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Identifying the Barriers of Human Papillomavirus Prevention in
Young African American Women

Alexandria West

IDENTIFYING THE BARRIERS OF HUMAN PAPILLOMAVIRUS PREVENTION
IN YOUNG AFRICAN AMERICAN WOMEN

SCHOLARLY PROJECT

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by

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2014

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Abstract

Background: The Human Papillomavirus (HPV) continues to be an epidemic in young women in the United States, especially African Americans. The college-aged community of minorities, specifically African American women between the ages of 18-26, has been more at risk for contracting HPV than any other racial group. This is due to barriers to health care in this group, including lack of knowledge, individual health beliefs, and access to care. Starting more widespread and diverse HPV education, prevention, and promotion programs, especially for young African American women, that is culturally specific, may be beneficial. Continued surveillance is imperative to monitor vaccine uptake, including racial and ethnic disparities. Further research exploring HPV knowledge and vaccination barriers across diverse cultural groups is needed to inform the development of more effective public health interventions.

Purpose: The purpose of this project was to create an educational intervention that can increase the knowledge of risks for contracting the Human Papillomavirus (HPV) and increase vaccination awareness in the 18-26 year old, African American female population. The aims of this project were to identify barriers to prevention of HPV by completion of a needs assessment and to create an educational intervention for 18-26 year old African American women in a local gynecologic clinic in Miami, FL.

Theoretical Framework: The Health Belief Model, which was written by Rosenstock, Hochbaum, Kegeles, and Leventhal.

Methods: The project was completed in three phases. First, a needs assessment was completed. Second, through clinical immersion, participants were routinely evaluated as

a part of the gynecological health history and exam, in which their knowledge of HPV and barriers to prevention were assessed and noted. An educational intervention was then created once this information is gathered.

Results: The barriers of HPV prevention in young African American women were found to be prevalent via conduction of a needs assessment and clinical immersion in a South Florida OB/GYN clinic. Subsequently, an educational brochure was created and evaluated by an expert consensus panel.

Conclusions: The project investigator was able to describe that there indeed was a problem due to the disproportionate number of these young African American women developing HPV due to their barriers of prevention.

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DEDICATION

I would like to dedicate this scholarly project to young African American women nationwide. I hope that women everywhere may benefit from my project, specifically this group of women who mean so much to me and my culture.

TABLE OF CONTENTS

TITLE PAGE.....i

SIGNATURE PAGE.....ii

COPYRIGHT PAGE.....iii

ABSTRACT.....iv

ACKNOWLEDGMENTSvi

CHAPTER ONE 1

 Nature of Project and Problem Identification 1

 Background of the Project..... 3

 Definitions..... 8

 Problem Statement 10

 Purpose 10

 Significance of Problem to DNP Essentials..... 11

 Project Objectives 13

 Project Questions..... 14

 Theoretical Framework 14

 Significance of Study to Practice 17

 Significance of Study to Health Care Outcomes..... 18

 Significance of Study to Health Care Delivery 18

 Significance of Study to Health Care Policy 19

CHAPTER TWO 20

 Introduction 20

 Epidemiology of HPV..... 21

 Description of the Problem 25

 Health Belief Model 31

CHAPTER THREE	35
Project Design	35
Project Phases.....	37
Phase I.....	37
Phase II	40
Phase III.....	40
Setting.....	41
Identification of Participants	42
Ethical Considerations.....	43
Timeline of Project Phases.....	43
Resources with Budget Proposal.....	44
Evidence of Support	44
Outcome Measures	45
CHAPTER FOUR.....	47
Introduction	47
Findings of the Project	48
Discussion of Findings per Project Questions.....	57
Strengths and Limitations of the Project.....	59
Implications for Practice, Health Care Outcomes, Health Care Delivery, and Health Care Policy	60
Summary	68
REFERENCES	69
APPENDIX A: LETTER OF SITE APPROVAL	75
APPENDIX B: EDUCATIONAL BROCHURE.....	76

APPENDIX C: SAMPLE EDUCATIONAL BROCHURE REVIEW/EVALUATION

FORM 84

APPENDIX D: SCHOLARLY PROJECT TIMELINE 86

VITA 88

CHAPTER ONE

Nature of Project and Problem Identification

The Human Papillomavirus (HPV) is a sexually transmitted disease that can lead to cervical cancer and genital warts, depending on the strain of the virus. HPV has become increasingly more prevalent among female minority groups, including African Americans. African American women have had a higher prevalence and incidence of cervical cancer than Caucasian women, putting them more at risk for developing cervical cancer (Bynum, Brandt, Sharpe, Williams, & Kerr, 2011).

Approximately 20 million Americans are currently infected with HPV, and 6.2 million acquire a new HPV infection each year. The highest rate of HPV infection is found in college-age populations and non-Hispanic black women aged 20 to 26 (Bynum et al., 2011). These statistics are due in part to the increased incidence of HPV in African Americans. With 6.2 million new cases identified each year, human papillomavirus is the most common sexually transmitted infection in the USA, with a peak in prevalence in ages 20-26 (Bendik, Mayo, & Parker, 2011). Vaccination against HPV can prevent the development of 99% of the cervical cancers it causes (Nelson, Moser, Gaffey, & Waldron, 2009). The Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices recommends routine vaccination of young women aged 11–12 and as early as 9 years old, with catch-up vaccination up to age 26 (CDC, 2013a).

There are more than 40 types of HPV that can affect varying parts of the body, including the genital and anal area, cervix, and oral and throat mucosa, which can lead to cancer (CDC, 2013a). The four main HPV types (e.g. HPV 6, 11, 16, and 18) are the causes for most cervical cancers, genital warts, and other mucosal oncogenic

abnormalities (Moscicki, 2005). Mucosal HPVs are further subdivided into either ‘high, intermediate’, or ‘low-risk’ types depending on the lesions they are associated with. ‘High-risk’ types (16 & 18) are predominately associated with cervical cancer while ‘low-risk’ types (6 & 11) are commonly detected in genital warts (Sanclemente & Gill, 2007). HPV-16 is the most prevalent type detected in cervical cancer and has been classified as a class I carcinogen (Sanclemente & Gill, 2007). The HPV-16 type is found in 19.1% of blacks compared with 12.5% of whites (D’Urso, Thompson-Robinson, Chandler, 2007, p. 162). Persistent infection with one of the high-risk oncogenic strains of HPV is considered the main risk factor associated with developing cervical cancer. According to Leon et al., different epidemiological studies have suggested that about 50–75% of sexually active women are infected with HPV at some point of their lives (2011).

Two HPV vaccines have been licensed by the Food and Drug Administration (FDA) and are recommended by national immunization programs in the United States and around the world. These vaccines are Gardasil and Cervarix, and are approved for girls and women ages 9-26 (Baker et al., 2012). These vaccines are given as a series of three shots over six months and both vaccines protect against cervical cancers in women. Gardasil also protects against genital warts and cancers of the anus, vagina, and vulva, which shows a greater protective and preventative measure for women. Gardasil is a quadrivalent vaccine that protects against the four main strains of HPV, which are 6, 11, 16, and 18. Cervarix is a bivalent that protects against the high-risk HPV strains 16 and 18 (ACS, 2013). “These vaccines have demonstrated safety and nearly 100% efficacy in protecting against HPV 16 and HPV 18, responsible for 70% of cervical cancers, and HPV 6 and HPV 11, causally related to 90% of genital warts” (Daley et al., 2010, p.

1888). Both vaccines are almost 100% effective against precancerous lesions, with Cervarix being more effective against persistent infections (nearly 100%) than Gardasil (86- 89%). The vaccines are recommended for young females aged 9 to 26 years and may have some benefits for older women (Pourat & Jones, 2012). Both vaccines require three doses to be given to be effective in preventing the most common strains of HPV that lead to cervical cancer.

However, minority females who suffer the disease burden of HPV have lower rates of awareness of the vaccine than white females (Baker et al., 2012). Preventative efforts, including appropriate uptake of the HPV vaccine, along with adequate education of HPV, could serve as a way to eliminate disparities in cervical cancer rates seen throughout the United States, especially in young African American women.

Background of the Project

Epidemiology

HPV has become a health concern and dilemma amongst young women, especially in the African American community. Cervical cancer accounts for the death of approximately one-quarter million women in the world each year. In the United States alone, over 4000 women die of the disease yearly (Lechuga, Swain, & Weinhardt, 2011). Cervical cancer is a preventable disease that results from infection with the carcinogenic high-risk genotypes of Human Papillomavirus, strains 16 and 18 (Theroux, 2008). “About 20 million individuals become infected with HPV each year, and over 80-85% of individuals who are sexually active are expected to become infected during their lifetime” (Theroux, 2008).

Racial disparities in HPV prevalence between African American and Hispanic women as compared to other groups are disproportionately higher (Ford, 2011).

“Cervical cancer is ranked the fifth most prevalent form of cancer in African American women. The cervical cancer incidence rate ratio between African Americans and whites is 1.6/100,000” (Scarinci, Garcés-Palacio, & Partridge, 2007, p. 1226). According to D'Urso et al., “the prevalence of cervical cancer in blacks in the United States is almost three times greater than that in whites” (2007).

According to Ford, “There’s a prevalence rate of 35% for black women, ages 18-25, as compared with 25% for their Caucasian female counterparts in the same age group” (2011). In a study of emergency department patients, black participants were less likely to have heard of HPV and to know that HPV causes cervical cancer compared to white participants (Gelman, Nikolajski, Schwarz, & Borrero, 2011). According to the American Cancer Society (ACS), “racial/ethnic disparities are also found in mortality rates as African American women are 2.2 times more likely to die from cervical cancer than White women” (2013). Further research has been shown to be needed to identify why knowledge and vaccination barriers exist in this population of young African American women (Ford, 2011).

Identifying predictors of uptake for HPV vaccination is a major public health concern (Bynum et al, 2011). “Cervical cancer is not just a women’s health issue. It is a public health issue of which we all need to be aware. It can be prevented through primary and secondary prevention strategies, and it can be effectively treated when caught early” (McCormish, 2011, p. 478). Research of HPV vaccine uptake and susceptibility in African American young women in particular has been lacking, indicating a need for

further research (Bynum et al., 2011). Vaccine uptake in African American women has been shown to be lacking due to several factors, including lack of knowledge of HPV, individual health beliefs, and access to health care (Ford, 2011).

Lack of knowledge of HPV

Knowledge deficits surrounding HPV have been linked to be one of the main causes of in particular young African American women not knowing the effects of HPV and vaccination against it. According to Gelman et al., “in a sample of 4088 women, it was found that Black and Hispanic women were significantly less likely to have heard of HPV and the HPV vaccine, even after controlling for socio-demographic and clinical confounders” (2011, p. 1171). This study also noted that this correlation was most pronounced in women under 26 years old, although it persisted among older women of reproductive age as well (Gelman et al., 2011).

Lack of knowledge continues to exist not only of HPV itself, but also of preventative measures for HPV. This group would need to understand that screening for HPV is the first step towards prevention. According to Nelson et al., “knowledge of HPV was associated with compliance with the recommended Papanicolaou (Pap) screen protocol, the mainstay of cervical cancer prevention” (2009, p. 1761). Educating this group so that they understand that HPV is a sexually transmitted disease that can cause cervical cancer, as well as oropharyngeal cancer and genital warts, may be the first step in increasing their vaccination and prevention (Scarinci et al., 2007). Primary concerns about HPV vaccination in African Americans included potential side effects, cost, lack of information about HPV infection, its link to cervical cancer, and lack of information

about the vaccine (Scarinci et al., 2007).

Health beliefs of African American women regarding HPV

Trust in health care providers has been more of a concern in African American patients (Wong & Do, 2012). This uncertainty in medical advice secondary to health beliefs may have a link to why this population seeks preventative measures less for HPV. According to Wong & Do, “compared with Whites, African Americans were less likely to be aware of the HPV vaccine but more likely to have discussions with their health care providers (HCPs) concerning the vaccine” (2012, p. 29). African Americans were shown to have more skepticism regarding vaccination and screening, mainly due to their lack of knowledge. African Americans also reported more concerns regarding HPV vaccine efficacy and side effects (Scarinci et al., 2007). According to Scarinci et al., there have been a number of studies have documented the mistrust of the health care system among African Americans in the United States. Given this history of mistrust, specialized efforts should be made to overcome this barrier when promoting HPV preventive vaccination among young African American women (2007).

Based on a study conducted by Scarinci et al., “African American women reported that their motivation to obtain the vaccine was based more on objective evidence such as receiving education/information about the vaccine, affordable prices, good results in trials, and knowing others who had already gotten vaccinated” (2007). These findings suggest that unique educational strategies need to be developed, based on the needs and perceptions of the targeted audience, in order to achieve widespread acceptability of this vaccine (Scarinci et al., 2007). Health beliefs of African American women have been

one of the major influences related to HPV vaccine uptake (Bynum et al., 2011).

Analyzing these factors through further research of this group may expose key factors inhibiting vaccine usage, resulting in increased spread of HPV and the development of cervical cancer.

Access to health care

Lack of proper insurance and financial instability continue to be major causes of this population having decreased access to health care. As Wong and Do explain, women at high risk for cervical cancer in the United States usually have less income, less education, and are likely to belong to racial/ethnic minorities, namely African Americans, Hispanics, and Asians (2012). Less higher education coupled with less income due to unemployment and poverty puts these young African American women at risk for developing HPV because of decreased or absent primary and secondary preventative measures. “Low-income levels and lack of medical insurance are associated with lower rates of HPV vaccine initiations” (Wong & Do, 2012, p. 20).

