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# Exploring Cultural Values, Beliefs, and Perceptions of Human Papillomavirus Vaccine Acceptance in African American Men

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# EXPLORING CULTURAL VALUES, BELIEFS, AND PERCEPTIONS OF HUMAN PAPILLOMAVIRUS VACCINE ACCEPTANCE IN AFRICAN AMERICAN MEN

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EXPLORING CULTURAL VALUES, BELIEFS, AND PERCEPTIONS OF HUMAN PAPILLOMAVIRUS VACCINE ACCEPTANCE IN AFRICAN AMERICAN MEN

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# ABSTRACT

## EXPLORING CULTURAL VALUES, BELIEFS, AND PERCEPTIONS OF HUMAN PAPILLOMAVIRUS VACCINE ACCEPTANCE IN AFRICAN AMERICAN MEN

By

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August 2022

Dissertation supervised by Rick Zoucha

**Introduction:** African American (AA) /Black men have a higher rate of anal and rectal HPV-associated cancer, which the HPV vaccine can prevent. **Purpose:** This study aimed to understand the cultural values, perceptions, and beliefs of the HPV vaccine in African American/Black Men. **Method:** Through a focused ethnography, a semi-structured guide was utilized to interview 24 AA men. Inclusion criteria included identifying as AA/Black, aged 18-30 years, born and living in the United States, identify and born as male, and able to understand, read, and write English. **Results:** Through Leininger's Four Phases of Analysis, three themes emerged: 1) lack of knowledge of HPV & HPV vaccine, 2) lack of seeking care from health professionals, 3) expression of interest in the vaccine but remain hesitant based on mistrust. **Discussion:** Results showed similarities to previous literature. By learning about cultural factors

influencing HPV vaccination, nurses can promote cultural congruent care and culturally appropriate education.

# DEDICATION

First, I would like to thank God for keeping me focused and providing me strength throughout my journey. I want to dedicate this presentation to my son to motivate him to continue with his own education to graduate school and to show him that with God, anything is possible. I would also like to dedicate this presentation to my dad and brother. During my program, I lost my brother in 2019 and my dad this January. My dad fought a good fight and tried to hold on to see his baby girl graduate. Unfortunately, he lost the battle to cancer.

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# Exploring Cultural Factors of Human Papillomavirus Vaccination Acceptance in African Americans: An Integrative Review


## Abstract

**Introduction:** Human Papillomavirus is a common sexually transmitted disease which can evolve into cancer. It can be prevented through the HPV vaccine; however, African American (AA) adults have only 54.7% adherence. **Methodology:** Although various factors influence HPV vaccine acceptance, this integrative review explored cultural factors and beliefs impacting HPV vaccine acceptance in AA adults. A final sample of twenty studies published from 2010 to 2020 were reviewed. **Results:** Eight themes emerged from the literature: religion, knowledge, physician recommendation, social network, attitudes, mistrust, benefits, and safety. **Discussion:** Themes revealed cultural factors influence vaccine perception and acceptance amongst AAs. Future studies are critical to discover additional cultural values, beliefs, and perceptions influencing HPV vaccine acceptance. Nurses can utilize this evidence to guide culturally competent and congruent patient centered care to decrease the incidence of HPV-related cancer in AAs.



Keywords**:** *human papillomavirus, vaccine, cultural values, African American, adult*

## Exploring Cultural Factors of Human Papillomavirus Vaccination Acceptance in African Americans: An Integrative Review

Human Papillomavirus (HPV) is a common sexually transmitted disease. In 2018, it impacted 43 million throughout the United States (US) with 13 million newly diagnosed cases (Center for Disease Control and Prevention, 2022). Most cases resolve within two years; however, persistent infection can lead to cervical, vaginal, oropharyngeal, anal, and penile cancer. Fortunately, HPV and 90% HPV-related cancer can be prevented through the HPV vaccine (Center for Disease Control and Prevention, 2021b). Despite the vaccine's effectiveness, the overall vaccine acceptance is lower in African Americans when compared to Caucasians.

### Background

African Americans are significantly affected by HPV-related cancers, particularly the survival rate. The AA 5-year survival rate for HPV-related oropharyngeal cancer is much lower at 48% compared to the overall rate of 65% (American Society of Clinical Oncology, 2020). According to American Cancer Society (2019), the 5-year survival rate of cervical cancer for AA women is 56% compared to Caucasian women at 68 percent. Plus, AA women have a 30% higher incidence of cervical cancer versus Caucasian women (American Cancer Society, 2019). For men, statistics in 2019 show AA men have a higher probability of anal and rectal HPV-associated cancer at a rate of 2.2 per 100,000 population compared to the rate for Caucasians at 2.1 per 100,000 (National Cancer Institute, n.d).

Recommendations for the HPV vaccine by The Advisory Committee on Immunization Practices include two intramuscular injections, given within 6-12 months of each other, starting at nine years old (Center for Disease Control and Prevention, 2021c). If not initiated until the age

of 15, three shots are required with a schedule of 0, 1-2 months, and then 6 months later (Center for Disease Control and Prevention, 2021c).

Despite the availability of the vaccine, vaccination rates are low, especially in the African American community**.** In 2018, the overall HPV vaccine rate was 36.7% for AAs and 43.1% for Caucasians; AA women had a higher rate compared to AA men with 44.7% and 29.4% respectively (Boersma, 2020)**.** When compared to other vaccines, HPV vaccination rate is the lowest for AAs with Influenza at 39.4% and Pneumococcal at 59.5% (Center for Disease Control and Prevention, 2019; National Center for Health Statistics, 2019).

Because of the disproportionate burden of cancer in African Americans, HPV vaccination is imperative. Previous research studies have focused on socioeconomic factors contributing to nonadherence, like income and lack of insurance (Laz et al., 2012; Lu et al., 2018; Marshall et al., 2019; Silver & Kobrin, 2020; Ylitalo et al., 2013). Lack of insurance and lower income showed a lower likelihood of vaccination (Laz et al., 2012; Lu et al., 2018; Marshall et al., 2019; Silver & Kobrin, 2020; Williams et al., 2013; Ylitalo et al., 2013). However, cultural factors, such as religion or mistrust, may also play a influential role in health care decisions (Thomas et al., 2015; Thomas et al., 2012).

