easy is it to find information about any aspect of HPV, such as the vaccination protocols, screenings and prevention?
B. What is your perception of how easy it is for you, your friends and other students to get information about where to go how to pay for or how to get the HPV vaccine?
(Hagan, O., 2020; Rosenstock et al., 1994)

Appendix C: Transcript Example

Speaker 1 (00:03):

Okay, so I'm using the, the theory of health belief, and I think we talked about that at one point. But anyway, um, so some of the questions may seem similar to each other, but it's to kind of get at the same question from several different directions. Okay. So the first one is, how serious do you believe H P V is among Col community college women? How serious of a, of a problem

Speaker 2 (00:39):

On a scale of one to 10? Probably a 9.99.

Speaker 1 (00:45):

Okay. What makes you say that?

Speaker 2 (00:48):

Um, from my understanding, the virus doesn't immediately show up. It can take many years to show up, and that kind of, um, diminishes some of the self-responsibility. Oh, I got tasked that I'm good. And, um, I also think the education information out there is very vague. Um, and health class, one time we filled out a chart with STDs and their symptoms or effects, and that was it. You never really talked about it again. Um, and depending what media you might consume, you might even say most people don't even get cancer or, um, it's, it's something that it can be very easily treated. And from the members in my family that have been affected, there's been, um, issues with pregnancy and even turning into cancer.

Speaker 1 (01:54):

Okay. Thank you. Um, what women, do you get the HPV vaccine, do you think in, in your opinion?

Speaker 2 (02:04):

I would say mostly those with mothers who have been educated on the topic. Um, because as young woman, we are not receiving the education for HPV or the vaccine.

Speaker 2 (03:00):

To answer the question, I wouldn't know. I would assume it's, with the amount of time it has gone untreated is linked to how severe, but it's just always not been talked about.

Speaker 1 (03:13):

Yeah. Yeah. Um, what have you heard about HPV from your friends or other students, um, people in your family, for example,

Speaker 2 (03:27):

Friends and students never been talked about? Not once and from my family. Um, I guess from my mother, because of her experience, she always gave me the talk of please wear protection, don't trust anybody. Um, same with my cousin, to swear protection, don't trust anybody. And for my cousin, I got more of the emotional thought process of it affects now her husband and her ability to get pregnant and stay pregnant. And she talked about her miscarriages and just how difficult it was to conceive. And for my mom, I had to see the whole surgery process of removing her cervix and her uterus and her fallopian tubes. Um, and just how the man kind of perceives it. She, I don't know how personal I'm

supposed to get, but she lost her virginity to my dad, therefore there was only one way she can get it. And just that like toxic masculinity that, you know, it wasn't my fault. I don't have any problems kind of thing. So my mom stuff like, explained to me how it is suffering alone. Um, just knowing that you have to live with it. And for us, since we don't have family here, just going through the whole process of surgery by yourself.

Speaker 1 (04:57):

Yeah.

Speaker 2 (04:59):

Um, and then expect it to get better and go back to work next week and, you know, your intimacy being affected. Just things like that. But, um, I'm fortunate enough to have that mother-daughter relationship.

Speaker 1 (05:15):

Yeah. Yeah. I'm, I'm happy that you guys were able to talk to each other about it. Um, and I'm imagined that you were a huge help for her when she had to go through this as well. I'm sorry that you have, you guys have had that experience. It's okay. Um, do you know what your chances are of getting HPV V?

Speaker 2 (05:47):

It scares me. That I don't know.

Speaker 1 (05:50):

Okay. Okay. How important do you feel getting the HPV vaccine is

Speaker 2 (05:58):

Very important? I got it before I could even understand what it was. Okay. Before any kind of relationship was on my mind. I believe that was between the ages of 13 to 15. Okay. I wanna say I was in eighth or ninth grade.

Speaker 1 (06:15):

Okay. Okay. Good. Um, what do you feel your chances are of getting cervical cancer and based on your experience? I mean, you've had the vaccine, so, and you know, some of the side effects of h the, the really negative side effects of H P V, um, so having the vaccine of course, um, as you said, it kind of prevents a lot of, a lot of those types of cervical cancer. So any feelings about what your chances might be?

Speaker 2 (07:07):

I would say just because of my personal experience, I would say that I'm never gonna feel invincible by any chance. I'm definitely do think it is still just a very probable possibility, but I am fortunate to have been a long-term monogamous relationship and at least like, kind of have a feeling that if it shows up many years later, um, you know, we ourselves take care of each other, get regular testing and screening mm-hmm. <affirmative>, um, and I, I wanna say it's like a security blanket thing. At least have a vaccine, at least this may be preventable, preventable, um, because fortunately there's one for women, but there's not one for men.

Speaker 1 (08:04):

Okay. Um,

Speaker 2 (08:07):

And so I would say it's like a security blanket where I think it is not likely, but I'm never going to feel invincible. Like it's never gonna happen to me. It can't happen to me.

Speaker 1 (08:17):

Sure, sure. When you, when you have someone close to you with cancer, it, I, it definitely opens your eyes to the possibility. Right. Okay. Um, do you know how many of your friend, or how many of your friends do you think might have H P V? Again, one of those questions that's winding itself around?

Speaker 2 (08:45):

I don't, I would say none, at least have shared with me that they

Speaker 1 (08:54):

Have. Okay.

Speaker 2 (08:55):

I, I would assume that 50% of the college campus friends that I have that live on campus, I would say about 50% have something that they're unaware of.

Speaker 1 (09:10):

Okay. Yeah. What, what are some of the reasons that college women decide not to get the vaccine?

Speaker 2 (09:23):

I would say either parents who weren't educated enough on the topic, didn't pass the knowledge onto them, didn't have them vaccinated themselves, and just conservative media, um, conspiracy theories, that invincible mindset that if nothing has happened to

me this far, I don't need it. Or I'm young, I'm healthy, I take care of myself. It's not gonna happen to me if I'm so young and healthy and I go to the gym and I eat well and I get regular doctor screenings. It's kind of this, um, young and invincible mindset that I've got control of my own body. I don't eat some vaccine that is in case I get cancer or

Speaker 1 (10:20):

Geez. Yeah. Um, so this prob question doesn't really apply to you, but I'll ask it. What do you think your family's feelings are about you getting the vaccine if you decide to do so?

Speaker 2 (10:50):

And I would say this varies on individual's personal experiences. Yeah. I don't talk about my personal health records with other people

Speaker 1 (10:58):

Sure.

Speaker 2 (10:59):

Because it has become a political matter. So I would say the women that have been affected or know someone that have been affected are very supportive and encouraging. Um, and they try and educate others as well. But for those who haven't been affected, it can just become a political topic.