Access to health care plays a major part in the prevention of HPV in young African American women. “A number of factors have been associated with lower rates of cervical cancer screening in young, black women, including lack of a usual source of health care, lack of health insurance, low income, and low educational attainment” (Nelson et al., 2009, p. 1765). Cervical cancer risk is associated with a low socioeconomic status, as defined by education or income levels (Franceschi et al., 2009). Socioeconomic status has been shown to be linked with HPV, because most women with lack of insurance or proper access to health care do not know enough about HPV or how

its contracted, or that there is a vaccine that protects against contracting the four major strains of HPV (Ford, 2011).

The costs of treating HPV and its related disease are estimated at or above \$4 billion annually (Pourat & Jones, 2012). Financial constraints are a significant barrier to HPV vaccination. The vaccine, at an estimated cost of \$360 for the 3-dose vaccine plus the associated administration and visit fees (estimated at \$92), is too expensive without insurance coverage for most low-income individuals and families (Pourat & Jones, 2012). Although there are free federally funded vaccine programs, known as the Vaccine for Children (VFC) program and the Immunization Grant Program, budget shortfalls exist (Pourat & Jones, 2012). Vaccine manufacturers may cover uninsured adults, and Medicaid may cover vaccine costs for adults; however, the scope of these forms of coverage is unknown and the underinsured may still have limited access (Pourat & Jones, 2012).

Definitions

Cervical cancer by definition is a disorganized proliferation of cell growth originating in the cervical epithelium. Squamous cell carcinoma of the cervix comprises 85% of cervical malignancies whereas adenocarcinoma accounts for only 10% to 15% of the remaining malignancies (McKeever, 2010). This form of cancer is particularly virulent and elusive. Adenocarcinoma is often difficult to manage in a young woman of reproductive age who faces the challenge of a potential malignancy and possible loss of reproductive capability (McKeever, 2010). Cervical cancer is slow growing and may not have symptoms but can be found with regular Papanicolaou (Pap) smears (ACS, 2013).

Cervical cancer generally develops gradually and begins as a pre-cancerous condition called dysplasia. Dysplasia, depending on its severity, can resolve without treatment; often, however, it may progress to cancer (Steigman & Vernick, 2002). Cervical cancer is most commonly caused by HPV. HPV is a double-stranded DNA virus of the family Papovaviridae. It infects only epithelial cells in humans such as skin and mucus membranes (ASCCP, 2012). It can affect the lower genital tract including the vulva, vagina, urethra, penis, anal canal, and perianal epithelium (ASCCP, 2012). HPV is known to cause cervical cell abnormalities that may progress to cervical cancer. HPV persistence on the female cervix is one of the known predictors in cervical neoplasia and the long-term persistence of the high-risk strains of HPV is considered the predominant predictive factor in cervical neoplasia (McKeever, 2010). HPV is the most common sexually transmitted disease (STD) in the United States, with at least half of the sexually active population expected to become infected at some point in their lives (Gelman, 2011). According to Sanclemente and Gill, HPV accounts for an estimated 11% of the global cancer incidence in women (2007).

The Papanicolaou smear (Pap smear) is a method or a test for the early detection of cancer, especially of the uterine cervix, which involves staining exfoliated cells by a special technique that differentiates diseased tissue (Steigman & Vernick, 2002). The main purpose of the Pap smear is to identify patients who have cellular changes that place them at risk for the development of cervical cancer. The Pap smear is most effective in detection and diagnosis of abnormalities in squamous cells (Steigman & Vernick, 2002). Even with the development of cytological screening (i.e. Pap smears), and the implementation of routine cervical cancer screening programs, women in the United

States still fail to regularly participate in cervical cancer prevention (McKeever, 2010). Within the U.S., fewer than 50-60 million women are screened annually with a Pap smear, and 3.5 million of these women have a Pap smear that is classified as abnormal. Statistics has shown that fewer than 50% of all women worldwide participate in cervical cancer screening on a routine basis (ASCCP, 2012). The American Cancer Society (ACS) recommends annual Pap smears starting with the onset of sexual activity or age 18, then annually (2013).

Approximately half of women diagnosed with invasive cervical cancer have never had a Pap smear (McKeever, 2010). Failure to obtain regular Pap smears is the single greatest risk factor for development of invasive cervical cancer (Steigman & Vernick, 2002). Historically, unscreened populations in the U.S. have included older women, uninsured and poor women, women residing in rural areas, and minority women, especially African American women (Steigman & Vernick, 2002).

Problem Statement

The problem is that there are a disproportionate number of African American women, between the ages of 18-26, developing Human Papillomavirus due to knowledge deficits, individual health beliefs, and decreased access to health care, resulting in decreased measures for prevention and vaccination.

Purpose

The purpose of this project was to create an educational intervention that can increase the knowledge of risks for contracting the Human Papillomavirus (HPV) and increase vaccination awareness in the 18-26 year old, African American female

population.

Significance of Problem to DNP Essentials

The Doctor of Nursing Practice (DNP) is a practitioner of advanced nursing practice that seeks to improve health and patient outcomes, as well as nursing practice through utilization of enhanced knowledge and leadership skills. These skills help to strengthen health care delivery through analytical practice-oriented research inquiries. The barriers faced by these young African American women to HPV awareness and vaccination are significant to the DNP practice in many different areas. The DNP's main goal in this group of women is to increase their knowledge of HPV, thereby increasing their awareness of preventative measures, including vaccination.

The AACN Essential II is Organizational and Systems Leadership for Quality Improvement and Systems Thinking, which is essential for the DNP to improve patient and health care outcomes (AACN, 2006). Through utilization of Essential II, the DNP utilized current research done on this problem to gain more in-depth information on the local community of 18-26 year old, African American women. The DNP then created an educational interventions tailored to 18-26 year old women in the African American community. Providing open access to care to all patients and private counseling to those patients who may be unsure or skeptical regarding HPV and preventative efforts can help to eliminate health disparities and promote excellence in practice (AACN, 2006).

Essential III is Clinical Scholarship and Analytical Methods for Evidence-Based Practice, was necessary for the DNP to explore the reasons for existing factors that contribute to this inequality of HPV in young African American women and how

exploring the barriers in the community were utilized to increase measures for prevention and vaccination in this group through creation of the educational brochure. Through guided clinically-based research and translation into practice, the DNP investigated barriers existent in this community. The DNP then applied the information obtained towards creating an educational intervention that addressed the barriers noted in this group from a complete needs assessment.

Essential VII is Clinical Prevention and Population Health for Improving the Nation's Health, which is aimed at health promotion, risk reduction, and illness prevention in the general population (AACN, 2006). This essential is key because it outlines the overall purpose of this project. Health promotion of HPV is necessary in the form of the educational intervention because it will help young African American women understand their risk for HPV and recommended primary and secondary measures for prevention, including regular pap smears, HPV screenings, and HPV vaccination. Educating these young women regarding multiple sex partners and unsafe sex practices will increase their knowledge on risk reduction and illness prevention.

Essential VIII reflects advanced nursing practice and is geared towards ensuring competence in complex areas of practice, including expertise and advance knowledge of nursing practice (AACN, 2006). African American women have shown a level of distrust and skepticism with regards to HPV vaccination (Scarinci et al., 2007). Some of this skepticism is related to the health care provider and their recommendations (Wong & Do, 2012). The DNP, with the utilization of refined assessment skills, enhanced the patient-to-DNP relationship by applying the relevant psychosocial, behavioral, cultural, economic, and physiological factors of women in this group to their current barriers to

HPV education and prevention (AACN, 2006).

In a study completed by Benkert, Hollie, Nordstrom, Wickson, and Bins-Emerick (2009), cultural mistrust, medical mistrust, and racial identity were analyzed among African American adults who were cared for by primary-care nurse practitioners. A sample of 100 predominantly female participants was utilized from three different primary care clinics. The study found that the participants simultaneously held moderate cultural mistrust of European American providers and the health care system, and high levels of trust and satisfaction with their nurse practitioners (Benkert et al., 2009). According to Benkert et al., “African American women participants reported being highly satisfied with and moderately trustful of their nurse practitioners (NPs) despite having moderate levels of mistrust of the health care system” (2009).

These findings are evident under Essential VIII, because the DNP is able to sustain therapeutic relationships and partnerships with patients, families, or groups as well as other professionals to facilitate optimal care and patient outcomes (AACN, 2006). Building a trusting, non-judgmental relationship with the women in this high risk group helped to minimize individual health beliefs and misconceptions this group has regarding HPV. The expertise in accurate, objective knowledge of the problem, therapeutic communication, and empathy towards the at risk population was necessary for the DNP to reach this group.

Project Objectives

Project objectives for this scholarly project included:

1. To complete a needs assessment related to HPV knowledge, prevention, and

vaccination in 18-26 year old African American women in a local gynecologic clinic in Miami, FL

2. To identify health inequities/barriers for HPV prevention among 18-26 year old African American women
3. To create an educational intervention at a South Florida clinic addressing the issues identified in the needs assessment for the selected group of 18-26 year old African American women

Project Questions

Project questions for this scholarly project included:

1. Does this population of African American women know what HPV is?
2. Does this population know the risks associated with HPV or how to prevent themselves from contracting HPV?
3. What are the perceived barriers to HPV vaccination in 18-26 year old African American women?
4. Does improving knowledge deficits in 18-26 year old African American women improve their desire for wanting HPV vaccination?
5. How do the health beliefs of this population affect their knowledge of HPV vaccination?

Theoretical Framework

The theoretical framework most applied to this project is the Health Belief Model (HBM). The HBM was developed by psychologists Rosenstock, Hochbaum, Kegeles, and Leventhal (Pender, Murdaugh, & Parsons, 2011). The HBM describes why some

people who are free from disease will take actions to prevent sickness, while others who have illnesses or are at high risk will not take preventative actions (Pender, Murdaugh, & Parsons, 2011). The model was developed at a time when there were public health concerns about the widespread reluctance to accept screening for tuberculosis, detection of cervical cancer, and immunizations (Pender et al., 2011). “Illnesses are conceived to be regions of negative valence exerting a force moving the person away from the regions of positive valence. Preventative behaviors are strategies for avoiding the negatively valenced regions of illness” (Pender et al., 2011, p. 64).

The HBM describes that people will take action to prevent disease if there is a perceived threat to health and if benefits of seeking health care outweigh the barriers (Pender et al., 2011). It is important to analyze the person’s perceived susceptibility and perceived barriers. Perceived susceptibility describes an individual’s feelings of personal vulnerability or risk for a specific health problem. Perceived barriers are perceptions regarding the potential negative aspects of taking action such as expense, danger, unpleasantness (Pender et al., 2011).

“Many of the attitudes and beliefs that motivate vaccination behaviors are derived from the HBM. Interventions guided by the HBM have been shown to increase vaccination rates” (Fazekas, Brewer, & Smith, 2008, p. 541). Perceived susceptibility to contracting HPV is decreased in many African American women. Much of this is attributed to knowledge deficits about HPV and cervical cancer and how the disease directly affects them (Fazekas et al., 2008). Not knowing or understanding what HPV is can affect these women from taking certain preventative measures to protect themselves from the disease (Fazekas et al., 2008). Exploring the perceived barriers and

susceptibility to HPV in this group is necessary to understand why there is a disparity and what education is necessary to increase knowledge and vaccine awareness.

The HBM suggests that key predictors for acceptability of any vaccine include perceived disease likelihood and severity, perceived vaccine benefits and barriers, and cues to action (Fazekas et al., 2008). In relation to HPV vaccination, perceived likelihood is the belief that HPV infection and cervical cancer are likely outcomes (Fazekas et al., 2008). Perceived severity is the belief that HPV infection and cervical cancer would have serious, negative health outcomes (Fazekas et al., 2008). “Perceived vaccine effectiveness (i.e., perceived benefit) is the belief that the HPV vaccine will reduce the risk of HPV infection or cervical cancer. Perceived barriers can be any perceived impediments to vaccination, such as cost” (Fazekas et al., 2008, p. 544). Cues to action are situational and social factors that prompt one to get vaccinated (i.e. knowing someone who is suffering or died from cervical cancer; Fazekas et al., 2008).

As applied to this problem, the perceived susceptibility of getting HPV in 18-26 year old African American women has generally been low, due to a lack of education regarding HPV (Gelman et al., 2011). The perceived barriers in relation to this group of women are related to their individual health beliefs about HPV, whether it is unsafe, has concerning side effects, is inconvenient, takes too much time, or is unnecessary to them because they may not know anyone who has received it. Understanding the health beliefs may provide a comprehensive look at vaccine uptake decision-making among young African American women, which is important to address in focused research of the HPV vaccine (Bynum et al., 2011).

The Health Belief Model suggests that individuals' beliefs about the riskiness and severity of a health threat, along with their expectations about the pros and cons of taking action, influence health-protective behavior (Fazekas et al., 2008). For example, the belief that receiving the HPV vaccine will effectively reduce the likelihood of contracting HPV in 18-26 year old African American women can be associated with willingness to receive the vaccine. In addition, the perceived likelihood of getting cervical cancer and perceived negative side effects of the vaccine can also be significant predictors of vaccine uptake.

Significance of Study to Practice

This project is significant to practice because it is necessary to have a better understanding of the factors and barriers that contribute to a higher prevalence and mortality of HPV in African American women. The DNP can create interventions to target more efficient health promotion methods for this group that are culturally specific, which in turn may increase their measures for prevention and vaccination. HCPs should prioritize screening practices based on epidemiological data, which shows the correlation of race and socioeconomic status with STIs (Wong & Do, 2012). Consistent use of these tailored screening methods in practice improves health promotion and prevention practices. According to Wong and Do (2012), a HCP who is aware that the prevalence of HPV infections is higher among African American women with low levels of education and income will be more likely to discuss the HPV vaccine with these groups. The DNP therefore needs to be aware of current HPV epidemiological and vaccination trends in high-risk groups so they are prepared to adequately educate and treat these women.