The purpose of this integrative review is to explore cultural values and beliefs impacting the decision to obtain the HPV vaccination from the perspective of African American adults. Culture is defined by "the learned, shared, and transmitted values, beliefs, norms, and life practices of a particular group that guides thinking, decisions, and actions in patterned ways" (Leininger, 1988, p. 156). By uncovering gaps in the literature, this integrative review will inform opportunities for future research and potentially improve nursing care**.**

## Method

### Model

The Whittemore and Knafl model guided the structure and process for this integrative review (Whittemore & Knafl, 2005). It is a systematic method previously utilized in nursing to evaluate theories and analyze health care problems. By applying this method, assorted types of literature including peer reviewed articles and gray literature are permitted, thus, giving potential for an exhaustive exploration of the HPV vaccine (Whittemore & Knafl, 2005). To strengthen the rigor of the review, this framework encompasses five stages: problem identification, literature search, data evaluation, data analysis, and presentation (Whittemore & Knafl, 2005).

### Literature Search

A literature search was conducted in PubMed, CINAHL (Cumulative Index of Nursing and Allied Health), and Embase databases under the direction of an experienced librarian**.** Primary search terms included 'human papillomavirus,' 'vaccine', 'cultural values,' 'African American', and 'adult'; see Table 1 for a detailed list of keywords. Years searched were 2009-2020. The HPV vaccine was not approved for men until 2009 so the final literature ranged from 2010-2020 and all literature beforehand was eliminated.

Inclusion criteria consisted of African Americans aged 18 years and over living in the US. Exclusion criteria included studies published in other languages or outside the US. Although some AAs may have dual citizenship with the US and other countries, health policies regarding the HPV vaccine may be different internationally. African Americans under the age of 18 were also omitted. Due to necessary parental approval for the vaccine, minors may have limited knowledge and experience regarding HPV. Articles with less than 50% representation of AAs

were also excluded due to inadequate sample size. Plus, many studies reported results from the perspective of the whole sample not distinguishing between races.

The initial search generated 634 articles with 385 from PubMed, 73 from CINAHL, and 176 from Embase (See Figure 1). Covidence, a web-based software, was utilized to organize articles which eliminated 162 duplicates. A review of titles/abstracts reduced the number of articles appropriate for full text screening to 67. After reviewing those articles, 19 articles met the final criteria. An ancestry search was completed to locate relevant literature; as a result, one additional article was identified. The final sample included 20 studies which were published from 2010 to 2020. Types of research designs included 13 quantitative, five qualitative, and two mixed method studies.

**Data Evaluation**

Data was evaluated using the Quality Appraisal Tool for Studies with Diverse Designs (QATSDD). According to Sirriyeh et al. (2012), it is a 16-item tool individually scored from 0 to 3 (0 = not at all, 1= very slightly, 2 = moderately, 3 = complete). Total scores ranged from 0 to 48 depending on the type of study. Qualitative and quantitative studies were scored with 14 questions for a potential maximum of 42 points and mixed methods were based on all 16 questions with a maximum of 48 points.

Article evaluation was conducted by first author only. Evaluation of total score was divided by maximum score to get a percentage; larger percentages represented a higher level of quality. Scores ranged from 48% to 98% with mean score of 72%. Lower rating articles were included in the final sample because they contributed relevant information. Sixteen articles did not include a specific research question, so the author appraised the purpose, aims, objectives in place of the missing research question.

**Description of Sample Studies**

Even though 15% (n=3) of the studies comprised of participants from multiple races, the remaining included AA participants only. All samples had at least 50% or greater of AAs. Sample sizes ranged from 19 in a qualitative study to 795 in a longitudinal cohort study. Most studies (n=12, 60%) focused on parents. Only 5% (n=1) consisted of men only and 45% (n=9) included women only. Participant ages ranged from 18-83 years with the youngest mean age of 20.24 years and the oldest mean age of 52 years. Common study locations were Boston, Massachusetts (n=3) and St. Louis, Missouri (n=3) but the remaining were dispersed across Texas, Illinois, New York, Alabama, Washington D.C., and Georgia. Settings included universities, churches, health centers/agencies, libraries, salons, laundromats, or grocery stores.

**Data Analysis**

Data was extracted from the articles and organized by the matrix method. The matrix method included a table (Table 2) which was constructed in three steps: a) organize the articles, b) designate categories for column headings, and c) abstract data from articles (Garrard, 2016). Selected column headings were author, purpose, sample/setting, findings, gaps/recommendations, design/analysis, and quality of evidence. After building the table, the data was analyzed to establish themes from each study's findings.

## Results

After review of the articles, eight themes (See Table 3) emerged from the literature: religion, knowledge, physician recommendation, social network, attitudes, mistrust, benefits, and safety. All but six studies concentrated on multiple themes (Bryer, 2014; Bynum et al., 2012; Fishman et al., 2016; Shao et al., 2015; Thomas et al., 2015; Thomas et al., 2012). Out of the 20

studies, the most prominent themes were knowledge/awareness, addressed by 12 articles. Physician recommendation, safety, and benefits was addressed by eight articles each.

**Religion**

Two studies by similar authors focused on religion and HPV vaccination (Thomas et al., 2015; Thomas et al., 2012). Thomas et al. (2015) explored the influence of spirituality and religiosity on HPV vaccination through focus groups in rural Georgia. Religiosity was defined as traditional practices and spirituality was defined as personal beliefs. Similarly, Thomas et al. (2012) conducted a cross sectional survey across three rural Georgia counties to investigate predictors of the HPV vaccine. Both studies showed religion was an important factor influencing health care decisions, but in Thomas et al. (2012), having religion was a significant predictor ($x^{2=}$ 30.49, df= 1, $p < .001$) of HPV vaccination. Thomas et al. (2015) reported spirituality influenced how participants were able to cope with HPV related illnesses believing that long term health is "in the hands of God" (p.9). Further analysis showed denomination was a factor in both studies. However, in Thomas et al. (2015), Baptists were more likely to vaccinate compared to non-Baptists in Thomas et al. (2012).

Although religion is important, it did not always influence decisions to vaccinate despite strong religious beliefs (Galbraith-Gyan et al., 2019; Sanders Thompson et al., 2012). AA women in Sanders Thompson et al. (2012) reported that, prayer was only used for guidance on HPV vaccine decisions but not a true determining factor. Furthermore, church leaders should not offer recommendations on the issue either (Sanders Thompson et al., 2012) especially since religion does not realistically address sexual activity issues (Gailbraith-Gyan et al., 2019).

**Knowledge**

Lack of knowledge / awareness of HPV was a recurring theme throughout the literature. In Watkins et al. (2015), 66.7% (n=605) were aware of HPV and 89% (n=538) of that sample wanted the vaccine for their daughter. However, others were apprehensive due to insufficient information while others had little to no knowledge the vaccine existed (Allen et al., 2012; Bynum et al., 2011; Clark et al., 2014; Cunningham-Erves et al., 2018; Galbraith-Gyan et al., 2019; Sledge, 2015). Plus, due to limited health literacy, health information was too difficult to understand; for example, parents were unfamiliar with medical terms, location of female anatomy, and cervical disease processes (Hamlish et al., 2012).