Speaker 1 (11:23):

So the, the vaccine because of covid, the vaccine issue you think might be lumped together with covid vaccines and other vaccines?

Speaker 2 (11:33):

Absolutely. I would say that strengthened and polarized the, the two opposing sides for the HPV vaccine. Mm-hmm. <affirmative>, even before I'm Cuban and Venezuela, you know, communist socialist backgrounds. And there's just this perspective of if you let the government control, you don't know what you're putting in your body. We didn't have all these back in your country. Um, but you look at them, you, there's no data to look at just because the government doesn't put out that data. People aren't getting screened. They have health complications that they just simply can't afford to get looked at. Um, so even before the vaccine for my family, it's just, it's been political, a matter of access to information and correct information.

Speaker 1 (12:32):

Yeah. So the having the correct information is something that's really important. Yeah, sure.

Speaker 2 (12:42):

And it's one of those things that you can't really talk about unless you've either walked a mile in the shoes yourself or walked alongside somebody.

Speaker 1 (12:56):

Yeah.

Speaker 2 (12:58):

Um, and just even seeing how cultures perpetrating, you know, like you must have gotten that somewhere else or I'm not affected, and it's like, well

Speaker 1 (13:10):

Off.

Speaker 2 (13:12):

Um, yeah, it is a personal topic, but that's why I agreed to just share.

Speaker 1 (13:17):

Another question that I think that we've talked about. What do your friends tell you about getting the vaccine or not getting the vaccine?

Speaker 2 (13:59):

To be honest, it hasn't been talked out. Okay. Kind of like my personal business stays between me. Um, just because this is involving personal intimacy and relationship life, that there is this culture of, you know, the less you sleep with, the better you are. And, um, kind of this like purity, even though it's not necessarily being practiced, you don't show, you don't talk about it. It's very secretive and private versus the Covid vaccine, it was just the common cold that was being passed around and everybody wanna talk about it. Everybody was posting on social media, Hey, I got vaccinated. And it was a little sticker that was showing around. It was very positively, at least in, uh, a more democratic metropolitan area. Sure. Where there is access to information and just depending on your view, positive influence mm-hmm. <affirmative>, um, and just access to information we're even close to a lot of scientific research areas. And there was a lot of transparency about that vaccine. Yeah. It was even encouraged, um, whether it was your personal job, social media, sharing these little tokens, nobody's gonna do that about a disease that involves your private space.

Speaker 1 (15:38):

Yeah. Okay. What are, what are some of the benefits of getting HPV vaccine?

Speaker 2 (15:48):

I would say I'm not educated enough. I'm just hoping it makes me less likely to contract the virus itself and having it spread

Speaker 1 (16:03):

Yeah.

Speaker 2 (16:04):

At least as quickly, um, so that it may be detected in an earlier stage with proper healthcare.

Speaker 1 (16:13):

Mm-hmm. <affirmative>. Um, how do you feel about talking with sisters, cousins, other family about the, the vaccine <laugh>? I think we've talked about this a little bit, so

Speaker 2 (16:29):

It depends which family members, but for the most part, my family is, um, aside from the politics, we are a loving family in the sense that if somebody is sick, somebody will get a helping hand when we are together. Um, so I would feel comfortable talking about it, not necessarily encouraging everyone. I would feel comfortable trying to inform and talk about it and talk it just about my reality. Nobody can define the experience I had with my mother and the experience my mother had. Yeah. Nobody can define or tell me about my experience. Um, and I mean, just looking up information and the percentage of women

that have h or the percentage of adults that have HPV in general mm-hmm. <affirmative> higher than you would think. It's just not talked about and sharing that information. I do feel comfortable sharing it. However, um, they like to get super in, in depth of how was research conducted? How was the vaccine mean that just the average human being wouldn't know that information off the back of their hand? Yeah. Um, so I wouldn't encourage a vaccine. I would ha have her talk about the virus, my experience, um, and share that I have been vaccinated this far. I am. Okay. I don't have any extra weird limbs growing out. I don't have any weird disability happening. I don't have any weird allergic reactions. Sure. Um, but I'm the same as I was before vaccine.

Speaker 1 (18:24):

How confident do you feel about knowing which preventive health screenings in general you should get and where to go get them

Speaker 2 (18:46):

In this area? I'm very confident. Okay. Um, I feel out the government has enough resources in place to at least help and direct women even looking at the information up online, there's a lot of local clinics, um, for all different income ranges that are available. Okay. And even if you don't have transportation, if you're 21 and under your student, you have a free ride on pass to the public, um, bus transportation here. Mm-hmm. <affirmative>. Um, and I've even helped some of my friends get tested and whether it's finding contraceptives at work for them or treatments, um, other s <affirmative>, um, other STS related to complications with their contraceptive, getting that medical care that

they need in a reasonable amount of time. Yeah. Um, so in this area, in the DC suburbs, very confident.

Speaker 1 (19:52):

Okay. Good. Thanks. Um, how, how comfortable do you feel about discussing information about sexuality, H P V screenings, for example, for cervical cancer with your doctor?

Speaker 2 (20:13):

Because my fear is so big of what, if I don't talk about it, what it can lead to extremely comfortable. I don't have any barriers. I okay. Believe that my medical provider is supposed to watch out for me if I express these concerns.

Speaker 1 (20:30):

Okay. Good. Good. So the, the, the fear, um,

Speaker 2 (20:35):

The trauma <laugh>,

Speaker 1 (20:36):

The trauma that you've been through, kind of trumps the any hesitancy that you might have otherwise felt. Is that, is that right?

Speaker 2 (20:48):

I don't think there would be a bigger advocate than myself.

Speaker 1 (20:51):

Yes, I would. I would agree. I would agree. Um, how easy is it to find information about any aspect of H P V vaccination protocols, screenings, prevention, and so on?

Speaker 2 (21:07):

I would say with the internet mm-hmm. <affirmative>, it is accessible and confusing.

Speaker 1 (21:13):

Okay.

Speaker 2 (21:15):

Um, with the education system we have here, at least at the university level, it is easier as well. If you have that relationship with a trusted adult or a department in the school, what would need to be strength than I would say is a public school education outreach, especially since the vaccine is more likely to do better and before they end her a sexually active stage, like being more preventative rather than reactive.

Speaker 1 (21:52):

Good. Um, how easy or difficult is it for you or do you think other students to get information about where to get that vaccine?

Speaker 2 (22:05):

I would say it depends on individual experiences. Mm-hmm. <affirmative>, um, certain cultures don't talk about sex, don't talk about, um, anything that isn't pure in their eyes or who, or anything in that matter mm-hmm. <affirmative>. Um, and they might be more scared to do so.