Significance of Study to Health Care Outcomes

Increasing the knowledge and awareness in the selected population may help to eventually decrease HPV in this group, positively affecting health care outcomes. Social disparities in HPV vaccine uptake will be greatly reduced if discussions between patients and their HCPs become more prevalent (Wong & Do, 2012). Increasing education about HPV and prevention in the selected group of 18-26 year old African American women at a clinic can increase their rate of seeking screening methods and vaccination for HPV, helping to narrow the health disparity in this group. More awareness of preventative measures against HPV in high-risk groups may decrease health care costs for treatment in those who are uninsured and have limited access to health care. As a result, there may also be an increase in health care maintenance (e.g. routine annual Pap smears) and vaccinations against HPV in this population.

Significance of Study to Health Care Delivery

Health care delivery is geared towards knowledge-specific education, utilizing current nursing and health knowledge about the population. “HCPs can play a pivotal role in dispensing accurate, objective information about the vaccine, and help dispel any myths or negative attitudes about HPV vaccination, thereby allowing socioeconomically disadvantaged women to make informed decisions for themselves” (Wong & Do, 2012, p. 30). Using these practices, educational interventions can be created to target this demographic. An enhancement of health care delivery, especially in the primary care setting may aid in an increase in education regarding HPV and cervical cancer in at risk groups (Tambouret, 2013). Ethnicity based educational seminars and programs geared towards groups of women more at risk for HPV, can assist the DNP integrate and deliver

more efficient health care, especially in primary care and women's health.

Significance of Study to Health Care Policy

This project is significant to health care policy because more research is needed regarding this problem and why there is such a large health inequity regarding HPV in 18-26 year old African American women. HCP involvement in broader public health efforts is of paramount importance in reducing socioeconomic disparities in HPV infection and cervical cancer (Wong & Do, 2012). The DNP is pivotal in being involved in educating the community, collaborating with other health care professionals, and getting involved with local and state nursing organizations regarding HPV in high-risk groups. The DNP can help to influence these changes in legislations through local, state, and national nursing councils, including the American Nurses Association, which can help to push legislations forward through state senate representatives regarding this issue.

Section Summary

This section discussed the background and epidemiology of HPV and its barriers to prevention in young African American women. HPV is sexually transmitted virus that has been found to lead to cervical cancer and other genital anomalies. Its prevalence and mortality is found to be increasingly higher among African American women, putting them at higher risk for suffering from diseases that can result from this virus. By understanding the knowledge deficits, health beliefs, and decreased access to health care in 18-26 year old African American women, the DNP student created an educational intervention that explored this group's perceived barriers and susceptibility to HPV infection and increase their knowledge of HPV and vaccination.

CHAPTER TWO

Introduction

The Human Papillomavirus (HPV) is a sexually transmitted infection that has gained national concern due to its incidence and prevalence in the young, female African American adult population. In the United States, HPV is the most common sexually transmitted infection (STI). It is also the leading cause of cervical cancer. Cervical cancer is the second leading cause of death worldwide in women (HPV Background Paper, 2011). Many asymptomatic strains of HPV exist making contraction of the disease prevalent, especially in high-risk populations. The goal of this project is to explore the factors that contribute to increased development of HPV in young African American women and how these factors influence prevention in this group.

A literature review was conducted to explore current research on the epidemiology of HPV and vaccination. A description of the problem of HPV as it relates to access to health care, lack of knowledge, and health beliefs in young African American women will also be discussed. The Health Belief Model and how it relates to this group of women will also be explored. The purpose of this literature review was to compile current research on HPV and its sequelae and apply the knowledge gained to understanding the barriers surrounding HPV in young African American women and how it influences prevention.

A search of relevant literature across disciplines was conducted to explore HPV and its impact on the young African American adult women. Using EBSCOhost and ProQuest Central search engines via Barry University's online library, the following computerized databases were used for this search: the Cumulative Index to Nursing and

Allied Health Literature (CINAHL), Academic Search Complete, ERIC, and MEDLINE. The key words used in the search were: epidemiology of HPV, HPV and background, HPV and knowledge in black women, HPV and health beliefs in young women, HPV and access to health care and black women, HPV and health belief model. Citations were limited to the English language. A limitation was imposed to find literature published within five years.

Search criteria were limited to full text articles and scholarly/peer reviewed journals, with both research and non-research based articles utilized, including qualitative and quantitative research. This chapter will investigate research findings related to HPV in young African American women and how it influences prevention.

Epidemiology of HPV

Tota, Chevarie-Davis, Richardson, Devries, and Franco (2011) completed an article discussing the epidemiology of HPV infection and its burden on society. The aim and purpose of the article was to discuss implications for prevention and screening practices for HPV. HPV infection accounts for approximately 530,000 of cervical cancer cases annually worldwide (Tota et al., 2011). About 90% of anal cancers and almost 50% of other cancers (including oropharyngeal, penile, vaginal, and vulvar) occur as a result of HPV. About 75% of individuals who engage in some form of sexual activity will contract HPV in their lifetime (Tota et al., 2011). “A substantial increase in risk for cervical cancer exists for women who develop persistent infection with high-oncogenic HPV types (HR-HPV), including HPV 16 and 18. Infection with low-oncogenic risk HPV types (LR-HPV), HPV 6 and 11, is also responsible for considerable morbidity associated with benign lesions known as acuminate condylomata (genital warts)” (Tota et

al., 2011, p. 14).

According to Tota et al. (2011), independent of sexual activity, other factors related to HPV infection include young age, socioeconomic status, multiparity, circumcision, condom use, oral contraceptive use, smoking, nutrition, immune suppression, and viral load. Papanicolaou (Pap) cytology screening is considered the primary reason we have witnessed a major reduction in cervical cancer mortality in most high-income countries over the past 50 years since its induction (Tota et al., 2011). Despite its success, Pap screening is far from perfect. “The average sensitivity of cytology to detect cervical intraepithelial neoplasia (CIN) is 51% and its average specificity is 98%” (Tota et al., 2011, p. 15). In recent years, HPV DNA testing has been suggested as an alternative to primary Pap screening, possibly utilizing Pap tests to rule out HPV positive cases. HPV DNA testing is less prone to human error and more sensitive than Pap in detecting high-grade cervical lesions (Tota et al., 2011).

HPV testing may also serve as a low cost alternative strategy to monitor long-term vaccine efficacy (Tota et al., 2011). “In the post-vaccination era, HPV DNA testing will also serve an important second purpose by providing a low cost surveillance approach to monitor vaccine efficacy, protection duration, and cross protection or type replacement” (Tota et al., 2011, p. 19). Prophylactic vaccination of young women before initiation of sexual activity would prevent a large proportion of these precancerous lesions, cervical cancer, and some other non-cervical HPV-related cancers (Tota et al., 2011). Initiation of primary and secondary cervical cancer prevention strategies is being shown to be a highly successful single prevention strategy (Tota et al., 2011).

Tota et al. (2011) discovered that in spite of breakthroughs in screening and prevention, cervical cancer remains an predominant cause of cancer deaths globally, especially in developing countries where the majority of the burden lies. Although prophylactic vaccination is expected to substantially reduce HPV- associated morbidity and mortality, it currently remains expensive. Recommendations include for more research on HPV DNA testing, as it can serve as an important purpose by providing a low cost surveillance approach to monitor vaccine efficacy, protection duration, and cross protection or type replacement.

“Cervical cancer is the first cancer that is recognized as being 100% caused by a virus (i.e. HPV). HPV types 16 and 18 collectively cause 50% of high-grade precancerous lesions CIN grade 2/3 and around 13–25% of low-grade CIN (CIN 1)” (Garland & Smith, 2010, p. 1083). HPV-16, which presents more virulent than other strains, results in a greater proportion of cervical disease, causing disease earlier and being more likely to persist than other high-risk (carcinogenic) HPV types (Garland & Smith, 2010). Genital transmission of HPV is transmitted mainly through sexual intercourse between sexual partners. The host immune response is dependent upon humoral and cell-mediated processes (Garland & Smith, 2010). Most HPV infections are transient, with HPV DNA being detected only for a short period. However, many HPV infections are subclinical, being the primary infection may involve other sites allowing for recurrences after post-treatment (Garland & Smith, 2010). Subclinical HPV gives rise to latent infections reappearing in times of immunosuppression.

“Two first-generation prophylactic HPV vaccines have been licensed to date. These prophylactic HPV vaccines utilize recombinant DNA technology” (Garland &

Smith, 2010, p. 1085). The two HPV vaccines currently used on the market require three intramuscular injections over a 6-month period (Garland & Smith, 2010). The bivalent Cervarix, manufactured by GlaxoSmithKline, provides prevention against HPV strains 16 and 18 in the protection of most cervical cancers only. The quadrivalent Gardasil, manufactured by Merck, provides protection from HPV 16, 18, 6, and 11, which covers most cervical cancers as well as the prevention of genital warts (Garland & Smith, 2010).

“Phase I and II studies of both HPV prophylactic vaccines (bivalent and quadrivalent) demonstrated high vaccine safety, tolerability and immunogenicity” (Garland & Smith, 2010, p. 1090). These vaccines provided 100% protection against persistent HPV 16 and 18 infections and cervical lesions (Garland & Smith, 2010). The clinical trials have shown that the current generations of the vaccines have good safety records, excellent immunogenicity, and a high efficacy against precancerous cervical cells (Garland & Smith, 2010). In the end of study analysis for the quadrivalent vaccine and the recent phase III results for the bivalent vaccine, both vaccines resulted in a reduction in Pap abnormalities, as well as gynecological procedures (Garland & Smith, 2010). This efficiency has translated into the bonus of some added protection for HPV infection and disease (Garland & Smith, 2010). There is no reason to expect a particular vaccine safety issue with the HPV vaccines because they are not live and do not contain HPV DNA (Garland & Smith, 2010). “The adjuvant in the quadrivalent HPV vaccine is a proprietary aluminum base that has been widely used in other vaccines; that for the bivalent vaccine is relatively novel and based on a detoxified bacterial cell wall component” (Garland & Smith, 2010, p. 1092). Tolerability was high for both Gardasil and Cervarix in Phase III clinical vaccine trials.

Some limitations from the clinical trials done on the vaccines were that data was based on populations of female adolescents who were slightly older (15-26 years) than the age recommended for initial vaccination in order to obtain maximum health benefits (prior to intercourse; Garland & Smith, 2010). However, in June 2006, the FDA approved routine vaccination with Gardasil of 11-12 year olds, with catch up vaccination of 13-26 year olds (Garland & Smith, 2010).

According to Garland and Smith, many factors serve as potential barriers to successful HPV vaccination implementation, “including the cost of HPV vaccination, assurance of the required cold-chain for vaccine provision, completion of the three-dose HPV vaccination series, and the implementation of programs focused on vaccine implementation to female adolescents” (2010, p. 1095). HPV vaccine uptake and acceptance has been at its lowest for 18-26 year old women with physicians (Garland & Smith, 2010). Appropriate communication to the public regarding HPV vaccines will need to vary between cultures (Garland & Smith, 2010). According to Garland and Smith, future recommendations will be to require polyvalent vaccines that cover a wider range of carcinogenic HPV types or broadly protective products to gain better protection (2010).

Description of the Problem

Access to health care, lack of adequate knowledge of HPV, and existing health beliefs all influence the magnitude, prevalence, and prevention of HPV in young African American women. Many studies have been conducted to explain or provide reasons for why these barriers exist. According to Brown, Wilson, Boothe, and Harris, knowledge of cervical cancer risks and contributing factors vary among ethnically diverse black women

(2011). Brown et al. completed a qualitative descriptive study of cervical cancer screening knowledge, attitudes, beliefs, and practices among ethnically diverse black women. They conducted 6 focus groups, with 5-10 participants each, for a total of 44 women. Ethnicities included Haitian, African, English-speaking Caribbean, and African American women recruited from a federally qualified health center. Their ages ranged from 18-50 years. Each focus group was audio-taped and took 1-2 hours. Focus group sessions were transcribed and transcripts were translated by certified translators.

According to the American Cancer Society, “women should begin cervical cancer screening at age 21 years or 3 years after becoming sexually active. Cervical cancer screening should be done every year using a regular Pap test, or every 2 years using the newer liquid-based Pap test” (2010). At age 30 and after having 3 normal Pap tests, women may get screened every 2 to 3 years with either the conventional or liquid-based Pap test, plus the HPV test (American Cancer Society, 2010).

According to Brown et al., black women are more likely to have a Pap test done if it is affordable and accessible, recommended by a physician, and part of the continuity of care (2011). “Barriers to screening included frequent change of residence necessitating a change in health care provider, inability to take time off of work, lack of trust toward physicians, high cost of screening and treatment, family financial obligations, transportation costs, and language” (Brown et al., 2011, p. 723). These factors were shown to affect these women’s access to health care. Additional barriers were associated with lack of knowledge about cervical cancer/HPV and its risks (Brown et al., 2011).