As AAs become more knowledgeable, HPV vaccine acceptance can increase (Maness et al., 2016; Shao et al., 2015; Sledge, 2015; Strohl et al., 2015). According to Strohl et al. (2015), 61% of AA women from Chicago knew of the HPV vaccine, but only 37% were aware of the connection between HPV and cervical cancer. Maness et al. (2016) conducted an exploratory study with 308 African American women churchgoers to understand how knowledge / awareness influenced HPV vaccination. Seventy four percent were aware that HPV was linked to cancer. Knowing the connection of HPV to cancer was associated with vaccinating a child (daughter: $\beta$ = .257, SE = .087, t = 2.942, p = .004; son: $\beta$ = .226, SE = .089, t = 2.533, p = .012). Non-cervical cancer was perceived differently. Approximately 13.2% reported knowing that HPV was linked with non-cervical cancers. Out of the 13.2%, participants were more willing to vaccinate their sons ($\chi^2$ = 6.068, df = 1, p = .013) and not their daughters ($\chi^2$ = 3.132, df = 1, p = .058).

HPV and HPV vaccine knowledge is obtained through various methods. Multiple studies revealed that parents seek out information through brochures, textbooks, health vans, television, and the internet (Bynum et al., 2011; Clark et al., 2014; Galbraith-Gyan et al., 2019). Bynum et al. (2011) reported a gender difference in how information was obtained; males preferred to

solicit information from television ($\chi^2 = 8.76$, df = 1, p = < .01) or social media ($\chi^2 = 5.23$, df = 1, p = .02), yet women preferred information from pamphlets ($\chi^2 = 19.01$, df = 1, p = < .01) and healthcare providers ($\chi^2 = 10.61$, df = 1, p = < .01).

One notable finding showed that knowledge/ awareness does not consistently influence vaccination. A longitudinal cohort study investigated levels of awareness among a low-income neighborhood (Fishman et al., 2016). Knowledge and awareness were measured at baseline with adults and adolescents (aged 13-18 years) independently. HPV vaccination status was measured at 3-month, 6-month, and one-year intervals. Regardless of baseline awareness levels, there was no relationship between vaccination and parental awareness at 3 months (OR = 4.52, 95% CI = 0.31–234.62, $R^2 = 0.0088$), 6 months (OR = 2.02, 95% CI = 0.3-16.74, $R^2 = 0.004$), and 12 months (OR = 2.31, 95% CI = 0.47–14.80, $R^2 = 0.008$). The relationship with adolescent vaccination status and awareness was weak at 3 months (OR = 17.28, 95% CI = 0.87–999.99, $R^2 = 0.02$), 6 months (OR = 4.8, 95% CI = 0.98–30.00, $R^2 = 0.02$) and 12 months (OR = 3.42, 95% CI = 1.05–12.25, $R^2 = 0.02$).

**Physician Recommendation**

The preference for a physician recommendation for vaccine acceptance is reiterated in multiple studies (Cunningham-Erves et al., 2018; Galibraith-Gyan et al., 2019; Hamlish et al., 2012; Sanders Thompson et al., 2012; Thompson et al., 2011). In Thompson et al. (2011), 200 AA men and women from St. Louis completed self-administered surveys measuring factors influencing HPV knowledge, vaccination, and perception of risk. A subsample of 112 reported awareness of HPV and knowledge of their daughters' vaccination status. Approximately 38% (n=43) received a physician recommendation and of those 43, over half (n=24, 55.8%) of their

daughters received the vaccine. Findings showed a significant relationship ($p < 0.001$) between physician recommendation and the decision to vaccinate.

Although it is crucial for the recommendation to be delivered, the strength of it can be just as important. Fu (2017) reported parents who received a very strong recommendation had 4.6 higher odds of receiving the vaccine compared to those who did not receive one. When presented with little precedence, parents just dismissed it. Galbraith-Gyan et al. (2019) further indicated that the approach and timing of a physician recommendation is critical. HPV vaccine appointments can be utilized as an opportunity for parents to discuss sex with their children. Additionally, early dissemination of information before the vaccine due date is preferred as opposed to last minute communication. According to Clark et al. (2014), it is imperative for parents to process the information and have the opportunity to review other health resources.

**Social Networks**

Although the physician is the preferred source of information based on the literature, social networks also play an imperative role in health care. Clark et al. (2014) completed a qualitative analysis to investigate how AA women prefer to learn HPV vaccine information. Older relatives, specifically grandmothers and mothers, were characterized as being the most trusted resource for advice. Similar findings were found in other studies (Allen et al., 2012; Clark et al., 2014b; Fu, Zimet, et al., 2019; K. V. Galbraith-Gyan et al., 2019; Sanders Thompson et al., 2012). Additional reliable sources were community groups, churches, and friends, especially those in health care (Clark et al., 2014; Galbraith-Gyan et al., 2019; Thomas et al., 2015).

**Attitudes**

Positive vaccine attitudes, like accepting the vaccine is effective, safe, and protective against disease, may lead to higher vaccine receipt. Galbraith-Gyan et al. (2019) completed a

qualitative study with 29 AA mothers and 34 daughters aged to 12 to 17 years to study the effect of culture on HPV vaccine acceptance. Questions addressed their perception and acceptance of the vaccine. Results showed that mothers (n= 19, 59.4%) and daughters (n=14, 46.7%) believed the vaccine prevented sexually transmitted infections. Mothers were less likely to report the HPV vaccine as beneficial in preventing cervical cancer vaccine compared to daughters at (n=17, 56.7%) and (n=23, 71.9%) respectively. Both mothers (n=5, 16.7)% and daughters (n=8, 25%) had a lower perception of vaccine safety.

Positive attitudes influenced vaccine intention in Bryer (2014), a descriptive correlation study with 262 AA men (n=43) and women (n=219). Vaccine attitudes and intention were assessed through HPV Vaccine Attitude Scale and HPV Vaccine Intention Scale, respectively. Attitudes were measured by statements like "having my daughter receive the HPV vaccine is… harmful/beneficial" (p.374). Intention was measured through statements such as "I plan on having my daughter vaccinated with the HPV vaccine." Findings showed 71.3% (n=187) of parents had positive attitudes regarding the benefits and safety of the HPV vaccine. There was a significant relationship between the likelihood of getting their daughters vaccinated and the positive perception of prevention benefits and vaccine safety ($r = .865$, $p < .001$).