Speaker 1 (22:31):

Okay.

Speaker 2 (22:33):

Um, but going back to your question, I think it's relatively easy with the right information or the right surrounding. And that's why I think it's so important to teach at that grade school level, to be more reactive and just have information. I think when you have the information, you have the confidence to go ask for it. Um, without implanting a fear, you kind of subconsciously are just telling them the truth that they're not invincible.

Speaker 1 (23:40):

So what kind of things, have you heard anything about other, other women, other students who may have had difficulty getting, finding information, getting information,

Speaker 2 (23:54):

Like my family's originally from Florida. I've definitely seen difficulties there.

Speaker 1 (23:59):

Okay.

Speaker 2 (24:01):

Um, simple things as, and then again, this will get very political, but the funding of Planned Parenthood. Yeah. Um, and the other clinics, it's not the same as in this area. I feel like in this area there's even advertising for it. You know, you get go in the metro, you see the get tested and some information like before even QR codes displayed. Um, and in other states it's just not talked about. It's not shared about, it's not even a matter of educating in school.

Speaker 1 (24:36):

Yeah.

Speaker 2 (24:38):

Um,

Speaker 1 (24:39):

Yeah.

Speaker 2 (24:40):

It's a very harsh reality. So I have seen difficulties, um, people even wondering if it's covered by insurance or if there's a really big tax.

Speaker 1 (24:54):

Yeah, yeah, exactly. And, and the understanding like, is this free? How much does it cost? Who do I ask? I don't wanna seem, I don't want it to seem uneducated?

Speaker 2 (25:09):

Yeah. Or they just don't wanna go around talking everywhere about it because I think everybody has the stigma or Yeah. Assumption about the person when they're trying to be preventative instead of reactive.

Speaker 1 (25:22):

Sure.

Speaker 2 (25:23):

Um, I have seen difficulty to access to healthcare in places outside of this metropolitan area.

Speaker 1 (25:34):

Oh yeah.

Speaker 2 (25:35):

Um, and I think it will all, I think my answer might be biased just because of the environment I am around, but mm-hmm. <affirmative>, I've had a lot of friends who I have at least been able to guide. I mean, they kind of did their own research online, so they don't ask anybody and they found the information. And I would say it's just like a matter of encouraging them to take care of themselves. That it's not about, you know, what people think of them being human and doing what humans do, just encouraging them to take care of themselves instead of, um, I have no idea where to start.

Speaker 1 (26:20):

Sure, it's, it's good that you're able to do that for people. So those are all my questions.

Speaker 2 (26:33):

Okay.

Speaker 1 (26:34):

Yes, thank you so much. I really appreciate this. Your comments have been very helpful. Everything that you've said is the reason I'm doing this research.

Appendix D: Transcript Summary by Question

RESEARCH QUESTION 1: Perceived Severity	Participant Responses	Researcher Notes
1. How serious do you believe HPV is among community college women?	A: On a scale of one to 10? Probably a 9.99. Um, from my understanding, the virus doesn't immediately show up. It can take many years to show up, and that kind of, um, diminishes some of the self-responsibility. Oh, I got tasked that I'm good. And, um, I also think the education information out there is very vague. Um, and health class, one time we filled out a chart with STDs and their symptoms or effects, and that was it. You never really talked about it again. Um, and depending what media you might consume, you might even say most people don't even get cancer or, um, it's, it's something that it can be very easily treated. And from the members in my family that have been affected, there's been, um, issues with pregnancy and even turning into cancer. I: I believe that people, I dunno how serious it is because I dunno if people are still aware that these, it's a real disease, Uhhuh <affirmative>, and I know that it's, that people can get it, but I dunno how well	**Research Question 1:** Question one involved the perception of severity, their thoughts about what women get HPV for the students and for their friends. My first thought was "wow, these students are frustrated and embarrassed!" They were frustrated at not having the information, not being provided with specific information and how to avoid HPV, not hearing about HPV at all. One student whose mother had cervical cancer as a result of HPV was very angry that information about the vaccine was not known by her classmates and family members. As if her mother's cancer was somehow her fault. She expressed a lot of anger that her father accused her mother of "sleeping around", when he was her only partner. As a result, she sees herself as a "caretaker" of her family. Some students remarked about their country of origin, Kenya, Venezuela, Cuba, and Brazil as part of the reason they had not heard about HPV, but they also remarked that even in classes where information about sexually transmitted diseases were discussed, that HPV

	informant they are. And, um, I dunno, I don't know. It's like, because the question is how serious I think that is this in, if people have that or if they're informant with about that, H: Um, I feel like that would be an issue no matter where you are. I haven't heard anything about it nor experienced it or anything, so I'm gonna guess it's about average. Okay. And severity. I think as a disease it's, um, it's pretty like severe. It can, uh, obviously the health, the health effects, but then the stigma that comes along with it. E: I do not, I've heard the term H P V, but I don't exactly know what it is in general. I'm assuming, is it an s t v or is it. Yeah. Um, I, sorry, I haven't, yeah, I haven't, well, cause I, in psychology we took a little bit of, um, we just learned like a lot about like, you know, sex education stuff. So we learned about, you know, St STD and stuff, but it wasn't like, you know, um, specified on certain ones. So it was more like, you know, um, um, what's it, what was I saying? Yeah, I, it wasn't specific to HPV V and then even in high school, health was more like, you know, use a condom. Uh, yeah, so I'm not, I'm don't sort cite me cuz I'm not the most knowledgeable person	was rarely mentioned. I thought that socio-economic factors would be more important, but having insurance was only mentioned by one student, because she had insurance through her work once she came to the United States. Her parents are medical professionals in Kenya, so she may be more aware as a result. 2 students remarked that they thought "older women" were at risk of HPV. I got the impression that this statement was a result of their lack of knowledge about HPV as it seemed like a "guess" because they were hesitant in their answers. It was a little difficult sometimes for them to not know the "right" answer. I wrote "hoping" about whether or not students heard about HPV from friends. "Assumptions" was another word that came to mind as "since I haven't heard of it, I would it's not as serious or isn't spreading as something more severe". I was surprised that students don't seem to talk about sexually transmitted diseases with friends or family. Experience of HPV immediate family

	stopping, but I would assume, um, honestly I feel like our gen like, um, our generation of people who are becoming more like, you know, um, what's it called? Sexually active or like sexually, um, de like developed, like when they're reaching their curiosity phase mm-hmm. <affirmative>, I feel like we're becoming more conscious about, well one, it's less stigmatized now or like, y'all just make sure everything's consensual and your process their sex. You know what I mean? So I feel like, and I hear a lot about people who are like, you know, regularly getting tested when they get a new partner or something like that. So I would assume, I don't know how like clinics work or like hospitals when you get tested and stuff, but I would assume that you, they would inform you about possible like, um, preventative measures like that. So yeah, I'd assume people who regularly are, um, taking care of their sexual health would know me inform about it. Yeah. Yeah, yeah. D: Um, I feel like that would be an issue no matter where you are. I haven't heard anything about it nor experienced it or anything, so I'm gonna guess it's about average. Okay. And severity.	