“When asked about the causes of cervical cancer, there was a significant amount

of confusion and uncertainty about the causes and risk factors for cervical cancer among all groups” (Brown et al., 2011, p. 723). Most women had an awareness of the Pap tests, but they were unaware of recommended screening guidelines (Brown et al., 2011). Health care and lack of health insurance coverage appeared to be barriers for participants. Low-income black women who may be unemployed or who had low-paying jobs are less likely to have health insurance. Having to pay out of pocket for health care increases the likelihood of avoiding or delaying needed care (Brown et al., 2011). Many of the women were unaware of the free or low-cost options provided by the federally qualified health center in which the focus group discussions were held (Brown et al., 2011). Overall, the findings suggested that there was limited knowledge and confusion across ethnic groups about cervical cancer and its risk factors, the Pap test, and HPV and its association with cervical cancer (Brown et al., 2011). The patient-doctor relationship was the single most important facilitator for cervical cancer screening.

Recommendations from this study noted that “ethnically diverse black women would benefit from interventions recognizing cultural barriers and misconceptions. For example, it would be important to address cultural beliefs about the causes and risks of cervical cancer that women bring to the health care setting” (Brown et al., 2011, p. 726). Implementing cultural competency training for health care providers along with the development of culturally and linguistically appropriate education materials are necessary considerations for proper outreach to these populations (Brown et al., 2011). Limitations of this study included limited generalizability of findings because of the small, qualitative sample of low-income black women (Brown et al., 2011).

Cates, Brewer, Fazekas, Mitchell, and Smith (2009) conducted a cross-sectional

design, quantitative study to identify racial differences in knowledge and attitudes about HPV, cervical cancer, and the HPV vaccine that may influence uptake of the vaccine. The researchers recruited 138 female participants (91 were African American and 47 were Caucasian) through convenience sampling from the waiting room of a public health clinic and OB/GYN office in North Carolina. All participants were over 18 years old and able to read English. Participants were given a 13-item questionnaire that assessed knowledge of HPV infection, cervical cancer, and HPV vaccination (Cates et al., 2009).

“Only 24% of black women reported having heard of HPV compared to 57% of white respondents. Black respondents scored lower on an HPV knowledge scale (29% correct) compared to whites (42% correct)” (Cates et al., 2009, p. 95). Blacks were also less to think that an HPV infection would be a serious threat to their own or their daughter’s health than the white respondents. Blacks were less likely to verbalize that they had any chance of getting cervical cancer than the white participants. In general, fewer blacks agreed that vaccines are beneficial and more agreed that they are unnecessary than did white respondents. “While most black respondents (63%) thought the ideal age for administering the HPV vaccine was 17 years of age or older, most (60%) white respondents thought the ideal age was younger than 17 years” (Cates et al., 2009, p. 93). Black respondents reported lower intentions to vaccinate themselves or their daughters than did white participants (Cates et al., 2009).

Overall, black respondents had less awareness and knowledge regarding HPV infection than white participants (Cates et al., 2009). “Blacks reported lower perceived severity of HPV infection for themselves and their daughters, lower perceived severity of their daughter’s cervical cancer and lower susceptibility to cervical cancer for themselves

than did whites” (Cates et al., 2009, p. 95). Some limitations for this study included the smaller sized, convenience sample of women recruited from health care facilities. The study design did not allow for measurement of vaccination decisions over time (Cates et al., 2009). Recommendations in order to ensure the uptake of the vaccine require additional studies to better understand the HPV vaccine decision making in high-risk populations (Cates et al., 2009). According to Cates et al., communication interventions to increase uptake of the HPV vaccine in the rural, Southern United States may need to be developed (2009).

Gelman et al. (2011) completed a national cross-sectional design study, which used nationally representative data collected by the National Survey of Family Growth between July 2007 and December 2008. “A multivariable logistic regression model was used to determine the independent effect of race/ethnicity on HPV awareness while controlling for sociodemographic and clinical confounders in a sample of 4088 women” (Gelman et al., 2011, p. 1170). The study was done to explore HPV knowledge and awareness variations in different races of women. Lack of HPV knowledge is concerning, given the positive association between HPV awareness and action with regard to cervical cancer prevention (Gelman et al., 2011). The purpose of this study was to obtain reliable estimates of HPV awareness in minorities, who are at greater risk for cervical cancer, in order to guide educational interventions (Gelman et al., 2011).

Gelman et al. used chi-square tests to analyze the demographic and clinical characteristics by race/ethnicity (2011). According to Gelman et al. (2011), black and Hispanic women were significantly less likely to have heard of HPV and the HPV vaccine, even after controlling for socio-demographic and clinical confounders. This was

more noted more in women 26 years of age and younger. “Overall, 82% of women had heard of HPV. White women were more likely to have heard of HPV than other racial/ethnic categories: 89% of white women compared to 62% of Hispanic women, 75% of black women, and 69% of women of other races” (Gelman et al., 2011, p. 1171).

“White women were most likely to have received the HPV vaccine: 26% of white women in this age group had received the vaccine compared to 18% of Hispanic women, 11% of black women, and 20% of women of other races” (Gelman et al., 2011, p. 1171). Vaccination rates were similar for the daughters of Caucasian and Hispanic women but lower for daughters of black women and women of other races. College educations, income above the national poverty level, and receipt of a Pap smear within the last 12 months were significantly associated with higher levels of HPV awareness (Gelman et al., 2011). There is a marked disparity in HPV awareness and knowledge in younger, vaccine-eligible black women, because doctors do not always discuss HPV prevention with their patients (Gelman et al., 2011). Therefore, a lack of awareness could result in a missed opportunity for protection against cervical cancer and genital warts (Gelman et al., 2011).

Overall, this study supported that Hispanic and black women have significantly lower levels of HPV awareness than white women. Targeted educational interventions will be necessary in order to improve HPV awareness and preventive health measures to avoid HPV-related morbidity and mortality (Gelman et al., 2011). Limitations in this study included that the wordings in the surveys may have been misleading or difficult for participants to understand, leading to a false affirmative or false negative responses (Gelman et al., 2011). A recommendation was for health care providers to be cognizant

of discrepancies in HPV awareness in certain populations in order to provide effective educational interventions and reduce the racial gap (Gelman et al., 2011).

Health Belief Model

Krawczyk et al. (2012) conducted a cross-section and retrospective study to identify correlates of HPV vaccination intentions and to explore differences between correlates of vaccination intentions and uptake. Krawczyk et al. (2012) used the Health Belief Model (HBM) and the Theory of Planned Behavior (TPB) as theoretical frameworks for this study. The factors associated with women's intentions to receive vaccinations were examined by the HBM. "The HBM states that individuals are more likely to engage in a health behavior if they believe they are susceptible to the condition (perceived susceptibility); they believe the condition has serious consequences (perceived severity); they perceive greater benefits and fewer barriers for taking the action; and they are exposed to influences that prompt action (cues to action)" (Krawczyk et al., 2012, p. 687). A doctor's recommendation (cue to action) is positively correlated with vaccination intentions in patients (Krawczyk et al., 2012).

This study used a total of 447 female undergraduates from McGill University, with a mean age of 20 years. Participants were asked about demographic information as well as sexual health history. They were also given a 22-item scale assessing their HPV and vaccination knowledge. Factors from the HBM and TPB were also assessed. Data was evaluated by the Pearson's correlation. "A number of factors from the HBM and TPB were related to vaccination intentions including: doctor recommendation, subjective norms, positive attitudes, and the perceived barrier that the HPV vaccine has negative health consequences" (Krawczyk et al., 2012, p. 690). The findings support that these

theories are partially successful in determining vaccination intentions in this group. Both individual beliefs about the vaccine, as well as societal influences, appear to be important factors related to vaccination intentions (Krawczyk et al., 2012).

However, vaccination intentions were not related to perceived susceptibility, perceived severity, benefits, and behavioral control (Krawczyk et al., 2012). “Most participants had low HPV knowledge and incorrectly identified themselves as being at low risk for HPV infection, despite the fact that 75% of participants had already engaged in sexual intercourse” (Krawczyk et al., 2012, p. 691). Influence from significant others was related to vaccination uptake. Therefore, social influence appears to be a critical factor affecting the transition from vaccination intentions to actual uptake (Krawczyk et al., 2012).

According to Krawczyk et al., physicians can be most influential in vaccination uptake by providing timely and accurate information and vaccination and screening recommendations to patients (2012). Physicians can also facilitate young women’s vaccination decisions by having open discussions and including them in the decision-making process (Krawczyk et al., 2012). It is also important to educate the significant others as well as close family members, whose opinions may influence the patient. Public health campaigns can positively influence vaccine uptake in these young women, such as pamphlets and websites (Krawczyk et al., 2012). A limitation of this study included limited generalizability due a largely homogenous sample. Also, “due to the study’s cross-sectional and retrospective design, a weakness is that direction of causality cannot be inferred between participants’ health beliefs” (Krawczyk et al., 2012, p. 692).

Gerend and Shepherd (2012) conducted a study comparing the HBM and TPB in predicting HPV vaccination. The purpose of the study was to compare the predictive ability of the HBM and TPB. “Both theories adopt an individual-level approach to predicting health behavior and both are based on an expectancy-value framework. Furthermore, both theories assume that health decision-making is a largely deliberative and rational process” (Gerend & Shepherd, 2012, p. 174). The main difference between the theories is that unlike HBM, in TPB behavioral intentions are the main predictor of future behavior (Gerend & Shepherd, 2012).

A convenience sample size of 735 women was used in this randomized, longitudinal design, with the majority being white or African American with a smaller portion of women being Hispanic, with a mean age of 21 years (Gerend & Shepherd, 2012). These young women watched a video and were asked to complete a survey about HPV and vaccination based on HBM and TPB constructs thereafter. Then, 10 months later, their HPV vaccination uptake was assessed (Gerend & Shepherd, 2012). “To test the HBM, Gerend & Shepherd first estimated a model in which perceived susceptibility, perceived severity, perceived benefits, safety concerns, vaccine cost, and physician recommendation were all specified to predict HPV vaccine uptake” (2012). “To test the TPB, Gerend & Shepherd first estimated a model in which attitudes, subjective norms, and self-efficacy were specified to predict intentions, and intentions and self-efficacy were specified to predict HPV vaccine uptake” (2012, p. 176).

Findings from this study found that TPB had an advantage in performance over HBM (Gerend & Shepherd, 2012). Key predictors of uptake included subjective norms, self-efficacy, and vaccine cost. “Findings revealed considerable overlap between the two

theories and highlighted the importance of proximal versus distal predictors of health behavior” (Gerend & Shepherd, 2012, p. 177). One limitation in this study pertained to the measure of attitudes. Gerend and Shepherd’s “measures focused more on outcome beliefs than on outcome evaluations and thus may not have fully captured the value participants place on avoiding outcomes associated with HPV infection” (2012, p. 179).

Findings were also limited to a single low-frequency health behavior within a single convenience sample (Gerend & Shepherd, 2012). Recommendations were suggested for additional research to assess the generalizability of these findings, both in terms of other health behaviors as well as other populations (Gerend & Shepherd, 2012).. Results from this study suggest promising avenues for theory testing in future research (Gerend & Shepherd, 2012).

Section Summary

This section discussed the current comprehensive body of knowledge that was obtained in order to understanding the barriers surrounding HPV in young African American women and how it influences prevention. Recognizing how epidemiologic trends and the HBM and its variables apply to young African American women helps to display how this group is at risk and how their barriers to prevention affects their health behaviors. The goal of this project is to understand how access to health care, lack of knowledge, and health beliefs affect prevention of HPV in this group and how to increase their knowledge of adequate health practices of HPV prevention.

CHAPTER THREE

Project Design

The purpose of this project was to increase the knowledge of risks for contracting the Human Papillomavirus (HPV) and vaccination awareness in the 18- to 26-year-old African American female population in a local gynecologic clinic in Miami, FL. The project design consisted of the completion of a needs assessment and an educational intervention geared towards increasing health knowledge of HPV, including statistics, risks directly related to the targeted population, symptomology, treatment options, and methods of prevention, including vaccination. The project began according to the phases of project management. The project design also sought to answer the project questions that were addressed in Chapter Four, which included:

1. Does this population of African American women know what HPV is?
2. Does this population know the risks associated with HPV or how to prevent themselves from contracting HPV?
3. What are the perceived barriers to HPV vaccination in 18-26 year old African American women?
4. Does improving knowledge deficits in 18-26 year old African American women improve their desire for wanting HPV vaccination?
5. How do the health beliefs of this population affect their knowledge of HPV vaccination?

Before these educational interventions can be planned and implemented, a needs assessment was completed in relation to this project. A needs assessment identifies the gaps in a project and its results (Watkins, Meiers, & Visser, 2012). It is a tool that can

allow the DNP to make better decisions regarding how to plan an intervention for specific project, with a focus on improving performance. “A needs assessment guides decision making in a project through a systematic process, provides justification for decisions before they are made, is measurable for any project size, and allows for a project to be replicable” (Watkins et al., 2012).

According to the Advanced Practice Nurse Committee (2004), a needs assessment is an activity that is designed to determine a community’s or a population’s service needs. A needs assessment should also identify utilization patterns and gaps in service provision and establish priorities for the creation of service programs. A needs assessment should be done before a program begins to determine if a new program or service is required (Advanced Practice Nurse Committee, 2004). The needs assessment, in advanced practice nursing, should provide a rational basis for planning services and allocating resources, identify service needs and alternatives for meeting these needs, and permit involvement of users of the health service in health planning, thereby avoiding over-reliance on care providers’ perceptions (Advanced Practice Nurse Committee, 2004).