In some studies, vaccine attitudes concentrated on vaccine necessity and ineffectiveness. According to Maness et al. (2016), 66.4% of AA women reported the vaccine should be available for boys and girls but a small percentage (4.7%) felt it was unnecessary. In Shao et al. (2015), 49% of parents felt the vaccine was not necessary for their sons but 68.6% were interested in it. Additional concerns included lack of protection. Since the vaccine does not prevent all types of HPV, the vaccine may produce a distorted sense of protection (Sanders Thompson et al., 2012). Galbraith-Gyan et al. (2019) declared vaccines are not a "one size fits

all" (p.14). Furthermore, two participants reported the vaccine may ineffective against strains directly infecting AA women (Cunningham-Erves et al., 2018).

**Mistrust**

Although physicians are the preferred source for health information, a sense of mistrust with health care system still exists among some AAs which may contribute to low vaccine receipt. Cunningham-Erves et al. (2018) reported a sense of mistrust against physicians and their recommendations on HPV vaccine as a hindrance to acceptance. Mistrust was also a prevailing theme among three additional articles. Participants in Allen et al. (2012) expressed frustration because physicians did not disclose anything about the "killer virus" (p.4). Forty percent of AA parents reported fear of experimentation as a concern in Fu, Zimet, et al. (2019). Receiving the vaccine was even compared to the Tuskegee experiment in two studies (Allen et al., 2012; Sanders Thompson et al., 2012).

**Safety**

Vaccine uptake is influenced by the perception of apparent harm. In a cross sectional descriptive study by Sledge (2015), 68 African American men ranked safety as one of the highest vaccine uptake barriers. Moreover, 72.0% responded positively to the statement "worrying that HPV4 vaccine isn't safe" (Sledge, 2015, pg. 839). Results showed a relationship with intention to vaccinate and perceived barriers, $r(63) = -.230$, $p = < .05$. Additional studies reported vaccine safety as a concern (Allen et al., 2012; Cunningham-Erves et al., 2018; Fu et al., 2017; K. V. Galbraith-Gyan et al., 2019; Sanders Thompson et al., 2012; Strohl et al., 2015; Thompson et al., 2011).

Vaccine harm was depicted by potential side effects. Cunningham-Erves et al. (2018) completed a mixed methods study to investigate the role that attitudes, subjective norms, and

variables (culture, racial pride, spirituality) had on AA mothers' intention to vaccinate. Mothers reported unknown vaccine effects and possible long-term risks as a deterrent to acceptance. Sanders Thompson et al. (2012) described fears of infertility, death, nausea, pain, dizziness, and autism. Fu et al. (2017) surveyed 400 AAs in Washington, D.C. health centers which 39.7% stated "too many vaccines, it can ruin his or her immune system" (p. 804).

**Benefits**

Protection from disease can be an incentive prompting vaccine acceptance (Cunningham-Erves et al., 2018; Galbraith-Gyan et al., 2019; Hamlish et al., 2012; Sanders Thompson et al., 2012). Hamlish et al. (2012) and Sanders Thompson et al. (2012) applied a qualitative research design to investigate factors effecting acceptance by interviewing African American parents. Protection from the consequences of sexual activity was a theme when choosing to vaccinate for both studies. Moreover, motivation in Hamlish et al. (2012) stemmed from personal experience with cervical cancer; out of 12 mothers with cervical dysplasia / cervical cancer, seven had their daughters vaccinated.

Results were similar among college students. A cross sectional descriptive study was conducted by Sledge (2015), Sledge (2015b), including 68 AA men, and Bynum et al. (2012), including 363 AA women. Both studies utilized a survey reflecting the Health Behavior Model constructs and the intent to vaccinate. Bynum et al. (2012) showed a significant relationship ($p < .01$) between perception of vaccination benefit and vaccine acceptability. Although perceived benefit was an influential factor in HPV uptake, males were less likely to see the vaccine's benefit compared to women ($t = 3.30$, $p < .01$). However, with a higher perception of benefit, men were more willing to get vaccinated (Sledge, 2015b).

On the other hand, vaccine refusal can be provoked by limited exposure to vaccine benefits (Fu, Zimet, et al., 2019). Plus, not all participants believe vaccines can prevent disease. In Thompson et al. (2011), 71% (n=88) AA adults believed that vaccines are important method to preventing disease. However, only n=65 (54%) believed cervical cancer can be prevented through the HPV vaccine.

## Discussion

The HPV vaccine is just one strategy to prevent HPV-related cancers. Although many people are hesitant to receive it, the vaccine is effective. Cultural factors play a critical role in the decision to vaccinate. Themes in the literature revealed that various cultural factors influence HPV vaccine acceptance amongst the African American community.

The Church has historically been a place of refuge and resource in the African American community. Spiritual / religious factors that are relevant for AAs include releasing their problems to God, connecting with a church family, and distinguishing the body as God's temple (Thomas et al., 2012). Since faith plays such a significant role in life, prayer, is often used for guidance in many healthcare decisions (Sanders Thompson et al., 2012) such as coping with HIV status support through the disease process (Maragh-Bass et al., 2021) or during an advanced-stage cancer diagnosis (Campbell et al., 2010).

Many studies showed a reliance on physician recommendation and expertise for HPV vaccination. Without a recommendation, missed opportunities occur. According to Allison et al. (2016), 50% of family practice physicians and 33% of pediatricians bypass the HPV vaccine discussion due to insufficient time, expected parental refusal, and disbelief of a child's sexual activity. Missed opportunities are common in healthcare. In Singleton et al. (2005), only 4.4%

(n=6) of AA older adults received a pneumonia vaccine recommendation. Colorectal screening was not done by 46% AAs due to lack of recommendation (May et al., 2015).

As a result, the literature suggests receiving a recommendation can inspire vaccine acceptance. Studies show that AA adults report they receive the flu vaccine because it was strongly recommended by their provider (Bazargan et al., 2020; Quinn et al., 2016; Singleton et al., 2005). After receiving a recommendation, AA adults aged 65 years or older were 3.2 times more likely to receive a flu vaccine (Bazargan et al., 2020). Regardless of the type of vaccine, physician recommendation is a significant factor.

Even though a physician recommendation is important, some research studies show many AAs have carry a great amount of mistrust towards the health care system and providers. This mistrust stems from historical medical experiments such as the Tuskegee Study, Henrietta Lacks, and surgical procedures by Dr. J. Marion Sims which were all deceptive in their true intention which caused harm, and in some cases, death (Ball et al., 2013; Wall, 2006). Addressing mistrust with AAs is a key component for acceptance. Open and honest communication can build trust in the health care system and facilitate collaborative relationships with physicians.