	C: Okay. So, to the best of my knowledge, I feel like I know that H P V is an s t i and that I feel that it can seriously affect people, especially if I feel like around this age, like this college age is where a lot of people are sexually active. And if I could give an example with me, I did not go to high school here. I, I went to high school abroad in Africa where people don't really talk about this as much. So coming here, let's say for example, you sleep around, then you get it, you might be scared to find out what exactly is wrong with you. And I feel like the more that you wait, the serious it can get. So I feel like it definitely is a serious thing. B: Like, honestly, like I haven't even heard like anything like, not amongst like my friends or like classmates. F: I don't know. It depends on if people have information.	
How do you feel about how serious HPV is in women?	A: To answer the question, I wouldn't know. I would assume it's, with the amount of time it has gone untreated is linked to how severe, but it's just always not been talked about. I: Um, no, there is nothing going on. I don't really actually hear about it and I don't think that people take that serious. Um, I don't	

	even know much about it actually. I don't even know HPV trying, like what I'm trying to figure out. E: Well, I'm not sexually active, so it's zero at a zero, but in general, not serious for me. D: I think as a disease it's pretty like severe. C: How severe in women? Mm-hmm. <affirmative>? Um, well, if you mean in terms of detecting, if someone isn't feeling good, I feel like it's pretty hard because there are people who are able to hide things very well. And, um, as, as a woman, I am honestly a very shy person. So if I have a problem, I will take some time before speaking up about it. So I feel like it could get like, very severe before I'd want to get medical help or anything.	
2. What is your perception of which women get the HPV vaccine?	A: I would say mostly those with mothers who have been educated on the topic. Um, because as young woman, we are not receiving the education for HPV or the vaccine. I: The ones, uh, well I think that the women that are informant about it. H: Um, probably older women, I'm guessing. Um, they probably hear more about it from like their doctors and stuff as they get older.	Several students mentioned the lack of adequate education about STD's in general and HPV specifically. Frustration with education for women's health and the lack of guidance for where information can be accessed. 2 students expressed a "guess" about which women obtain the vaccine. It was clear during the interview that "older women?" was more of a guess than a statement. Students guessing answers to the question even after I explained that their

	E: Uh, yeah, so I'm not, I'm don't sort cite me cuz I'm not the most knowledgeable person stopping, but I would assume, um, honestly I feel like our gen like, um, our generation of people who are becoming more like, you know, um, what's it called? Sexually active or like sexually, um, de like developed, like when they're reaching their curiosity phase mm-hmm. <affirmative>, I feel like we're becoming more conscious about, well one, it's less stigmatized now or like, y'all just make sure everything's consensual and your process their sex. You know what I mean? So I feel like, and I hear a lot about people who are like, you know, regularly getting tested when they get a new partner or something like that. So I would assume, I don't know how like clinics work or like hospitals when you get tested and stuff, but I would assume that you, they would inform you about possible like, um, preventative measures like that. So yeah, I'd assume people who regularly are, um, taking care of their sexual health would know me inform about it. D: Um, probably older women C: Um, I'd definitely say those with more knowledge and health insurance. Again, as someone who came here	knowledge was not required still appeared to be hesitant to say "I don't know". Also, I wrote down "hope" and "assumption" and "wishful thinking" to refer to the statements that if the student was not familiar with HPV, then it must not be serious with an unspoken "I hope".

	from another country, um, I don't really have family, so I'm not on someone else's insurance plan. And the only reason why I have insurance is because of the job that I work at. And if I didn't work there, I wouldn't have the insurance and I probably wouldn't get a vaccine. And even now that I have insurance, I don't have it because I don't have as much knowledge on H P V as I'd like to. B: Mm. I feel like, I feel like it would be over like 18 probably. Okay. F: I've never heard of it.	
3. What have you heard about HPV and your friends and other students?	A; Friends and students never been talked about? Not once and from my family. Um, I guess from my mother, because of her experience, she always gave me the talk of please wear protection, don't trust anybody. Um, same with my cousin, to swear protection, don't trust anybody. And for my cousin, I got more of the emotional thought process of it affects now her husband and her ability to get pregnant and stay pregnant. And she talked about her miscarriages and just how difficult it was to conceive. And for my mom, I had to see the whole surgery process of removing her cervix and her uterus and her fallopian tubes. Um, and just how the man kind of perceives it. She, I don't know how personal I'm	Here several students appeared to feel that there would be some type of "judgement" by me about their answers.

	supposed to get, but she lost her virginity to my dad, therefore there was only one way she can get it. And just that like toxic masculinity that, you know, it wasn't my fault. I don't have any problems kind of thing. So my mom stuff like, explained to me how it is suffering alone. Um, just knowing that you have to live with it. And for us, since we don't have family here, just going through the whole process of surgery by yourself. Um, and then expect it to get better and go back to work next week and, you know, your intimacy being affected. Just things like that. But, um, I'm fortunate enough to have that mother-daughter relationship I: Yeah. I don't even know HPV trying, like what I'm trying to figure out H: Honestly, like, none. <laugh>, nothing. E: Well, since I've never heard of it, I would hope it's not as serious as it or isn't as spreading rampant as, you know, something more severe, but I'm assuming otherwise, yeah, a lot of things, especially self sexual health-wise, unless it's like, you know, aids that's cuz people like that, you know, proportionately affected gay people and people hate gay people, so they always talk about that. But yeah, I've, I have not heard that much news about it.	