The goal of this project was to identify factors that specifically contribute to the select group of 18-26 year old African American women being most at risk for contracting HPV and to create an educational intervention based on specific factors, which included lack of knowledge of HPV, individual health beliefs, and access to health care (Ford, 2011). These barriers provide justification for why this project was done. Researching how these barriers affect prevention in this group of women was essential in creating an educational program that increases the knowledge, health promotion practices, and measures for prevention and vaccination.

This project consisted of three phases based on the stated objectives. Project objectives for this project included:

1. To complete a needs assessment related to HPV knowledge, prevention, and vaccination in 18-26 year old African American women in a local gynecologic clinic in Miami, FL
2. To identify health inequities/barriers for HPV prevention among 18-26 year old African American women
3. To create an educational intervention at a South Florida clinic addressing the issues identified in the needs assessment for the selected group of 18-26 year old African American women

Project Phases

Phase I

This project was completed in three phases according to the three objectives. The objectives, goals, and phases were outlined and discussed with the clinical mentor. A needs assessment was completed related to HPV knowledge, prevention, and vaccination in 18-26 year old African American women. A needs assessment was designed to ascertain this population's needs in relation to HPV knowledge, prevention, and vaccination. This needs assessment also:

- Identified health inequities/barriers for HPV
- Identified gaps in HPV knowledge, prevention, and health care administration
- Established priorities for creation of an educational intervention

The purpose of the needs assessment was:

- To provide a rational basis for creation of an educational program that addresses the project objectives
- To identify the needs of the population under study and provide alternatives/options for meeting those needs
- To provide the knowledge necessary for the inclusion of this population in their health planning in relation to HPV education and prevention

Through clinical residency immersion, a systematic process was implemented in order to complete the needs assessment. The needs assessment was conducted as follows:

Needs Assessment Process (Advanced Practice Nurse Committee, 2004):

1. Identify stakeholders.
 - a. Stakeholders included the study participants, medical office staff, and the clinical mentor/preceptor.
 - b. The objectives, goals, and phases were outlined and discussed with the appointed clinical mentor.
2. Conduct a windshield survey of the community.
 - a. Gain a pictorial view and better understanding of the community around the clinic.
 - b. Provide insight to resources currently available in community.
3. Identify population based on social indicators, including demographic, socioeconomic, and geographic characteristics.

4. Identify and define health care services provided at clinic:
 - a. Type and range of services provided
 - b. Use and demand for service
 - c. Accessibility and affordability of services for population
5. Identify formal and informal patterns of health care practice in clinic setting.
6. Assess met and unmet needs in the population based on previously collected data and answer the following questions:
 - a. Who has a need for HPV knowledge and prevention?
 - b. How many have a need?
 - c. Why does this need exist in this particular population?
 - d. Is this need met adequately with the current services offered at clinic?
7. Determine and prioritize potential goals and outcomes to meet the identified needs.
8. Identify skill set requirements to achieve the desired goals.
9. Examine potential solutions by analyzing the skills required to meet the needs of this population, considering:
 - a. Legislation
 - b. Scope of practice
 - c. Resources
 - d. Unique program needs
10. Evaluation

- a. Based on the objectives met and project outcomes

Phase I lasted 2 weeks in duration.

Phase II

After completion of the needs assessment in Phase I, the information gathered was used to guide the clinical immersion process and patient health assessment. During clinical immersion and residency, patients were seen individually at the OB/GYN clinic in Miami, FL. Patients were interviewed as a part of the routine health history and physical during their visit.

As a part of the gynecological visit, it is necessary to obtain prior and current health history on each patient. No identifying information was recorded outside of the patients' office chart, according to the clinic's policy. Patients' health beliefs, perceived barriers to HPV prevention and vaccination, access to health care, and knowledge deficits were noted in order to create an educational intervention, which is discussed in Phase III. Patients were able to decline to participate in the health discussion at any time to avoid coercion. There were no direct benefits to any of the women seen at the clinic. Phase II lasted four weeks in duration.

Phase III

In Phase III, the final objective of this project was completed, which was to create an educational intervention at the clinic addressing the issues identified in the needs assessment. The educational intervention was created in the form of a brochure (Appendix C), adapted and condensed from an existing tool created by the Centers for Disease Control and Prevention (CDC, 2013b) and by the American Congress of

Obstetricians and Gynecologists (2012). This brochure highlights HPV background and prevention and was created to be used for the diffusion of knowledge of HPV, risk factors, symptoms, treatment, vaccination, and community resources. To evaluate the educational intervention, a consensus panel was utilized. This panel consisted of the clinical mentor at the clinic; a Barry University professor who was a member of this scholarly committee; and another professor from Barry University. The consensus panel exhibits experience and knowledge in gynecological issues in African American women and offered written evaluative suggestions and comments while responding to questions that directly correspond with the evaluation of the educational brochure.

The DNP student's long-term post-doctorate ambitions include the implementation of the educational intervention in a women's health clinical setting. Phase III also included completion of Chapter Four, in which the results of the population's perceived barriers to HPV prevention were discussed. Clinical residency immersion was completed during this time. Phase III lasted two weeks in duration.

Setting

The site for this project was at a comprehensive OB/GYN clinic in central Miami, FL. The clinic serves primarily minority patients who have limited access to health care and have limited education on proper health care practices, including health promotion and prevention. The information gathered at this clinic was useful and applicable to the objectives of this scholarly project.

Site access was outlined in a letter for site support, which was signed by the designated clinical mentor (Appendix A). Through clinical immersion, the DNP student

was able to gather the information needed to develop an educational intervention that helps to increase knowledge and awareness of HPV and preventative behaviors in this group.

Identification of Participants

The identification of participants was utilized to determine the educational material that was included in the educational brochure. Inclusion criteria were women 18 to 26 years of age, self-identifying as non-Hispanic Black/African American, with the ability to comprehend and read English. Participants must not have any known history of HPV vaccination. Exclusion criteria for this group included any non-African American women, less than 18 years of age and greater than 26 years of age, and those with a history of vaccination against HPV, current pregnancy, and women who decline educational intervention or participation in project. The clinic chosen for this project sees on average about 50 patients per day. Furthermore, a representative amount of information regarding perceived barriers to HPV prevention and vaccination was noted from the women seen during their routine OB/GYN visit, and information obtained from women who met the inclusion criteria was utilized to create the educational intervention.

In addition to understanding the patients seen during this project, it is important to note the stakeholders involved as well. Stakeholders included anyone involved in project operation, anyone affected by the project, or anyone who was involved in evaluating the findings and effectiveness of the project. Those involved in project operation included staff at the clinic (i.e. nurses, nurse practitioners, physicians, or medical office staff). Stakeholders affected by the project included the participants/clinic patients and health

care providers in the clinic. Stakeholders involved in evaluating this project included committee members on the board for this project, and the expert consensus panel.

Ethical Considerations

Ethical principles were practiced for all participants in this study. The Health Insurance Portability and Accountability Act (HIPAA) was upheld according to the policy of the clinic. Privacy to the patient and health information was protected and included only in the patient's office chart. The goal of this project was to promote the ethical principle of beneficence, which is to do no harm. The thoughts and concerns regarding health issues and HPV knowledge for each patient seen through clinical immersion were respected and kept confidential. This project sought to educate and empower this population, which is at high risk for contracting HPV, and to provide them with the knowledge needed to make better health care choices, thereby improving their likelihood for better health care outcomes. No exploitation, racial or ethnic innuendos, or privacy violations were involved in the process of this project.

Timeline of Project Phases

This scholarly project was completed within an eight-week period. In Week 1, Phase I began. Stakeholders were identified. In Week 1, the DNP student communicated with stakeholders, including the project mentor regarding completion of needs assessment. Clinical immersion began during this time. In Week 2, Phase II began and the needs assessment, including windshield assessment, was developed and completed. During Weeks 3-6, the DNP student saw various patients, including those who presented as having health inequities/barriers to HPV prevention and had more guided discussions with participants regarding HPV prevention and the project questions, based on the needs

assessment. Information was gathered and organized for the educational brochure during this time. Clinical immersion continued forward. The DNP student began writing Chapter Four.

During Weeks 7-8, as Phase III began, the educational intervention was created based on the results of the needs assessment and information obtained from the routine health history. Clinical immersion continued during Phase III. After completion of the educational intervention, the consensus panel was given a copy of the educational brochure and the Educational Brochure Review/Evaluation Form (Appendix C) during Phase III. After the consensus panel evaluated the educational intervention, Chapter Four was completed. A detailed outline of the timeline is included in Appendix D.

Resources with Budget Proposal

Certain resources were necessary in order to adequately complete this project. No financial compensation or any other physical incentives were offered to patients seen at the clinic. The only incentives were personal gain of knowledge as related to the HPV educational intervention, which may be implemented post-doctorate. Minimal finances were necessary to design and print the educational brochure, which was given to the members of the expert consensus panel. Technological resources were also necessary to compile information obtained and results but were used at the discretion of the DNP student.

Evidence of Support

Evidence of site support was provided in the form of a letter from the scholarly project mentor (Appendix A). The letter granted the DNP student permission to access

and perform this scholarly project according to the project objectives outlined above.

Approval was granted from the project mentor from the OB/GYN clinic in Miami, FL.

Outcome Measures

Evaluation methods for this project addressed several dimensions of health care. According to the American Association of Colleges of Nursing (AACN) Essential VII, the DNP is expected to “evaluate care delivery models and/or strategies using concepts related to community, environmental and cultural and socioeconomic dimensions of health” (Hickey & Brosnan, 2012, p. 15).

The education intervention created and information obtained were done while maintaining culturally unbiased communication with participants. Unbiased communication was achieved by using language that was cohesive and basic for the chosen population, developing educational material to which sample participants could relate and using unbiased terminology to describe health situations and outcomes related to HPV and preventative practices.

The first project objective for this scholarly project was to complete a needs assessment related to HPV knowledge, prevention, and vaccination. The needs assessment was used to determine the barriers against HPV knowledge and vaccination in the selected group. The first objective was evaluated with the results of the needs assessment completed in the community surrounding the clinic. The second objective was to identify health inequities/barriers for HPV among 18-26 year old African American women. This objective was evaluated with the findings from the needs assessment and information obtained during clinical immersion, which identified gaps or barriers for

HPV knowledge and prevention in this group of women. The last objective was to create an educational intervention at a South Florida clinic addressing the issues identified in the needs assessment for the selected group of 18-26 year old African American women. This objective was evaluated via the consensus panel, through their responses from the Educational Brochure Evaluation/Review Form.

Section Summary

This section discussed the project design and the three phases designated to successfully complete this project. Phase I comprised the completion of a needs assessment. Phase II included utilizing the information gathered via the needs assessment to guide the clinical immersion process. Upon completion of Phase 2, the project investigator began writing Chapter Four of the scholarly project. Finally, Phase III contained the creation of the educational intervention, which was evaluated by the expert consensus panel upon completion.

CHAPTER FOUR

Introduction

The Human Papillomavirus (HPV) is a sexually transmitted disease that is more prevalent amongst young, college-aged minority women, particularly African Americans. Its incidence in young African American women can be linked to three main barriers of prevention to HPV. These barriers include lack of knowledge of HPV, health beliefs of African American women, and access to health care. These barriers are often the main or only inhibitors of these women taking the necessary precautions to protect themselves from contracting HPV. The problem is that there are a disproportionate number of African American women, between the ages of 18-26, developing Human Papillomavirus due to knowledge deficits, individual health beliefs, and decreased access to health care resulting in decreased measures for prevention and vaccination. Therefore, the purpose of this project was to create an educational intervention to increase the knowledge of risks for contracting the HPV and increase vaccination awareness in the 18-26-year-old, African American female population.

Knowledge deficits surrounding HPV were noted to be one of the major contributors for decreased measures of prevention for young African American women. There is a lack of knowledge of HPV and its preventative measures (Scarinci et al., 2007). HPV and prevention methods were not generally well understood in this group, which has increased its prevalence. Health beliefs of African American women regarding HPV have also been a barrier for prevention due to uncertainty regarding the disease and related medical advice (Wong & Do, 2012). African American women have been shown to be more unsure and doubtful regarding screening and vaccination, mainly due to their

lack of knowledge, which includes uncertainty and concerns regarding the HPV vaccine efficacy and safety (Scarinci et al., 2007).

Lastly, one of the more impacting barriers that were found to be an inhibitor to HPV prevention in young African American women was their decreased access to health care. Young African American women are found to have a lack of adequate health care coverage, a usual source of health care, and low income (Nelson et al., 2009). HPV and cervical cancer risks are associated with a lower socioeconomic status and income level (Franceschi et al., 2009). Furthermore, these three barriers to prevention were observed via clinical immersion in a local obstetric and gynecology (OB/GYN) clinic in Miami, Florida.

Findings of the Project

Through clinical immersion, the project objectives for this project were achieved. The mission of this scholarly project was to identify factors that specifically contribute to the select group of 18-26 year old African American women being most at risk for contracting HPV and create an educational brochure that addressed the barriers of HPV prevention in this group. This mission was achieved through completion of the project objectives. The project objectives for this scholarly project were:

1. To complete a needs assessment related to HPV knowledge, prevention, and vaccination in 18-26-year-old African American women in a local gynecologic clinic in Miami, Florida
2. To identify health inequities/barriers for HPV prevention among 18-26-year-old African American women

3. To create an educational intervention at a South Florida clinic addressing the issues identified in the needs assessment for the selected group of 18-26-year-old African American women

The first objective was met and completed successfully as a needs assessment related to HPV knowledge, prevention, and vaccination in 18-26-year-old African American women in a local gynecologic clinic in Miami, Florida. The needs assessment was completed during Phase 1 of this project within the first two weeks of the clinical rotation at the OB/GYN clinic in Miami, FL (Appendix A). The clinic is open Monday – Friday from 7:30 am – 5 pm. Through clinical immersion with the project mentor, the project investigator was able to identify the elements of the needs assessment as outlined in Chapter 3. Stakeholders were identified as African American women aged 18-26 who could potentially utilize the educational brochure created, the clinical mentor, the project investigator, the medical office staff, including other physicians, and the expert consensus panel for the brochure. These stakeholders were identified because they were noted to be the people involved who would have the most input and involvement with the creation of the educational intervention. The objectives, goals, and phases were discussed and reviewed with the clinical mentor at the beginning of the project.