Unfortunately, mistrust influences the choice to participate in care. In Jamison et al. (2019), an AA women expressed concern about the flu shot due to perception of historical medical abuses of AAs and feared potential of unknown current abuse. Furthermore, AA men, feeling a greater amount of mistrust, had a higher odds of delays in preventing screening (blood pressure / check-up) (Hammond et al., 2010; Powell et al., 2019). Additionally, a sense of mistrust even effects medication acceptance; AA HIV-infected adults reported mistrust was a significant factor in antiretroviral therapy adherence (Dale et al., 2016) and influenced the willingness to take pre- exposure prophylaxis (PrEP) (Cahill et al., 2017).

Since attitudes are a strong predictor of vaccine acceptance, negativity can discourage vaccination (Fu, Haimowitz, et al., 2019b). Fu, Zimet, et al. (2019) reported increased vaccine refusal occurred due to more exposure to anti-HPV vaccine material or decreased pro-HPV information. On the other hand, more positive vaccine attitudes may result in a higher likelihood of acceptance**.** In adults aged 50 or older, positive attitudes in Influenza vaccine protection was related to higher vaccine acceptance (Niyibizi et al., 2016). AAs aged 65 or older were more likely to get the Influenza vaccine if they believed it was more effective (Wooten et al., 2012).

A prominent theme throughout the studies was a lack of knowledge / awareness of HPV and the connection to cervical cancer. Insufficient knowledge is common regarding vaccines. For example, approximately 40.3% (n=63) of AA adults aged 65 or older were unaware the pneumococcal shot existed (Singleton et al., 2005). As a result, education should disclose side effects, address safety concerns, and promote positive benefits about the vaccine.

Because the HPV vaccine is optional for school admission, it is inconsistently addressed in physician offices with parents. So, they frequently reach out to their social network. Fu et al. (2019) reported 82% of parents soliciting family members for direction usually from an average of two to three people. Although family members offer advice, they are often not well informed on the subject. Therefore, nurses are a pivotal resource in educating, encouraging, and answering patient questions so patients will not rely only on their social networks for health care advice.

**Limitations**

There are several limitations for this review. The literature search was limited to three databases; thus, additional databases may have revealed other sources. Articles were omitted if the focus was predominantly on cervical cancer, adolescents, and other races. Plus, articles were excluded based on inadequate sample size of  having less than 50% representation of AAs. All

populations were age 18 years and over, but limited research focused on women aged 26 and over as well as males of all ages. Two articles reported data collection before the vaccine approval data for men, but attitudes of the HPV vaccine were still included as valuable information on the decision to vaccinate.

### Implications for Future Research

Future research related to HPV vaccine acceptance in the AA community should focus on implications of culture. Cultural factors are important and can influence vaccine decisions. Although cultural factors, such as mistrust, was inconsistently acknowledged as an influential factor, medical mistrust is deeply ingrained element in the African American culture. Therefore, it should be explored fully to assess if it truly effects health care decisions.

Additional research should include the young adult perspective from ages 18-26 years. Because of high rates of sexual activity in teenagers and college-aged students, it is crucial to gain their perspective to develop targeted prevention strategies for HPV (Bynum et al., 2011). Possible influential factors may include social media. With the popularity of social media among young adults, it would be valuable to determine if how it influences health care and the decision to vaccinate.

## Conclusion

HPV and cancer are major health issues amongst the African American community. Multiple factors influence vaccination decisions. A deeper understanding of cultural values, beliefs perceptions related to HPV vaccination is indicated and needed to promote preventative care in the African American community. Future research is critical to understand the reasons behind the low vaccine acceptance. Therefore, nurses can be better prepared to provide targeted cultural education, interventions, and culturally congruent care for the African American

community. Also, this information can assist in the development of targeted programs and initiatives to fit the needs of the AA population. As a result, more individuals may agree to vaccination; thus, potentially lowering the incidence of cancer and even death.

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Table 1

*Keywords*

| |
|---|
| **PubMed** |
| Immunization/psychology, Papillomavirus Infections, papillomavirus vaccines, Vaccination Coverage, Vaccines, HPV Infection*, HPV Vaccin*, HPV4 Vaccin*, Human Papilloma Vaccin*, Human Papilloma Virus Vaccin*, Human Papillomavirus Infection*, Human Papillomavirus Vaccin*, Immunization Program*, Immunization, Immunis*, Immuniz*, Papillomaviridae, Papillomavirus, Vaccination Coverage*, vaccination, Uterine Cervical Neoplasms/prevention and control, Uterine Neoplasm*, Pre-Exposure Prophylaxis, Primary Prevention |
| AND |
| African American*, Black*, BIPOC, Vulnerable Population* |
| AND |
| Adult*, Young Adult*, Middle Age*, aged, Adult |
| AND |
| Attitude to Health; Patient Non-Adherence; Patient Acceptance of Health Care; Patient Compliance; Acceptance of Health Care*; Nonadherence; Non-Adherence; Noncompliance*; Non-Compliance*; Patient Adherence*; Patient Non Adherence; Patient Nonadherence*; Decision Making; Healthcare Disparities*; Health Knowledge, Attitudes, Practice |
| **CINAHL** |
| HPV Infection*, HPV Vaccin*, HPV4 Vaccin*, Human Papilloma Vaccin*, Human Papilloma Virus Vaccin*, Human Papillomavirus Infection*, Human Papillomavirus Vaccin*, Immunis*, Immuniz*, Immunization/psychology, Papillomavirus Infections, Papillomavirus, |
| Primary Prevention, Vaccination Coverage*, HPV vaccine*, Human papillomavirus (HPV) vaccine*, human papillomavirus vaccine*, Immunization Programs, Immunization, Papillomavirus Infections, Papillomavirus Vaccine, Papillomaviruses, Pre-Exposure Prophylaxis, Uterine Neoplasms, Vaccination Coverage, Vaccines |
| AND |
| Non-Adherence, Patient; Patient Acceptance of Health Care; Patient Non Adherence; Patient Nonadherence*; Patient Noncompliance; Acceptance of Health Care*; Compliance; Decision Making; health attitude*; health care disparit*; health care inequalit*; health care inequit*; health condcordance*; health disparit*; health inequities; Healthcare Disparit*; healthcare disparit*, healthcare inequalit*, healthcare inequit*, Attitude to Health, Decision Making, Healthcare Disparities; non-adherence; noncompliance; non-compliance; Non-Compliance*; |

noncompliant; non-compliant; Patient Adherence*; Patient Compliance; Patient nonadherence, Patient Non-Adherence; Attitude to Illnes*

AND

African American*, African American*, Black American*, Black people, Black*, Blacks, Special Populations, minorities, people of col*, vulnerable population*