	D: Honestly, like, none C: Here's the thing, I don't, I don't really socialize a lot with people. And when I do, I feel like the topic about ST is, that's something that we don't really talk about. Okay. Like, it's not something that you open, you openly wanna discuss with friends casually or anything. B: Um, I think, I don't know. I feel like it's not very common. Like I feel like it, if it was like very, very common, I would've heard more about it. F: My friends talk about other things, but not about illness.	
4. How do you feel about how serious HPV is in women?	A: To answer the question, I wouldn't know. I would assume it's, with the amount of time it has gone untreated is linked to how severe, but it's just always not been talked about. I: Um, no, there is nothing going on. I don't really actually hear about it and I don't think that people take that serious. Um, I don't even know much about it actually. I don't even know HPV trying, like what I'm trying to figure out. E: Well, I'm not sexually active, so it's zero at a zero, but in general, not serious for me. D: I think as a disease it's pretty like severe. C: How severe in women? Mm-hmm. <affirmative>?	"Just not been talked about" "Well, I'm not sexually active" "I think" "As a woman, I will take some time…." Here I noted that even the most well educated student in terms of HPV has questions about how serious it is. Is it more serious over time? "gone untreated"

	Um, well, if you mean in terms of detecting, if someone isn't feeling good, I feel like it's pretty hard because there are people who are able to hide things very well. And, um, as, as a woman, I am honestly a very shy person. So if I have a problem, I will take some time before speaking up about it. So I feel like it could get like, very severe before I'd want to get medical help or anything. F: It's hard to tell because I think it's a disease, but I don't know how bad it is.	
Research Question 2: Perceived Susceptibility		
1. Do you know your chances of getting HPV?	A: It scares me. That I don't know. I: No H: I'm gonna say you can prevent it by abstinence. Other, other than that, I don't really know. E: No I don't. I'm not sexually active though. C: Um, so, Hmm, that's a good question. I, um, if we wanna get personal, like I like to stick to on partner mm-hmm. <affirmative>, and before doing anything with that partner, I do ask about, I do ask, are you clean? Like, I'm clean and I've been trying to make it a habit of going to get tested in general regularly. Um, because I have insurance now. Honestly, when I didn't	There are a lot of assumptions in these answers. One is that abstinence (not having intercourse) would be protective. This seemed to be a misperception that HPV would not happen except for heterosexual intercourse. Students were surprised to know that HPV can be spread through oral sex. "Getting tested regularly." Question here is "How can I be sure I am protected?" Again, the lack of comprehensive accurate information for women is noted. "I would like to know what to do to prevent it."

	have insurance, I wouldn't go to the hospital for anything because it's just, healthcare here is so expensive. Um, right. B: Uh, no. I don't know. Yeah, I don't think I've ever thought about that, so I don't think, yeah. F: No, but I would like to know what to do to prevent it.	
2. How important do you feel getting the HPV vaccine is to you?	A: Very important? I got it before I could even understand what it was. Okay. Before any kind of relationship was on my mind. I believe that was between the ages of 13 to 15. Okay. I wanna say I was in eighth or ninth grade. I: I will look into it now. H: Um, I think it would be important, especially if it's, if an individual has some of the risk factors. Um, for me personally, I have to see what my risk factors are and any possible side effects of the vaccine. E: I'm going to talk to my doctor now. D: I don't really know. C: I think it is very important. It's very important to have it and to have that security of knowing like whomever, because I feel like there's some people who might tend to lie about their status. Um, if I could give an	"I have to see what risk factors are". Side effect of the vaccine was mentioned by one student. She is recalling side effects of the Covid vaccine and not sure of any side effects of the HPV vaccine. "lie about status" This was an observation of two students about having conversations with potential sexual partners. Minimizing potential for cervical cancer. Lack of knowledge and where to find information.

	example, I have a friend, and this friend is back in Kenya. Um, she slept with a guy and from that guy she got an s t i. So had she had the vaccine, I'm not sure which s t I was, I can't remember. But had she had the vaccine, she wouldn't be in this situation. And I know it definitely affected her, not only physically, but also mentally and emotionally because she's afraid to go near other people. She doesn't want to get them sick. And herself, she feels like there was a time that she felt her life was ruined because now she has this and it will never go away. So I think it's very important to get it. And if it could be more accessible to people at probably better prices, then more people would be able to get it. B: That's, yeah, it's okay. Um, I don't think any of them do. F: I didn't know there was a vaccine.	
3. What do you feel about your chances of getting cervical cancer?	A; I would say just because of my personal experience, I would say that I'm never gonna feel invincible by any chance. I'm definitely do think it is still just a very probable possibility, but I am fortunate to have been a long-term monogamous relationship and at least like, kind of have a feeling that if it shows up many years later,	Most students did not make any connection between HPV and cervical cancer. The question of heredity came up here several times.

	um, you know, we ourselves take care of each other, get regular testing and screening mm-hmm. <affirmative>, um, and I, I wanna say it's like a security blanket thing. At least have a vaccine, at least this may be preventable, preventable, um, because fortunately there's one for women, but there's not one for men. And so I would say it's like a security blanket where I think it is not likely, but I'm never going to feel invincible. Like it's never gonna happen to me. It can't happen to me. I: I don't know H: I don't know E: Is that it depends on if that's like hereditary or not, I would assume. Is that, is that sexually transmitted? So my likelihood would probably be extremely unlikely. And then I, I know that my family has a history of breast cancer, so again, I don't know where that would fall. Yeah. D: I don't know. C: I feel like nowadays everything causes cancer. <laugh>, <laugh>, like according to the internet, people say, don't eat this or don't do this, or, you know, so I mean, I'd say the chances are pretty high cuz of all like the chemicals and carcinogens and almost every day-to-day lives, like in the food we consume, the pollution in the air that we breathe, so.	

	B: I don't know. F: I'm not sure.	
4. How many of your friends do you think have HPV?	A; I would assume that 50% of the college campus friends that I have that live on campus, I would say about 50% have something that they're unaware of. I: Yeah, so the, the question is get, trying to get at, um, if, if women kind of talk, if this is something they talk about and if it, if this is something that, um, is something commonly understood, like for example, H I v people know what that is, um, and they know more, a lot more about it. Um, with H P V, I'm not, I'm just not sure. So that's why I'm asking kind of roundabout questions to figure out if there's any conversation going on. H: I'm gonna guess none. They're about my age, like 18, 19 or so. Okay. So I don't think, and most of them aren't early in relationships. E: No D: I don't think any of them are in sexual relationships. C: I mean, apart from my one friend with HIV that I gave you an example with, um, I don't, I'm, I'm not sure. B. I don't know. F: No idea	My friends are like me. We don't like to talk about this stuff and if we did, we would find we don't really need to do that because none of us are sexually active. Assumptions about sexuality of others. I was very surprised that all but 2 students responded with something like "we don't talk about THAT". So without discussions with friends and without adequate education, I am frightened about the potential for an uptick in STDs.
Research Question 3: Perceived Barriers		
1. What are some reasons college women do not get the HPV vaccine?	A; I would say either parents who weren't educated enough on the topic, didn't pass the knowledge onto them, didn't	Religious people don't get the vaccine because they don't have sex. Uh huh….