During the needs assessment, a windshield survey was completed in the community near the clinic. The assessment was conducted on one weekday and a weekend day in the morning and evening, at the same times on both days. The clinic is located within North Shore Hospital's outpatient center, which is in central Miami, Florida, just west of the I-95 South off of the 95th Street exit. The clinic is about 5-7 miles from Liberty City, which is one of the most deprived and destitute populated cities

in Miami. The immediate community surrounding the clinic is populated with a majority of African Americans, with a smaller population of Afro-Caribbean Americans, from various islands, mainly Haiti. Very few Hispanics were noted in this area, and a very scant number of Caucasians were seen driving while conducting the windshield survey of this community. The female to male ratio noted was about 2:1. The age group of this community was noted to include many young women with children, most under the age of 5, and up to 12 as well as adults from ages 20 to 70.

In a 2-mile radius, the main form of transportation is buses and cars. Very few bicyclists were noted. Many of the pedestrians were walking to and from bus stops. The roads and streets were generally in good condition with adequate signs and sidewalks for pedestrians and people utilizing public transportation. Many of inhabitants of this central Miami community live in small houses, with a majority living in heavily populated apartment homes throughout the community.

One small privately owned general medicine clinic, separate from the North Shore Hospital offices, was spotted about a mile away from the clinic. About three churches, Protestant and Baptist, were noted within a 2-mile radius of the clinic. Several fast food chains were present. At the border of the 2-mile radius, one small supermarket was present. However, several corner stores were noted on almost every major intersection. Outside of the medical clinic, there were very few businesses, mainly small businesses within strip malls.

As a whole, community resources were limited with the exception of the hospital system. However, the local health department is about 10 minutes driving distance, or a

little over 6 miles from the clinic. Several public schools were in the area, extending out 3-5 miles. One of the Miami-Dade Community College campuses is about 3 miles away from the clinic. The nearest public library is about 13 miles away from the clinic. There are minimal close range community facilities that encourage personal and career development for adults, within a 5-mile radius to the clinic. Overall, the surrounding area of central Miami near the clinic was observed to be a low income to poverty level community. This was translated into the patients that were seen as a part of the routine OB/GYN health care visits in the clinic. The majority of the patient population, young African American women, fit the demographics described in the windshield survey, all being female.

The OB/GYN clinic that was utilized for clinical immersion offered a wide variety of services, including obstetrics and prenatal care, gynecology care, postpartum care, annual well-woman exams, pap smears, pelvic exams, breast exams, colposcopies, menopause care, infertility, genetic counseling, surgical clearance, pregnancy testing, fetal testing, in-office ultrasound, tubal ligation and reversal, STI/STD testing for both females and males, incontinence management, osteoporosis management, and family planning, i.e., birth control. Many of the services that were used more frequently by the patient population were general OB/GYN care, prenatal care, STD testing, well-woman exams, pap smears and pelvic exams, and family planning. These were the services that were covered by Medicaid, which was the predominant form of health care coverage in the majority of the patient population.

While conducting the needs assessment, mostly formal patterns of health care were observed with very few informal patterns seen by the project investigator. Patients

were seen according to appointment times, and services were offered and performed appropriately as per the office routine. Referrals were made and offered according to patient affordability. The informal patterns that were noted were few and mainly consisted of leniency of payment for self-pay patients and prenatal services, delivery, and postpartum care for patients from other countries who were not residents or citizens.

Assessment of needs in the patient population was conducted through clinical immersion. It became apparent during the routine gynecological health history and physical that many of the African American women particularly in their early 20s (18-26 year olds), more so than other patients with different racial backgrounds in the same age group, did not have any knowledge of what HPV is or the methods of prevention. This patient population knew more of the existence of other STDs, such as chlamydia, gonorrhea, and herpes. Many of these women who also had histories of abnormal pap smears did not know the cause of the results, nor did they know that HPV is preventable. Consequently, it was determined by the project investigator that there is indeed a necessity for education of HPV and preventative methods in African American women in this age group.

In the two weeks during the creation of the needs assessment, the majority of the African American young women demonstrated a need for education of HPV during their routine visits. During assessment of their medical and social histories, it was evident that there were limited safe sex practices being utilized, high gravida and parity numbers, and multiple sex partners. These indicators established there is a high need for education of HPV and prevention. This clinic provides several services to diagnose and treat HPV before it develops fully into cancerous lesions in the cervix or warts; these services

include pap smears, in-office lab work, colposcopies, and cryotherapy. However, the clinic does not currently offer HPV vaccination to patients. The lack of vaccination services was noted during the needs assessment and was addressed in Phase 3 of the project.

Goals and projected outcomes for project were confirmed during the needs assessment and then set to include easy-to-understand language based on education level and description of HPV and its symptoms, including prevention methods, with steps on how to get vaccinated locally within the educational brochure that was developed. The primary goal for this project was to identify if there was a need for education of HPV and therefore translate that need into an educational brochure. Skills set requirements necessary were determined as a personable, non-judgmental, and knowledgeable health care provider who these women felt comfortable engaging with. Knowledge of women's health, HPV, and prevention were necessary and were reinforced with the guidance and expertise of the clinical mentor.

In order to expound upon the potential solutions to meet the needs of this population, current legislation was explored regarding HPV vaccination in women 26 years of age and younger. "The CDC announced that the HPV vaccine is available through the federal Vaccines for Children (VFC) program in all 50 states. VFC provides vaccines for children ages nine to 18 who are covered by Medicaid, Alaskan-Native or Native American children, and underinsured or uninsured children" (NCSL, 2014, p. 7). Each state has different guidelines for vaccine coverage. Florida requires that information approved by the Department of Health be given regarding HPV and vaccination starting at grade 6 to parents, but the state does not enforce mandates on vaccination at any age

(NCSL, 2014). For eligible women in Miami who were interested in vaccination, they can receive the vaccine for low to no cost at the Miami-Dade Health Department according to their employment status and health care coverage, if applicable (Appendix B). Therefore, the completion of a needs assessment was successful because all areas were addressed, as above, and Phase 2 and 3 were subsequently completed.

The second objective, which describes identifying the health inequities/barriers to HPV prevention, was completed during Phase 2. The information gathered during the needs assessment was utilized to direct the clinical immersion. Phase 2 lasted approximately four weeks, and consisted seeing varying female patients individually during their routine OB/GYN visits. Prior and current health histories and physicals were conducted on each patient. No identifying information was recorded outside of the patients' office chart, according to the clinic's policy. A representative amount of information regarding perceived barriers to HPV prevention and vaccination was noted from the women seen during their routine OB/GYN visit and used to create the educational intervention (Appendix B).

As observed in the needs assessment, there was a vast deficit of knowledge of HPV and prevention as predicted, based on current research in Chapters 1 and 2. The three main barriers to HPV knowledge and prevention were examined in these women during their assessment. Lack of knowledge proved to be a major contributor to a lack of HPV prevention particularly in young African American women. Many of these women had the reading level of an eighth grader, with some admitting to not completing high school. Some of the women confused HPV with HIV or herpes, because of sound-alike similarities. This knowledge inequity was clarified during routine health education. The

lack of HPV knowledge was the first barrier to prevention that was confirmed, and it was the most prevalent.

Health beliefs of these young African American women also appeared to have an influence on their prevention methods. A lack of awareness and relation of HPV to anyone these women were acquainted with seemed to have affected their overall view on the significance of the effects of HPV and the necessity of prevention and vaccination. The majority of the African American women seen at the clinic were not aware of HPV or that it causes cervical cancer, amongst other cancers, and warts. This notion was also noted in patients who had a history of abnormal pap smears and HPV. Out of all of the African American female patients seen at the clinic during the clinical immersion, between the ages of 18-26, only one woman verbalized receiving one dose of the HPV vaccine.

Lastly, access to health care was a major barrier to HPV prevention in this group. Financial instability was an observed factor that inhibited adequate HPV prevention methods. Many of the African American women seen at this clinic were on government assistance and/or employed at minimum wage. Many of these women were Medicaid patients, with few being self pay. Very few had private insurance coverage. Many of these women had unreliable transportation and some utilized public transportation to come to their office visits. The young African American women seen at the clinic who had limited or no insurance coverage were willing to obtain vaccination for HPV if they had an affordable option. These barriers to HPV prevention and vaccination were therefore utilized to create the educational intervention. On completion of this objective, the identification of the barriers to HPV prevention in African American women, ages

18-26, were successfully met.

The third and final objective was to create an educational intervention addressing the issues identified during the needs assessment for the selected group of 18-26-year-old African American women. The educational intervention was also established from the barriers to HPV prevention observed in Phase 2. This objective was completed during Phase 3 of the project. A comprehensive educational brochure (Appendix B) was developed approximately during a two-week period. The brochure highlights a description of HPV, background, and transmission as it relates to young African American women. Signs and symptoms, screening, diagnosis, and prevention were described in detail as well as how to get vaccinated, treatment options, and community resources. The brochure also included how HPV affects the male, as well as vaccination details for men. A map with directions as well as pertinent bus routes to the Miami-Dade Health Department was also incorporated into the brochure.

An expert consensus panel was utilized to evaluate the educational intervention and ultimately determine if implementation of the HPV educational brochure would be beneficial in increasing the knowledge of HPV and vaccination awareness in the 18-26-year-old, African American female population. This evaluation was achieved through completion of an HPV Educational Brochure Review/Evaluation Form (Appendix C), which was adapted with permission from a competency-based assessment tool review form from Dr. Corvette Yacoob's (2011) DNP capstone (p. 96-97).

This expert consensus panel consisted of the clinical mentor at the clinic; and two doctorally prepared professors from Barry University. The consensus panel exhibited

experience and knowledge in gynecological issues in African American women and provided written evaluative suggestions and comments while responding to questions that directly corresponded with the evaluation of this educational brochure. The brochure was evaluated separately by each member of the expert consensus panel and overall was deemed to be applicable, useful, and beneficial in increasing the knowledge of HPV and vaccination awareness in this group of young African American women. Following evaluation of the educational intervention by the consensus panel, the findings from Objective 3 were met successfully.

Discussion of Findings per Project Questions

The answers to these project questions from Chapter 1 were revealed during completion of Phase 1 and 2 of the scholarly project. These questions gave insight to the project investigator on the barriers to HPV awareness and prevention in young African American women. For question 1, it was determined that this population of African American women, as a whole, did not know the meaning or definition of HPV or its implications. There was a lack of understanding regarding the disease during the routine gynecological history and physical and many women confused HPV with other STDs that sounded similar, such as HIV. This group in general did not know HPV was indeed a STD and its commonality.

For question 2, it was discovered that this population didn't know the risks associated with HPV or how to prevent themselves from contracting HPV. This group had minimal knowledge on how HPV causes cervical cancer and genital warts and prevention methods. The majority of these women didn't know that there are vaccines available to prevent the most prevalent strains of HPV. Even those women who had

history of HPV, abnormal pap smears, and genital warts had limited to no knowledge on HPV and how to prevent transmission.

For question 3, the perceived barriers to HPV vaccination in 18-26-year-old African American women were confirmed to consist of lack of knowledge of HPV, individual health beliefs, and decreased access to health care. These barriers were noted to be the major inhibitors to HPV education and prevention in young African American women. For question 4, improving knowledge deficits in 18-26-year-old African American women does improve their desire for wanting HPV vaccination. Once these women were educated regarding HPV and its sequelae, they were eager to learn the ways in which they can prevent it, including vaccination. Each women was educated on safe sex practices during their visit, and those who expressed interest on learning more about HPV were given more background on prevention and vaccination.

For question 5, the health beliefs of this population affected their knowledge of HPV vaccination in different ways. Some women were timid to discuss HPV, not understanding its incidence and prevalence amongst young African American women. Other women felt HPV was not a relatable issue because they believed they didn't know anyone who was affected by HPV, even if they themselves had a history of an abnormal pap smear. This group of women lacked knowledge regarding how HPV affects African American women in general, and the methods to prevent progression of the virus.

Expected findings were for the project investigator to discover that indeed the main barriers of HPV prevention and vaccination in African American women, between 18-26 years of age, were lack of knowledge of HPV, individual health beliefs, and access

to health care. The project investigator expected for there to be a need for creation of an educational intervention that is specifically geared to the needs and education level of this group of women who are more at risk. An unexpected finding that was noted by the project investigator was that the clinic did not provide vaccination for its patients. It was discovered during the needs assessment that patients were given little to no information on how to proceed with HPV vaccination if they expressed interest. Another unexpected finding was that all but one woman verbalized never receiving any doses of any form of HPV vaccination. This finding confirmed that vaccination rates in this group continues to be low, further emphasizing the effort for more education of HPV and prevention and facilitating local community resources where vaccination can be performed.

Strengths and Limitations of the Project

A limitation of this project was that it did not address the problems related to illiteracy in this population. Although the brochure was designed to be comprehensible to a person with an eighth-grade reading level, person who are illiterate would require more extensive education. Another limitation was that this project did not actually address adoption of vaccination. The project investigator examined and identified the barriers to HPV prevention in young African American women, and subsequently, an educational brochure was created that can increase knowledge of HPV and vaccination. The adoption or actual receipt of the HPV vaccine in these women was not addressed.