AND

Belief*, Cultur*, Custom*, Ethnology, Prayer*, Religio*, Spirituality, Belief System, Faith , Religion and Medicine, Religion and Religion, Acculturation, Lifestyle

AND

Adult*, Adult aged, Middle Age*, Young Adult*

**EMBASE**

'Immunization/psychology; 'Papillomavirus Infection*; 'papillomavirus vaccines ; 'Vaccination Coverage; 'Vaccines; 'HPV Infection*; HPV Vaccin*; HPV4 Vaccin*; Human Papilloma Vaccin*,'Human Papilloma Virus Vaccin*,'Human Papillomavirus Infection*; Human Papillomavirus Vaccin*; Immunization Program*; Immunization; Immunis*; Immuniz*; Papillomaviridae 'Papillomavirus, Vaccination Coverage*; vaccination ; Immunization/psychology; Uterine Cervical; Neoplasms/prevention and control; 'Uterine Neoplasm*; 'Pre-Exposure Prophylaxis; Primary Prevention

AND

(African American*, Black, Blacks, BIPOC, African Americans, Vulnerable Population*)

AND

Adult*; Young Adult*; Middle Age*; aged, Adult

AND

Attitude to Health; Patient Non-Adherence; Patient Acceptance of Health Care; Patient Compliance, Acceptance of Health Care*; Adherence, Patient; Compliance; Patient, Compliance; Health Knowledge, Attitudes, Practice; Nonadherence; Non-Adherence; Noncompliance*; Non-Compliance*; Patient Adherence*; Patient Non Adherence; Patient Nonadherence*; Decision Making; Healthcare Disparities*; Healthcare Disparities; Attitude to Illness

AND

Belief*, Ethnology, Religio*, Prayer*, Spirituality, Religion, Spirituality Cultur*, Custom*, Culture, Acculturation, Lifestyle, Religion and Medicine,

Table 2

*Matrix of Articles*

| **Author/ Year** | **Purpose** | **Sample / Setting** | **Findings** | **Limitations/ Recommendations** | **Design/ Analysis** | **Quality** |
|---|---|---|---|---|---|---|
| Allen, J. D., De Jesus, M., Mars, D., Tom, L., Cloutier, L., & Shelton, R. C. (2012). | To investigate attitudes and knowledge about the HPV vaccine amongst different racial groups. | n = 64<br>72% Women<br><br>59% Black<br>23% White<br>19% Hispanic<br><br>Recruited from Boston health or social service agencies<br><br>Mean age =46 | **Overall**<br>Not enough information;<br>Preferred info from daughter's physician; viewed television commercials<br><br>**African American**<br>Fathers felt decision was the female family member's decision<br>Mothers felt daughter's input on vaccine was not necessary for decision<br>Discussed long term side effect concerns<br>Mistrust with drug companies | **Limitations:**<br>Convenience sampling<br>No intra-ethnic comparisons<br><br>**Recommendations:**<br>Information for parents<br>Increased interventions focused on provider communication and education<br>Address mistrust amongst drug companies. | **Design:**<br>Qualitative with focus groups<br><br>**Analysis:**<br>Data coded into themes | 57% |

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| Bryer, J. (2014). | Explore in African Americans the association of HPV attitudes, behavior belief, with HPV vaccine intentions. | N= 262 African American parents of daughters aged 9-17 from three educational opportunity and a northeastern public college 10,000-100,000 | **Intention**<br>49% extremely likely to vaccinate daughters<br>20.7% were likely to vaccinate<br>28.3% -were extremely unlikely<br><br>**HPV Vaccine Attitude**<br>mean score of (M = 4.5, SD = 1.57) parents likely had a positive attitude with vaccine<br><br>**HPV Vaccine Behavioral Belief**<br>(M = 91, SD = 41) parents had less favorable beliefs about HPV vaccination | **Limitations:**<br>Only one geographic area. New instrument lacked comparison potential.<br><br>**Recommendations:**<br>Education on vaccine benefits, effectiveness, and risk of cancer Trusted community members should deliver education. | **Descriptive**<br>Correlation<br><br>**Analysis:**<br>Descriptive & Correlation-al analysis Pearson Correlation / chi-square Baron and Kenny's test for mediation | 81% |
| Bynum, S. A., Brandt, H. M., Friedman, D. B., Annang, L., & | Men and women were studies to explore any differences with HPV knowledge, beliefs, and | N= 575 college aged African American men and women from Historically Black Colleges in southeastern United States | Females preferred information<br><br>Health care provider, pamphlets and then health websites | **Limitations:**<br>Nonprobability sample / oversample men<br>Self-report<br>Data on men's attitudes was collected before approval of vaccine | **Design:**<br>Cross Sectional<br><br>**Analysis:**<br>SPSS 17.0<br>Descriptive statistics<br>T tests | 76% |

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|---|---|---|---|---|---|---|
| Tanner, A. (2011). | acceptance of vaccine. | n=212 men<br>n=363 women<br><br>Mean age =20.24 | 75% students were familiar with HPV (women 85.9% vs men 56.9%)<br><br>Women (95%) heard of the HPV vaccine versus men (65.7%)<br><br>76% were interested in vaccine.<br><br>Males perceive less benefits, reported fewer cues to action | **Recommendations:**<br>Health promotions / interventions target Black men<br>Campus based health education on HPV, vaccine, and related disease | Chi-square test | |
| Bynum, S. A., Brandt, H. M., Annang, L., Friedman, D. B., Tanner, A., & Sharpe, P. A. (2012). | To investigate the acceptability of HPV vaccination and the influence of cultural factors | N= 363 college aged African American women from Historically black colleges in southeastern United States<br><br>Mean age =20.31 years | 75.8% report HPV vaccine acceptability<br><br>Vaccine acceptability was influenced by higher perceived benefits, more cues to action, sexual and sexually transmitted, and less racial pride | **Limitations:**<br>Non-random sample<br>Self-report data and cross-sectional data<br><br>**Recommendations:**<br>Build culturally appropriate programs and education focusing on benefit | **Design:**<br>Cross sectional sample (male/female)<br>Focus on females<br><br>**Analysis:**<br>SPSS (version 17.0)<br>Pearson correlation | 76% |