	have them vaccinated themselves, and just conservative media, um, conspiracy theories, that invincible mindset that if nothing has happened to me this far, I don't need it. Or I'm young, I'm healthy, I take care of myself. It's not gonna happen to me if I'm so young and healthy and I go to the gym and I eat well and I get regular doctor screenings. It's kind of this, um, young and invincible mindset that I've got control of my own body. I don't eat some vaccine that is in case I get cancer. I: Um, I think that the reasons could be related with the effects of the vaccine. And what you could bring, uh, after you take it, um, and feel, um, maybe related to the way that they, they will raise it without vaccine and religion aspects. But most I think would be if they would not want take it because related to effects. H: Probably a lack of knowledge and just thinking that like, they'll be fine, but it happens to other people, like it won't happen to them, that sort of thing. E: Um, well for one, I just think, again, they're not, it's not being informed or talked about as much. And I also think that especially when comes, like the term vaccine, usually think of like sicknesses, like cold, flu, and usually they're not like	Fear – what are the effects of the vaccine? Does getting the vaccine mean I'm getting ready to have sex? If I don't get the vaccine, I'm pretending I'll not have sex, be sexually assaulted? Here there were questions about why we don't know more. That's a very good question. The students appeared to be questioning themselves i.e. should I know more than I do? What does it say about me that I don't know these things? Frustration and embarrassment.

	associated with like, you know, sexual or like genital health. Mm-hmm. <affirmative>, that just doesn't seem like, like when you think of vaccine, you think of like, oh, get your shots for school, you know? So I don't think that would usually cross people's minds at all. Okay. So, yeah D: They think it'll only happen to other people. C: Hmm. So I feel like I said before, um, I know like at Montgomery College, I know a lot of people who've come from different countries here. And like for example, as an international student coming here, you probably don't have insurance. So it will probably be difficult to afford or just to access it itself, um, from those other foreign countries. A lot of people don't really talk about these kinds of things because like for example, I'm from Kenya and what the word we use is taboo. Like, it's a very shameful thing cuz it's a really like archaic, but it's like a shameful thing to talk about and no one should discuss it. Um, so yeah, I think a lot of them don't have it. But again, if it were cheaper and if it were talked about more or more advertising on it, probably cuz like in Kenya we never had sex ed classes, so, you know, you really wouldn't know about these things.	

	B: Mm, probably like lack of resources or, um, lack of like, information on the vaccine and on like H P D itself and like whether if they know or not, if they have that. F: Well if they're like me, they don't know anything about it. I don't understand why we don't know more.	
2. What do you think your family's feelings are about you getting the vaccine if you decide to do so?	A; Because it has become a political matter. So I would say the women that have been affected or know someone that have been affected are very supportive and encouraging. Um, and they try and educate others as well. But for those who haven't been affected, it can just become a political topic. I would say that Covid strengthened and polarized the, the two opposing sides for the HPV vaccine. Mm-hmm. <affirmative>, even before I'm Cuban and Venezuelan, you know, communist socialist backgrounds. And there's just this perspective of if you let the government control, you don't know what you're putting in your body. We didn't have all these back in your country. Um, but you look at them, you, there's no data to look at just because the government doesn't put out that data. People aren't getting screened. They have health complications that they just simply can't afford to get looked at. Um, so even before the vaccine for my family, it's just, it's been	This was a hot button. It seems that families do NOT discuss sex according to most participants. So students are not getting information at home or at school? Polarization regarding vaccines in general was mentioned by several students. Who can I trust to give me accurate information? Trust "I assume it's an STD so we wouldn't discuss it."

	political, a matter of access to information and correct information. And it's one of those things that you can't really talk about unless you've either walked a mile in the shoes yourself or walked alongside somebody. H: Uh, nothing. We don't really talk about this. E: This like, well one I doubt a lot of people know about because when you tell people, I feel like when people hear HPV, they immediately think of like HIV D: We don't ever talk about things like this. C: Uh, yeah, we don't really talk about, I mean, I feel like it's just me because I don't really, again, it's really hard for me to socialize with people and make friends. So the little that I do, I don't really get that deep or talk about things like that. B: No, it's just not even like talked about at all. F: We don't talk about things like this. I assume it's an STD, so we wouldn't discuss it.	
3. What do your friends tell you about getting the vaccine or not getting the vaccine?	A; Friends and students never been talked about? Not once and from my family. Um, I guess from my mother, because of her experience, she always gave me the talk of please wear protection, don't trust anybody. Um, same with my cousin, to swear protection, don't trust	According to all the women I interviewed, friends don't discuss STD's. I fell as though these women are more closed off from information than women in the 1950's. Fear

	anybody. And for my cousin, I got more of the emotional thought process of it affects now her husband and her ability to get pregnant and stay pregnant. And she talked about her miscarriages and just how difficult it was to conceive. And for my mom, I had to see the whole surgery process of removing her cervix and her uterus and her fallopian tubes. Um, and just how the man kind of perceives it. She, I don't know how personal I'm supposed to get, but she lost her virginity to my dad, therefore there was only one way she can get it. And just that like toxic masculinity that, you know, it wasn't my fault. I don't have any problems kind of thing. So my mom stuff like, explained to me how it is suffering alone. Um, just knowing that you have to live with it. And for us, since we don't have family here, just going through the whole process of surgery by yourself. Um, and then expect it to get better and go back to work next week and, you know, your intimacy being affected. Just things like that. But, um, I'm fortunate enough to have that mother-daughter relationship I: Yeah. I don't even know HPV trying, like what I'm trying to figure out H: Honestly, like, none. <laugh>, nothing.	Anxiety Comparison with others

	E: Well, since I've never heard of it, I would hope it's not as serious as it or isn't as spreading rampant as, you know, something more severe, but I'm assuming otherwise, yeah, a lot of things, especially self sexual health-wise, unless it's like, you know, aids that's cuz people like that, you know, proportionately affected gay people and people hate gay people, so they always talk about that. But yeah, I've, I have not heard that much news about it. D: Honestly, like, none C: Here's the thing, I don't, I don't really socialize a lot with people. And when I do, I feel like the topic about ST is, that's something that we don't really talk about. Okay. Like, it's not something that you open, you openly wanna discuss with friends casually or anything. B: Um, I think, I don't know. I feel like it's not very common. Like I feel like it, if it was like very, very common, I would've heard more about it. F: My friends talk about other things, but not about illness.	
4. How important is getting the HPV vaccine is to you?	A: Very important? I got it before I could even understand what it was. Okay. Before any kind of relationship was on my mind. I believe that was between the ages of 13 to 15. Okay. I	Searching for answers A little more confidence and plans to "look into" the vaccine. I feel angry that educators and public health leaders have done such a poor job of informing these women.