A third limitation was that the brochure was not distributed to patients for the purposes of this project. Post-doctoral work of the project investigator will explore dissemination of the brochure to women in this demographic group. Despite the limitations, a major strength of this project is that it is one of the few to create an

educational brochure geared towards increasing HPV knowledge and prevention in African American women that is also personalized to the barriers of prevention most prevalent in this group.

Implications for Practice, Health Care Outcomes, Health Care Delivery, and Health Care Policy

The DNP role designates a transformational change of the professional nurse into practicing at the most advanced level of nursing. This requires an in-depth expansion of scientific knowledge and a translation of research into advanced nursing practice. The aim of the project investigator in this DNP role was to expound upon current research of HPV in young African American women and translate that knowledge gained through research into developing an educational intervention that can be utilized in advanced nursing practice. This aim was subsequently achieved through application of the eight DNP essentials.

Health Care Practice

This DNP scholarly project can affect healthcare practice because on completion of this project there is an in-depth understanding of the factors and barriers that contribute to a higher prevalence and mortality of HPV in African American women. The utilization of the information gained can potentially influence advanced nursing practice by implementation of the educational brochure and creation of other educational interventions that can address the barriers of HPV prevention in this group.

Health Care Outcomes

Health care outcomes at the conclusion of this scholarly project will be implemented by the increase in knowledge and awareness in the selected population, which may help to eventually decrease HPV in this group, positively affecting health care outcomes. Social disparities were addressed and can therefore be eventually reduced after post-doctoral implementation of this project. The DNP student can influence local and eventually national initiatives to further knowledge of HPV prevention in young African American women.

Health Care Delivery

Delivery of health care services will be influenced by this project. Ethnicity based educational seminars and programs geared towards groups of women more at risk for HPV, can assist the DNP integrate and deliver more efficient health care, especially in primary care and women's health. These programs can in turn influence a change in the delivery of this women's health issue into being more thoroughly screened for to prevent the continued development of HPV. Health care providers can provide important information to patients who meet vaccination criteria so they can prevent the spread of HPV to themselves and to their partners, therefore decreasing their risk for cervical cancer and other HPV diseases.

Health Care Policy

This scholarly project has several implications for health care policy because more supporting research was provided regarding this problem and why there is such a

large health inequity regarding HPV in 18-26 year old African American women. The DNP involved in women's health is responsible for educating the community, collaborating with other health care professionals, and getting involved with local and state nursing organizations regarding HPV in high-risk groups. Thus changes can be implemented to help to influence these changes in legislations through local, state, and national nursing and health councils, which will help to push legislation forward regarding this issue and vaccination.

Essential I

The AACN Essential I, Scientific Underpinnings for Practice, has many implications for practice, health care outcomes, delivery, and policy for the DNP graduate. The DNP graduate retains a wealth of knowledge from advanced nursing science that is translatable to patients in the daily demands of the practice environment. A strong scientific foundation in advanced nursing is necessary to address current and future practice related matters (AACN, 2006). Through utilization of this essential, the DNP graduate has applied scientific-based foundations into creating a HPV educational intervention for young African American women. Scientific underpinnings for practice are key for effective health care outcomes, because those science-based theories and concepts describe the advanced strategies to enhance health care delivery and evaluate outcomes.

The educational intervention created can be utilized to improve health care outcomes for these women once implemented. This, in turn, can improve health care delivery for HPV in advanced nursing practice because a problem-focused tool exists that

addresses the barriers of HPV prevention in this group of women. Lastly, scientific underpinnings for practice can influence health care policy because adding more wealth of scientific knowledge on how HPV prevention can reduce new HPV infections and health care costs for HPV may help to develop more legislation for increased vaccine affordability and distribution statewide.

Essential II

The AACN Essential II, Organizational and Systems Leadership for Quality Improvement and Systems Thinking, is critical for improving patient outcomes and eliminating health disparities (AACN, 2006). The DNP graduate utilized this essential to improve practice by identifying barriers to HPV education and prevention in young African American women so that an educational intervention could be created that can address these health disparities. In doing so, safety and excellence in practice can be promoted to improve health care outcomes in this group of women. The DNP graduate can improve health care delivery, through utilization of this essential, by incorporating the use of the educational intervention to possibly conceptualize new care delivery models that are geared towards increasing HPV knowledge and prevention in this group. The DNP graduate can utilize this essential to influence health care policy by being proficient in quality improvement strategies and in creating and maintaining changes at organizational and policy levels (AACN, 2006).

Essential III

The AACN Essential III, Clinical Scholarship and Analytical Methods for Evidence-Based Practice, is used by the DNP graduate to describe the reasons for

existing factors and barriers to prevention that contribute to the inequities of HPV in young African American women. Through this essential, the DNP graduate improved practice by critically appraising existence literature and other evidence to create an educational intervention that can serve as a tool to improve health care outcomes (AACN, 2006). Implications for health care delivery demonstrates that there will be a more in-depth understanding of the barriers to HPV knowledge and prevention through the dissemination of the knowledge gained through this project. Through this essential, the DNP graduate can influence health care policy by providing information obtained through research from the literature and the results of this project to state health departments for utilization and dissemination to people of this demographic.

Essential IV

The AACN Essential IV, Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care, implications for practice include integration of patient care technology to improve HPV prevention in practice by utilizing reminders to the health care practitioner to initiate education on HPV and resources for how to get vaccinated. Health care outcomes can be positively influenced through this because it can decrease HPV barriers to prevention and knowledge through information systems. The DNP graduate can improve health care delivery through utilizing patient care technology and the electronic medical record (EMR) to facilitate these reminders as a regular part of the history and physical. This can prevent HPV education and prevention from being overlooked by the health care practitioner. Implications for health care policy include petitioning to local lobbyists to make HPV education a standard part of the EMR in varying participating facilities as

apart of the vaccination history and also as apart of the gynecological health assessment.

Essential V

The AACN Essential V, Health Care Policy for Advocacy in Health Care, implications for practice for the DNP graduate include utilizing the educational brochure to influence health care policy at the local level and eventually statewide to encourage creation of more vaccination programs for populations who are more at risk, such as young African American women. Health care outcome and delivery can be improved with the creation of more programs, which further enhances positive outcomes and fluid delivery of health services to this group of women. Through this essential, the DNP graduate can influence health care policy by continuing to portray a leadership role on behalf of this group of women and the advanced nursing profession to create more programs statewide and eventually influence national mandates for HPV education and prevention.

Essential VI

The AACN Essential VI, Interprofessional Collaboration for Improving Patient and Population Health Outcomes, implications for practice for the DNP graduate include incorporation of more members of the health care team for a greater dissemination of HPV education and prevention. Members of the health care team include the registered nurse (RN), qualified ancillary staff such as the medical assistant (MA), and interdisciplinary consults. Health care outcomes and delivery will be improved due to the collaboration and involvement of the entire health care team, which will be encouraged and influenced by the DNP graduate. This collaboration will further allow the distribution

of information and education regarding HPV and prevention. Health care policy is implicated because interdisciplinary support on this topic can enhance the creation of legislation to promote increasing HPV programs geared towards young African American women.

Essential VII

The AACN Essential VII, Clinical Prevention and Population Health for Improving the Nation's Health, implications for practice for the DNP graduate include implementation of clinical prevention through health promotion, risk reduction, and illness prevention through development of the educational intervention. As the DNP graduate integrates evidenced-based clinical prevention, health care outcomes and delivery will be implicated to increase health services for individuals, aggregates, and populations. Through integration of this essential, health care policy can be affected by the DNP graduate by implicating current concepts of public health, health promotion, evidence-based recommendations, determinants of health, environmental/occupational health, and cultural diversity and sensitivity (AACN, 2006).

Essential VIII

The AACN Essential VIII, Advanced Nursing Practice, implications for practice for the DNP graduate incorporated utilization of refined assessment skills, applying relevant psychosocial, behavioral, cultural, economic, and physiological factors of young African American women to their current barriers to HPV education and prevention. The DNP graduate has influenced health care outcomes and delivery by translating the knowledge obtained from practice to the specialization of women's health within the

larger domain of nursing. Health care policy is implicated in this essential because the legal roles of the Family DNP are supported through integration of advanced nursing practice.

Recommendations for future projects

Recommendations for future projects should include the development of a vaccination program with a participating health care facility or nonprofit organization to develop a vaccination program in south Florida that facilitates completely free HPV vaccination to all adults, male or female that meet criteria, regardless of income. Future projects should also explore working with local government health agencies and the Florida Department of health to increase government funding towards providing HPV vaccination for women who are at an increased risk due to socioeconomic factors and barriers to prevention.

Another recommendation for future practice is to develop an educational tool centered on increasing HPV knowledge and prevention in Hispanic women. Similar to young African American women, young Hispanic women also experience a disproportionately higher incidence and mortality of HPV and cervical cancer than other races. These disparities found in these groups of women emphasize a need for more projects focused on public health to expose the sociocultural and structural barriers to HPV vaccination experienced by vulnerable populations of young adult women (Ford, 2011). Future projects on HPV education and prevention must be conducted in order to increase understanding of the varying needs of vulnerable, young African American women so that the health disparities in HPV and cervical cancer can be reduced in this

group.

Summary

This chapter discussed the results of this scholarly project that identified the barriers of HPV prevention in young African American women. Through identification and completion of the project objectives, the project investigator was then able to complete a needs assessment, identify health inequities/barriers to prevention, and create an educational intervention in the form of a comprehensive brochure related to the scholarly project for the selected group of 18-26-year-old African American women. The project investigator was then able to describe that there indeed was a problem due to the disproportionate number of these young African American women developing HPV due to their barriers of prevention. The purpose of the project was achieved through creation of the educational intervention that addressed these barriers to HPV prevention. Through clinical immersion and evaluation of the educational brochure from an expert consensus panel, all the objectives for this scholarly project were subsequently met.

REFERENCES

- Advanced Practice Nurse Committee (2004). *Advanced Practice Nursing Needs Assessment Guide*. Retrieved from <http://www.hsc.mb.ca/nursing/contents/apn/projects/Needs%20Assessment%20Guide.pdf>
- American Association of Colleges of Nursing (AACN). (2006). *Doctoral education for advanced nursing practice*. Retrieved from <http://www.aacn.nche.edu/publications/position/DNPEssentials.pdf>
- American Cancer Society (ACS). (2010). *American Cancer Society Guidelines for the Early Detection of Cancer*. Retrieved from www.cancer.org/Healthy/FindCancerEarly/CancerScreeningGuidelines/american-cancer-society-guide-lines-for-the-early-detection-of-cancer
- American Cancer Society (ACS) (2013). *HPV and cancer*. Retrieved from www.cancer.org/cancer/cancercauses/othercarcinogens/infectiousagents/hpv
- American Congress of Obstetricians and Gynecologists. (2012). *Everything you wanted to know about HPV but were afraid to ask*. Retrieved from <http://mail.ny.acog.org/website/GYNCaHPVBrochure.pdf>
- American Society for Colposcopy and Cervical Pathology (ASCCP). (2012). *Vulva: Human Papillomavirus Infections & Vulvar Intraepithelial Neoplasia*. Retrieved from <http://www.asccp.org/PracticeManagement/Vulva/HPVInfectionsandVIN/HPVDefinitionsandEpidemiology/tabid/7444/Default.aspx>
- Baker, J., Brawner, B., Leader, A., Voytek, C., Jemmott, L., & Frank, I. (2012).

Incorporating community based participatory research principles for the development of a HPV prevention program for African American adolescent females and their parents/guardians. *American Journal of Health Studies*, 27(1), 1-7.

Bendik, M. K., Mayo, R. M., & Parker, V. G. (2011). Knowledge, perceptions, and motivations related to HPV vaccination among college women. *Journal of Cancer Education*, 26(3), 459-464.

Benkert, R., Hollie, B., Nordstrom, C. K., Wickson, B., & Bins-Emerick, L. (2009). Trust, Mistrust, Racial Identity and Patient Satisfaction in Urban African American Primary Care Patients of Nurse Practitioners. *Journal of Nursing Scholarship*, 41(2), 211-219. doi:10.1111/j.1547-5069.2009.01273.x

Brown, D., Wilson, R., Boothe, M., & Harris, C. (2011). Cervical cancer screening among ethnically diverse black women: Knowledge, attitudes, beliefs, and practices. *Journal of the National Medical Association*, 103(8), 719-728.

Bynum, S., Brandt, H., Sharpe, P., Williams, M., & Kerr, J. (2011). Working to close the gap: Identifying predictors of HPV vaccine uptake among young African American women. *Journal of Health Care for the Poor and Underserved*, 22(2), 549-61.