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| | | | | | Logistic regression analysis Chi-square test | |
| Clark, C. R., Baril, N. C., Achille, E., Foster, S., Johnson, N., Taylor-Clark, K., … & Viswanath, K. (2014). | To explore preferred sources / channels to receive health education on HPV vaccinations well as their perceptions of their information sources. | N=25 Black mothers of girls aged 7 to 20 living in low socio-economic areas in Boston, Massachusetts<br><br>Income below poverty level<br><br>Ages 30 or older<br><br>median age = 43<br>(Range, 30–67)<br><br>All had incomes below poverty level | Focus group themes:<br>*Knowledge*-Various levels<br>*Trust and Preferred Source of information*-Health care providers-Participants double check physician information sources and process information.<br>Family members - (mother or older relative)<br>Friends in health care, internet, brochures, textbooks<br><br>*Common source of info*-Television, Doctors, Health care facilities, Internet | **Limitations:**<br>Not generalizable-focused only in a certain area in Boston<br>Did not focus on child/caregiver or child/physician relationships<br>Participant no show to focus groups<br><br>**Recommendations:**<br>Larger studies / different locations<br>Physician engagement with African American patients | **Design:**<br>Community-based participa-tory research (CBPR) (Include community organizations, residents, researchers)<br>Qualitative study with 5 focus groups<br><br>**Analysis:**<br>NVivo 8 – Thematic analysis | 98% |

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| | | | *Other sources*- Brochure and flyers, Community workshops health vans, information tables | | | |
| Cunning-ham-Erves, J., Forbes, L., Ivankova, N., Mayo-Gamble, T., Kelly-Taylor, K., & Deakings, J. (2018). | Explore the influence of attitudes and variables related to culture, HPV information and knowledge on HPV vaccination | N= 237 for quantitative and n= 9 for qualitative<br><br>All African American women aged 19 and over in Alabama Recruited from community settings<br><br>Mean age=35<br><br>Income less than 40,000 (56.5%) | Low HPV vaccination was influenced by perceived barriers High HPV vaccination was influenced by higher perceived benefits, susceptibility, subjective norms, and culture: future-time orientation scores. Negative vaccine information was related to lower intention<br><br>**<u>Qualitative themes</u>**<br>*Interpersonal influences*<br>Positive relationship with physician / recommendation | **Limitations:**<br>Convenience sample with a focus on daughters only<br>Self-report leading to social desirability /response bias<br>Lack of knowledge with mothers<br>Time lapse of the sequential mixed methods design<br>Online survey so unsure of who completed survey<br><br>**Recommendations:**<br>Increased number of African American participants in all areas including males.<br>Compare results with other races | **Design:**<br>Mixed methods<br><br>**Analysis:**<br>**<u>Quantita-tive</u>**<br>Chi square<br>*t* test analysis<br>Logistic regression<br><br>**<u>Qualitative</u>**<br>NVivo (version10)<br>Thematic analysis of qualitative data (within case and cross case analysis) | 81% |

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| | | | *Barriers*<br>Limited knowledge / lack of information<br>Mistrust in pharmaceutical companies<br>Vaccine safety / effectiveness<br>Limited trials with Black women<br>Did not believe daughter was currently having sex<br>Mandate interferes with personal/ religious rights<br>Lack of support for AICP recommendations | | | |

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| Fishman, J., Taylor, L., & Frank, I. (2016). | Investigate the influence of awareness on the uptake of HPV vaccination | n = 149 parents<br>n= 211 adolescents<br><br>95.2 % Black<br><br>Low-income Philadelphia neighborhood<br><br>10,000-30,000<br>48% <10, 000 | 57.1% were aware of (1) HPV, (2) cervical cancer, (3) HPV vaccination, and (4) news or advertising about HPV Vaccination (94% were aware of cervical cancer / 66% aware news or advertising)<br>No significant difference in HPV vaccine uptake based on level of awareness | **Limitations:**<br>Self- report (Recall bias)<br>Unmeasured cofounders<br><br>**Recommendations:**<br>Evidence based behavior interventions for high-risk populations | **Design:**<br>Longitudi-nal cohort design<br><br>**Analysis:**<br>SAS-9.3<br>Descriptive summary statistics *t* test / Wilcoxon test / Fisher's exact test<br>Predicted probability<br>Logistic regression model | 71% |

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|---|---|---|---|---|---|---|
| Fu, L. Y., Zimet, G. D., Latkin, C. A., & Joseph, J. G. (2017). | **Purpose**: Investigate connection of HPV vaccine acceptance, health care provider trust. and the strength of recommend-ation | N=400 African American men and women with children aged 10-12<br><br>Teaching Hospital in Washington, DC.<br><br>Mean age 37.9 | **Vaccine acceptance**<br>66.7% -very strong recommendation<br>56.1%-somewhat strong<br>23.8%-not very strong<br>**Vaccine acceptors**<br>50% believed it is experimental<br>39.7% can destroy a child's immune system.<br>**Vaccine Beliefs**<br>Refusers were one point lower than vaccine acceptors<br>HPV vaccine was associated with trust in HCP<br>Higher odds of children receiving vaccine with a stronger recommendation | **Limitations:**<br>Conducted in medical setting<br>No determination of causality<br>Participants' awareness of study may influence vaccine acceptance<br><br>**Recommendations:**<br>Scripted recommendations<br>Build interventions to include vaccine benefits from all types of sources | **Design:**<br>Structured Survey before and after physician visit<br><br>**Analysis:**<br>Multivari-able logistic regression<br>Bivariable statistics<br>Fischer's exact test<br>Chi-square tests | 69% |
| Fu, L. Y., Zimet, G. D., Latkin, C. A., & Joseph, J. G. (2019). | To investigate the effect social network advice on HPV vaccination. Specific aims include trust | N= 353 Black parents of children aged 10-12 | 80% trust family members; 80% trust friends with "some" or "a lot" for vaccine advice<br>60% trust other community | **Limitations:**<br>Not generalizable-conducted in one academic hospital<br>Self-report of advice given | **Design:**<br>Exploratory Structured survey<br><br>**Analysis:** | 71% |

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| | and composition of recommend-dation, vaccine different viewpoints. | Washington, DC health centers<br><br>Median age = 37[32,41]<br>45.3% less than high school graduation | members at least "some."<br>Most parents have 2 to 3 people who provided them with vaccine advice<br>15% reported that half discourages vaccine child<br>54.4% children received the vaccine same day as study | **Recommendations:** Compare characteristics of advice networks | Stata - version 13.1<br>Wilcoxon rank-sum tests<br>Chi-square tests<br>Fisher's exact tests.<br>Exploratory factor analysis | |
| Galbraith-Gyan, K. V., Lechuga, J., Jenerette, C. M., Palmer, M. H., Moore, A. D., & Hamilton, J. B. (2019). | **Purpose:**<br>Utilize PEN-3 conceptual framework with African American mothers/ daughters to investigate the effects of culture on HPV vaccination | n= 28<br>AA mothers<br><br>n=34<br>AA daughters<br>Recruited from New York salons, libraries, health departments, and churches<br><br><10K –>50K income levels above $30,000 annually | **<u>Mothers:</u>**<br>Positive: Vaccines prevent mortalities, Prevents HPV/ cervical cancer, Physician recommendation; Social network (friends, family, church)<br>Negative: Side effects, Lack of awareness /knowledge, Influence on premarital sex, | **Gaps:**<br>Include more diverse clinical trials<br><br>**Recommendations:**<br>Design focused educational intervention on African American mothers/ daughter | **Design:**<br>Qualitative-Grounded Theory<br><br>Semi-structured interviews<br><br>**Analysis:**<br>Theoretical sampling/ comparative analysis | 83% |