	wanna say I was in eighth or ninth grade. I: I will look into it now. H: Um, I think it would be important, especially if it's, if an individual has some of the risk factors. Um, for me personally, I have to see what my risk factors are and any possible side effects of the vaccine. E: I'm going to talk to my doctor now. D: I don't really know. C: I think it is very important. It's very important to have it and to have that security of knowing like whomever, because I feel like there's some people who might tend to lie about their status. Um, if I could give an example, I have a friend, and this friend is back in Kenya. Um, she slept with a guy and from that guy she got an s t i. So had she had the vaccine, I'm not sure which s t I was, I can't remember. But had she had the vaccine, she wouldn't be in this situation. And I know it definitely affected her, not only physically, but also mentally and emotionally because she's afraid to go near other people. She doesn't want to get them sick. And herself, she feels like there was a time that she felt her life was ruined because now she has this and it will never go away. So I think it's very important to get it. And if it	

	could be more accessible to people at probably better prices, then more people would be able to get it. B: That's, yeah, it's okay. Um, I don't think any of them do. F: I didn't know there was a vaccine.	
Research Question 4: Perceived Benefits		
1. What are some benefits of getting the HPV vaccine?	I: Well, if there is a vaccine that would help me to prevent assist, I would get that. H: I don't know for sure. E: Well, if someone is again, sexually active, I would think at the least being informed about possible, um, STDs or viruses Okay. Is extremely important. So especially if the vaccine is like, you know, f d A approved, then for sure it should be really important or at least publicized more. Yeah. So just like a breath of fresh air, like okay, one less thing I have to worry about that, you know, could possibly save me a lot of pain and treatment in the future. D: Probably peace of mind. C: Well, number one, you definitely know that you're safe and you can definitely not have that fear of causing harm into other people's lives. And yes, I think H P V does cause cervical cancer.	Getting informed Important to publicize the vaccine. One less thing to worry about Safety Alleviate fear. Knowledge

	That's why you asked that certain question. I mean at least you know that your chances of getting cervical cancer in the long run have been cut down. B: Yeah. I don't know anything like, yeah. So I don't know if that would even, like, would that even help the research to be honest? Like me not knowing. Okay. F: You would feel more safe I think.	
2. How would you feel about talking with your sisters or cousins about getting the HPV vaccine?	A; It depends which family members, but for the most part, my family is, um, aside from the politics, we are a loving family in the sense that if somebody is sick, somebody will get a helping hand when we are together. Um, so I would feel comfortable talking about it, not necessarily encouraging everyone. I would feel comfortable trying to inform and talk about it and talk it just about my reality. Nobody can define the experience I had with my mother and the experience my mother had. Yeah. Nobody can define or tell me about my experience. Um, and I mean, just looking up information and the percentage of women that have h or the percentage of adults that have HPV in general mm-hmm. higher than you would think. It's just not talked about and	Polarization regarding vaccines. Discuss, but not encourage Discomfort with talking about HPV Trust “Definitely going to be talking about it now”

	sharing that information. I do feel comfortable sharing it. However, um, they like to get super in, in depth of how was research conducted? How was the vaccine mean that just the average human being wouldn't know that information off the back of their hand? Yeah. Um, so I wouldn't encourage a vaccine. I would ha have her talk about the virus, my experience, um, and share that I have been vaccinated this far. I am. Okay. I don't have any extra weird limbs growing out. I don't have any weird disability happening. I don't have any weird allergic reactions. Sure. Um, but I'm the same as I was before vaccine. I: Um, I feel comfortable talking with friends and, and especially with people that are close and I can trust and I trust. I am not afraid, I'm sure. H: Um, probably like not comfortable. I don't have any sisters and the cousins, I do have a lot of them come from more religious backgrounds. E: I'm, again, I'm a very, like, what is it? Like, I'm not blunt, but like I take things like race, like you have to be like realistic, like people are having sex, it's just facts. Um, so again, I'm very vocal on like again, get tested <laugh>, make sure consent, condoms, that type of thing. So yeah, the fact that I'm	

	hearing about it now and the fact that I know that vaccinations for like sexual, like acts is a thing, I'm definitely gonna be talking about it more. So yeah, definitely something on me telling my female relatives about now. D: Not really comfortable with my family. C: I only have one sister and she's 10. But when she grows up I would definitely advise her to practice safe intimacy. I would advocate for her to get it. Um, my cousins, I would probably bring it up. It probably won't be the best conversation because again we don't, it's a taboo since most of them are in Kenya and they have grown up with the backwards mentality, backwards mentality. Um, so for them, probably not. But my sister, I feel like I definitely tell her okay to stay safe. B: Um, I feel like I would be kind of uncomfortable to be honest, because I don't know if that would be something like personal to them. Um, I feel like maybe one of them could like no information on it, but I feel like the only reason it would be is because like she works in the healthcare field. She's not like, uh, you know, I feel like it would be different for her cause she like is in the field knowing about that stuff, constantly being informed	

	about that stuff. It's not, uh, a situation where like, I guess she's just like a person, like a normal person type of thing. F: I only have brothers, so not likely, but I will be looking for more information.	
Research Question 4: Self-Efficacy		
1. How confident do you feel about knowing which preventive health screenings you should get, and where to go to get them?	A: In this area? I'm very confident. Okay. Um, I feel out the government has enough resources in place to at least help and direct women even looking at the information up online, there's a lot of local clinics, um, for all different income ranges that are available. Okay. And even if you don't have transportation, if you're 21 and under your student, you have a free ride on pass to the public, um, bus transportation here. Mm-hmm. <affirmative>. Um, and I've even helped some of my friends get tested and whether it's finding contraceptives at work for them or treatments, um, others um, other STS related to complications with their contraceptive, getting that medical care that they need in a reasonable amount of time. Yeah. Um, so in this area, in the DC suburbs, very confident. I: Uh, I am not that comfortable because, um, I dunno much actually. And um, I know there's some, um,	Confidence I don't know much Lack of knowledge Who do I ask? College not putting forth much effort to educate students about this. Lack of motivation from teachers. Most ok to discuss with primary medical. Hesitancy – What do I ask? Fear of being wrong, laughed at, humiliated. Need to look up information so I don't sound dumb.