Cates, J., Brewer, N., Fazekas, K., Mitchell, C., & Smith, J. (2009). Racial differences in HPV knowledge, HPV vaccine acceptability, and related beliefs among rural, southern women. *Journal of Rural Health: Official Journal of the American Rural Health Association and the National Rural Health Care Association*, 25(1), 93-97. doi:10.1111/j.1748-0361.2009.00204.x

- Centers for Disease Control and Prevention (CDC). (2013a). *Human Papillomavirus*. Retrieved from <http://www.cdc.gov/hpv/whatishpv.html>
- Centers for Disease Control (CDC). (2013b). *STD curriculum for clinical educators: HPV module*. Retrieved from <http://www2a.cdc.gov/stdtraining/ready-to-use/Manuals/HPV/hpv-notes-2013.pdf>
- Daley, E. M., Vamos, C. A., Buhi, E. R., Kolar, S. K., McDermott, R. J., Hernandez, N., & Fuhrmann, H. J. (2010). Influences on Human Papillomavirus Vaccination Status among Female College Students. *Journal of Women's Health, 19*(10), 1885-1891. doi:10.1089/jwh.2009.1861
- D'Urso, J., Thompson-Robinson, M., & Chandler, S. (2007). HPV knowledge and behaviors of black college students at a historically Black University. *Journal of American College Health, 56*(2), 159-163.
- Fazekas, K. I., Brewer, N. T., & Smith, J. S. (2008). HPV Vaccine Acceptability in a Rural Southern Area. *Journal of Women's Health, 17*(4), 539-548. doi:10.1089/jwh.2007.0489
- Ford, J. L. (2011). Racial and ethnic disparities in Human Papillomavirus awareness and vaccination among young adult women. *Public Health Nursing, 28*(6), 485-493.
- Franceschi, S. S., Plummer, M. M., Clifford, G. G., de Sanjose, S. S., Bosch, X. X., Herrero, R. R.,... Vaccarella, S. S. (2009). Differences in the risk of cervical cancer and Human Papillomavirus infection by education level. *British Journal of Cancer, 101*(5), 865-870. doi:10.1038/sj.bjc.6605224

- Garland, S., & Smith, J. (2010). Human Papillomavirus vaccines: Current status and future prospects. *Drugs*, *70*(9), 1079-1098. doi:10.2165/10898580-000000000-00000
- Gelman, A., Nikolajski, C., Schwarz, E., & Borrero, S. (2011). Racial Disparities in Awareness of the Human Papillomavirus. *Journal of Women's Health* *20*(8), 1165-1173. doi:10.1089/jwh.2010.2617
- Gerend, M., & Shepherd, J. (2012). Predicting Human Papillomavirus Vaccine Uptake in Young Adult Women: Comparing the Health Belief Model and Theory of Planned Behavior. *Annals of Behavioral Medicine*, *44*(2), 171-180. doi:10.1007/s12160-012-9366-5
- Hickey, J. V. & Brosnan, C. A. (2012). *Evaluation of health care quality in advanced practice nursing*. New York: Springer.
- Human Papillomavirus (HPV) Background Paper. (2011). Retrieved from <http://www.nursingworld.org/MainMenuCategories/PolicyAdvocacy/State/IssuesResources/HPV/HPV.pdf>
- Krawczyk, A. L., Perez, S., Lau, E., Holcroft, C. A., Amsel, R., Knauper, B., & Rosberger, Z. (2012). Human Papillomavirus Vaccination Intentions and Uptake in College Women. *Health Psychology*, *31*(5), 685-693. doi:10.1037/a0027012
- Lechuga, J., Swain, G. R., & Weinhardt, L. S. (2011). The cross-cultural variation of predictors of human papillomavirus vaccination intentions. *Journal of Women's Health*, *20*(2), 225-230. doi:10.1089/jwh.2010.1993
- Leon, S., Camargo, M., Sanchez, R., Munoz, M., Perez-Prados, A., Purroy, A.,...Patarroyo, M. (2011). Distribution patterns of infection with multiple types

- of human papillomaviruses and their association with risk factors. *Plos ONE*, 6(2), 1-7. doi:10.1371/journal.pone.0014705
- McCormish, E. (2011). Cervical cancer. *Nursing For Women's Health*, 15(6), 476-483. doi:10.1111/j.1751-486X.2011.01675.x
- McKeever, A. (2010). Cervical cancer risk among college-age women: A review of the literature. *Journal of Gynecologic Oncology Nursing*, 20(1), 6-13.
- Moscicki, A. B. (2005). Impact of HPV infection in adolescent populations. *Journal of Adolescent Health*, 37, S3-S9.
- National Conferences of State Legislatures (NCSL) (2014). HPV vaccine policies. Retrieved August 2, 2014 from <http://www.ncsl.org/research/health/hpv-vaccine-state-legislation-and-statutes.aspx>
- Nelson, W., Moser, R. P., Gaffey, A., & Waldron, W. (2009). Adherence to cervical cancer screening guidelines for U.S. women aged 25–64: Data from the 2005 Health Information National Trends Survey (HINTS). *Journal of Women's Health*, 18(11), 1759-1768. doi:10.1089/jwh.2009.1430
- Pender, N., Murdaugh, C., & Parsons, M. A. (2011). *Health promotion in nursing practice* (6th ed.). Upper Saddle River, NJ: Pearson Education.
- Pourat, N., & Jones, J. M. (2012). Role of insurance, income, and affordability in human papillomavirus vaccination. *American Journal of Managed Care*, 18(6), 320-330.
- Sanclemente, G., & Gill, D. (2007). Human papillomavirus molecular biology and pathogenesis. *Journal of The European Academy of Dermatology & Venereology*, 16(3), 231-240. doi:10.1046/j.1473-2165.2002.00419.x

- Scarinci, I. C., Garcés-Palacio, I. C., & Partridge, E. E. (2007). An examination of acceptability of HPV vaccination among African American women and Latina immigrants. *Journal of Women's Health, 16*(8), 1224-1233.
doi:10.1089/jwh.2006.0175
- Steigman, C., & Vernick, J. (2002). The Pap smear: A victim of its own success? *Medical Laboratory Observer, 34*(8), 8.
- Tambouret, R. (2013). Screening for cervical cancer in low-resource settings in 2011. *Archives of Pathology & Laboratory Medicine, 137*(6), 782-790.
doi:10.5858/arpa.2011-0695-RA
- Theroux, R. (2008). The HPV vaccine: rates, attitudes and acceptability. *Nursing For Women's Health, 12*(5), 423-426.
- Tota, J., Chevarie-Davis, M., Richardson, L., Devries, M., & Franco, E. (2011). Epidemiology and burden of HPV infection and related diseases: Implications for prevention strategies. *Preventive Medicine, 53*S12-21.
- Watkins, R., Meiers, M. W., & Visser, Y. L. (2012). A guide to assessing needs: Essential tools for collecting information, making decisions, and achieving development results. Washington, D.C.. The World Bank.
- Wong, K. Y., & Do, Y. K. (2012). Are there socioeconomic disparities in women having discussions on Human Papillomavirus vaccine with health care providers? *BMC Women's Health, 12*(1), 33-39. doi:10.1186/1472-6874-12-33
- Yacoob, C. V. (2011). Towards a competency-based assessment tool for family nurse practitioners: Reviewing FNP competency practices. *DNP College of Health Sciences, Division of Nursing*. Barry University.

APPENDIX A
LETTER OF SITE APPROVAL



Full Circle Health Care, Inc

1190 NW 95th Street, Suite 306

Miami, FL 33150

Phone (305)693-0000 - Fax (888)717-7671

May 5, 2014

Dear Ms. Alexandria West,

This letter is to allow you to perform your scholarly project according to your project objectives and to complete your required clinical hours for your DNP course at the Full Circle Health Care clinic from May – August 2014. I, Dr. Patricia Litts MD, OB/GYN, will be your clinical preceptor and clinical scholarly project mentor during this time. This letter serves as proof of site approval and support for your scholarly project.

Sincerely,

Patricia Litts MD, OB/GYN

Full Circle Health Care Clinic

1190 NW 95th Street

Suite 306

Miami, FL 33150

(305) 693-0000

plitts@fullcirclehealth.net

APPENDIX B
EDUCATIONAL BROCHURE

(See next page)

APPENDIX C**SAMPLE EDUCATIONAL BROCHURE REVIEW/EVALUATION FORM**

HPV EDUCATIONAL BROCHURE REVIEW/EVALUATION FORM

Please complete this form related to the HPV educational brochure you have just reviewed. Your valuable feedback will help in the refinement process prior to implementation of this tool. Thank you for your participation.

1. The HPV educational brochure is clear and easy to understand.

Yes

No (Explain) _____

2. The HPV educational brochure is appropriate for young women, between ages 18-26.

Yes

No (Explain) _____

3. I would support use of this HPV educational brochure for interested patients in my practice and/or for FNP students.

Yes

No (Explain) _____

4. Is there anything that should be added to this HPV educational brochure?

5. Is there anything that should be deleted from this HPV educational brochure?

6. I clearly understand how to apply/utilize this educational brochure?

- Yes
- No (Explain) _____

7. I believe that implementation of this HPV educational brochure will be beneficial in increasing the knowledge of HPV and vaccination awareness in the 18-26 year old, African American female population.



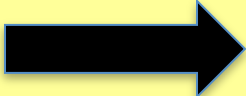




- Yes
- No (Explain) _____

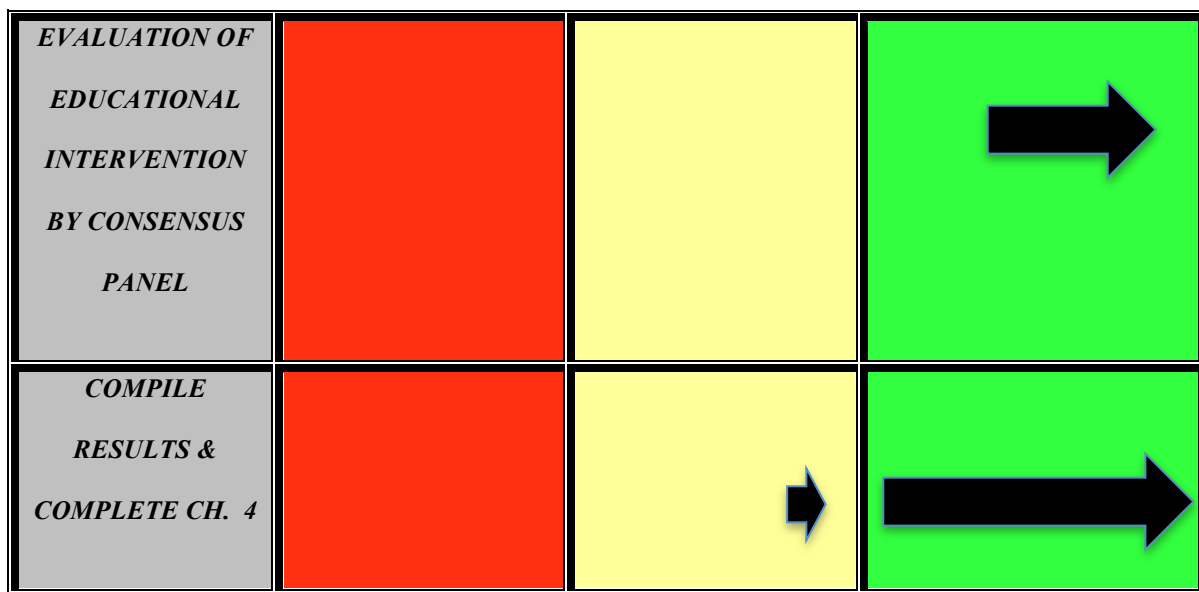
Evaluator's Name and Credentials _____

Signature _____

APPENDIX D

SCHOLARLY PROJECT TIMELINE

OUTCOME MEASURES	PHASE I Week 1-2 End May 14-----Jun	PHASE II Week 3-6 Jun-----July	PHASE III Week 7-8 July-----Aug 14
<i>IRB EXEMPTION & APPROVAL</i>			
<i>CLINICAL IMMERSION</i>			
<i>NEEDS ASSESSMENT & WINDSHIELD ASSESSMENT</i>			
<i>GATHERING INFORMATION VIA CLINICAL IMMERSION</i>			
<i>CREATION OF EDUCATIONAL INTERVENTION</i>			



VITA

Alexandria West

8124 NW 15th Manor

Plantation, FL 33322

(954) 937-0897

EDUCATION

Barry University – Doctor of Nursing Practice as a Family

Advanced Registered Nurse Practitioner

August 2010 – Present (Graduation October 2014)

ANCC Boards and Certification pending completion

Nova Southeastern University Bachelor of Science in Nursing

(BSN) Program with minor in Psychology – Davie, Florida

Registered Nurse – State of Florida, RN 9262193

January 2005 – April 20, 2007

Nova Southeastern University – Davie, Florida

August 2002 – April 20, 2007

Plantation High School – Ft. Lauderdale, Florida

Diploma

August 1998 – June 2002

EXPERIENCE

Registered Nurse II, Broward Hospital Medical Center – Recovery
Room (Post Anesthesia Care Unit)

Fort Lauderdale, Florida

June 2014 – Present

Registered Nurse II, Memorial Regional Hospital – Recovery
Room (Post Anesthesia Care Unit)

Hollywood, Florida

May 2009 – Present

Registered Nurse II, Memorial Regional Hospital – Pediatric
Radiology Department

Hollywood, Florida

January 2008 – May 2009

Registered Nurse II, Memorial Regional Hospital – 8 South,
Trauma/Surgical Floor

Hollywood, Florida

June 2007 – January 2008

AWARDS AND ACTIVITIES

- Member of Barry University’s Chapter of Sigma Theta Tau, Honor Society of Nursing
- Member of Barry University’s Chapter of Delta Epsilon Iota, Academic Honor Society
- Member of *Florida Nursing Association, 2007-present*
- Member and inductee of *NSU’s chapter of the Nursing Honor Society, 2007-present*
- *NSU-Nursing Student Association (NSA) President, 2005-2006*
- Member of *NSU-NSA and Florida Nursing Student Association (FNSA), 2005-present*
- Member of *Beta Beta Beta (BBB) Biological Honor Society, 2005-present*