	kind of, um, groups that sometimes get together college and they do those workshops mm-hmm. <affirmative>, but it's not often and most of the times in, in times that are not available to participate and attend. And I think that if there was more quick informations, uh, even like in in classrooms or, uh, would be helpful, uh, because I dunno much and emails come from college. Yes. But they don't put a lot of effort and they put some effort in there to say it. But if you are not keeping on track on your emails, you will be losing this information and, uh, being a student's not easy because you need to focus on your studies. Mm-hmm. <affirmative> and this ended up being, uh, the most important thing that it'll be looking for if it's not someone in front of you telling you about those informations. H: I don't think you just scroll across just like randomly. I think you'd have to look for it, but if you did try, you could find it easily. E: I actually don't know. Cause again, I don't know if this is a community college thing or just in general. Like my sister's college, it's like an on, like, it's a, um, a college where you live on campus. I know they have a	

	health center mm-hmm. <affirmative>, you can get tested. Yeah. Um, but I don't know if they offer like preventative measures and I don't, I don't even know if mc does. I know we have a health center, but that's where you get like covid shots. So I don't know where I would go if I didn't want like my, like if I didn't want, if I didn't want like my parents or something. I know like, uh, a general hospital or something. D: I'm very comfortable talking to my doctor, but might need to wait for a few more visits to talk about this because my doctor is new. C: The benefits of getting it is that, you know, that you won't be able to get H P V itself. And I guess there's just that security that comes with knowing whatever you do, you're safe. But probably just the H P V alone, the HPV vaccine alone won't be enough. Mm-hmm. <affirmative> cuz there are also other things out there, some of which don't have vaccines. B: I feel like I would, I could just go to my doctor's office. At least that's what I think. F: I will be talking to my PA.	
2. How do you feel about discussing information about sexuality, HPV and screening for cervical cancer with	A: Because my fear is so big of what, if I don't talk about it, what it can lead to extremely comfortable. I don't have any barriers. I okay. Believe that my	Confident with primary care. Culture and openness Don't have primary care I go to Care First urgent care. Not sure if insurance covers it.

your primary care practitioner?	medical provider is supposed to watch out for me if I express these concerns. I; Um, I am comfortable about talking about that. Um, especially in Brazil. I had, um, a person that I was going for a while, so this person has my whole history mm-hmm. <affirmative> historical, um, here, uh, I needed to look for a doctor, but for me, I dunno if my culture that helps me to be more open, so I am Okay. Talking about those kind of things. H: Uh, not very. I'd probably have to go to my like normal doctor and then get like a referral from her. But other than that, like if it's something I needed right away, I would not know where to go, what to do. E: I feel pretty comfortable. Um, yeah cuz I, I've had the same doctor, you know, for like years and like one, she's a woman so there's always that familiarity and we talk. So I'm very comfortable around her. C: Hmm. I personally do not have a primary care doctor, but if it comes to a doctor who's checking who like doing my checkup, I feel like I'd rather not leave any information out. Mm-hmm. <affirmative> just so that if any diagnosis is to be made, it's the most accurate as possible. I probably am not the best person for this	

	because then I do not like hospitals. <laugh>, <laugh>, I don't, I don't, I don't at all. And I am horrified of needles, so getting my blood drawn. So like the only times I do get tested is like when I'm sick or if I feel like something's off, that's when I'll go and get the work done. But like, I know I've been trying to make it on a regular basis, but sometimes, sometimes it's just hard, harder. Sometimes you just put it in the back of your mind. So how confident, confident and I that I will do it. I'd say like from a hundred percent I'd probably give myself a 25%. Okay. I probably haven't been doing my best part. B: Not comfortable because I don't know what to ask. F: I will feel better if I look up information first so I don't feel embarrassed.	
Research Question 5: Cues to Action		
1. **How easy is it to find information about any aspect of HPV, such as the vaccination protocols,** screenings, **and prevention?**	A: I would say with the internet mm-hmm. <affirmative>, it is accessible and confusing. Um, with the education system we have here, at least at the university level, it is easier as well. If you have that relationship with a trusted adult or a department in the school, what would need to be strength than I	Education is good regarding how to find credible information. Credible. Google it. "They could be doing more." "They need to do better in spreading the news about everything".

	would say is a public school education outreach, especially since the vaccine is more likely to do better and before they end her a sexually active stage, like being more preventative rather than reactive. I; It's not easy. I never heard three years in United States. I never heard about it. H: Um, I mean, I haven't really looked, but I mean, thanks to Google and like all of the sources, I'm gonna say you could find it relatively easy if you were looking. Okay. It's not something, I don't think you just scroll across just like randomly. I think you'd have to look for it, but if you did try, you could find it easily. E: Um, when it comes to just information out there, again, we're in the era of the internet, so it's not that hard. However, you have to like actively look for it. So when it comes to just like you being, you like it being brought to your attention? Yeah, I've never heard of it <laugh>. Yeah. But now that I know I can just look up HPV facts and stuff like that. But you know, just being informed about it, like proactively that, that hasn't happened until now. D: I think it's pretty easy to google what you need. C: So the fact that I've probably never come across	"Just being informed about it, like proactively that, that hasn't happened until now." Again, I am feeling ashamed of my profession. Community college women need information like this just as much as women in a university, so why are we so bad at getting the information to students?

	that information casually is saying a lot that they need to do better in spreading the news about everything. But I'm pretty sure if you google what you're trying to look for, you might be able to find it. Hmm. So, if we didn't know, we probably wouldn't find that information. Cause you see like they could be doing more, like a lot of people watch YouTube, a lot of people listen to Spotify. They could have some ads there. I don't know if people still listen to the radio, they can put that there so people are driving or maybe like billboards as people drive by, they can pass and see it. Like, oh, that's important. I should probably look into it. B: I feel like since there is a lack of like, uh, information about where to go, you kind of just have to figure it out for yourself. Like, oh, maybe just going to the doctor will be like, where I find the resources. So yeah. Um, I feel like the internet isn't, like, it wouldn't be super reliable, but I could like get a general idea on there, but I feel like it wouldn't be as accessible cuz I would have to like, go to the doctor's office, probably wait until yearly checkups or like just go outta my way to like schedule an appointment for that. So, yeah, I don't	

	know, like, it just seems kind of like a hassle in a way. F: I think you have to be careful and only use credible sources, but it should be on the web.	

Appendix E: Promotional Flyer

INTERVIEW PARTICIPANTS NEEDED

HELP RESEARCH TO UNDERSTAND COMMUNITY COLLEGE WOMEN'S VIEWS OF HPV AND CERVICAL CANCER.

You may be eligible if you are:

- *A woman between the ages of 18 and 45; a student at Montgomery College.*

- *This study will involve participation in a private 1- hour Zoom interview to answer questions about your perceptions and understanding of HPV (Human Papillomavirus) and cervical cancer. Results of this study will be provided to you. (Questions are not about your personal medical history).*

- *This study is specifically for community college women because this population of women is overlooked in health science research.*

- This study is being conducted by a researcher named Odella Dianne Hagan, who is a doctoral student at Walden University. You might already know the researcher as a professor, but this study is separate from that role.

Want to be a part of this study?
Contact:
Odelladianne.hagan-jones@waldenu.edu,
Odella.hagan@montgomerycollege.edu *or call 304-261-9042*