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|---|---|---|---|---|---|---|
| | | mean age of 42.6 years (SD = 6.2) | Negative media messages<br>Uninformed physician recommendation,<br>Communication between mothers/daughters<br>Religion was not a factor<br><br>**<u>Daughters</u>**<br>Positive: Vaccines are beneficial, everyone should get it<br>Social network (friends, family)<br>Negative: Side effects, ineffective, unsafe | | | |
| Hamlish, T., Clarke, L., & Alexander, K. A. (2012). | To explore hindering factors along with motivating factors effecting the decision to obtain the HPV vaccination | n= 19 mother / daughter pairs from South Side Chicago<br><br>Recruited from federally qualified health center | Lack of health literacy undermined parents' confidence in deciding on vaccination<br>Personal Experience with Cervical Cancer and did not want | **Limitations**<br>Snowball recruitment method<br><br>**Recommendations**<br>Create culturally based HPV education<br>Validate physician guidelines on recommendations | **Design:**<br>Qualitative method<br><br>**Analysis:**<br>Data was coded, and themes identified | 76.% |

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| | | | daughters to feel the same pain<br>Protect daughters against disease<br>Reliance on Physician recommendation and expertise | | | |
| Maness, S. B., Reitzel, L. R., Watkins, K. L., & McNeill, L. H. (2016). | To investigate the relationship of sociodemographic factors with HPV vaccination attitudes and knowledge amongst church going African Americans. | N=308 African American women aged 18 -83 from a Houston, Texas Baptist Church<br><br>age 18 to 83 (M=52.28, SD = 13.83).<br><br><40,000/year - >/= $40,000/year<br><br>66% >/=$40,000 | 66.4% vaccination should be distributed to boys and girls<br>4.7% vaccine should not be given<br>(18–39 years) - greater likelihood of a positive attitude toward vaccinating young daughters and greater awareness<br>Knowledge of linkage with HPV to non-cervical cancers was associated to vaccinate sons but not daughters | **Limitations**: Convenience sample and no men<br>Did not address insurance, socioeconomic status, and vaccination attitudes for sons<br><br>**Recommendations:** Include participants that do not attend church, different levels of education, and vaccine compliance | **Design:** Exploratory with surveys<br><br>**Analysis:** Linear regression, Chi-square analysis, Logistic regression analysis | 64% |

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|---|---|---|---|---|---|---|
| Sanders Thompson, V. L., Arnold, L. D., & Notaro, S. R. (2012). | **Purpose:** Study cultural factors that determine vaccine decision making **Variables:** costs, religious issues, youth sexuality provider recommend-ation, vaccine safety | N=30 (25 women and 5 men)<br><br>African Americans from St. Louis with one daughter<br><br>Mean age 42.4 years (range: 26–60) | Physician input is important. Vaccine should be decided by parent, usually mother Side effects were a concern. More urgency to vaccinate if daughter was sexually active. Religion did not influence decision. | **Limitations:** Lack of diversity among interviewers Lack of generalizability Completed before approval of Gardasil Difficult to count refusal rates<br><br>**Recommendations:** Additional studies HPV vaccine addressed by healthcare providers | **Design:** Community sampling strategy Self-admini-stered survey Qualitative interview<br><br>**Analysis:** Transcribed and coded | 64% |
| Shao, S. J., Nurse, C., Michel, L., Joseph, M. A., & Suss, A. L. (2015). | To study perceptions and attitudes of HPV Vaccine in Caribbean American and African American parents and children. | N=128 adolescent boy 13-19 n= 92 parents<br><br>55% African American Other from adolescent clinic Ages <40-61+ 47% = <40 35% high school graduate | Significance in knowledge of HPV linked to cervical cancer 68% vaccine acceptability 51.4% parents felt it was unnecessary | **Limitations:** Convenience sample Small sample sizes Self-report information Limited generalizability Unable to determine causality<br><br>**Recommendations:** Explore the connection of acceptance and vaccine uptake | **Design:** Cross sectional survey<br><br>**Analysis:** SPSS (v.21) Chi-square analysis | 48% |
| Sledge, J. A. (2015). | To understand HPV4 factors | N= 68 African American men | 85% heard of HPV | **Limitations:** | **Design:** | 79% |

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| | and vaccination acceptability among African American men | from universities in St. Louis, Missouri<br><br>Mean age=20.71 | 38.2% aware of vaccine for women / 13.2% aware of vaccine for men<br>Perceived benefits predicted HPV intention.<br>Perceived barriers were significant in intention -1) cost 2) lack of insurance 3) unsafe | Self- report, Nonprobability convenience sample<br>Limited reliability / validity of instrument<br><br>**Recommendations:**<br>Research based on reliable/valid instrument | Cross sectional descriptive<br><br>**Analysis:**<br>SPSS (version 19)<br>Correlation<br>Multiple regression analysis | |
| Strohl, A. E., Mendoza, G., Ghant, M. S., Cameron, K. A., Simon, M. A., Schink, J. C., & Marsh, E. E. (2015). | To explore in African American women their knowledge of HPV, HPV vaccine, and cervical cancer. | N=215 women<br><br>Mean age 48.2 (18-70)<br><br>32% income > 40,000<br><br>Chicago | 73% had low knowledge<br>Positive association between income, having a child, education level and knowledge. | **Limitations:**<br>Convenience sample<br>Limited generalizability<br><br>**Recommendations:**<br>Educational interventions including community partnerships. Focus on healht belief modeling. | **Design:**<br>Cross Sectional Survey<br><br>**Analysis:**<br>SPSS Version 18<br>Chi-square analysis | 64% |

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|---|---|---|---|---|---|---|
| Thomas, T. L., Strickland, O. L., DiClemente, R., Higgins, M., & Haber, M. (2012). | Factors influencing HPV vaccination among African American families in rural Georgia. | N= 400 African American parents from rural Georgia counties: (36%) Burke, (36%) Screven (28%) Lincoln<br><br>Mean age=40.7<br>15,000-60,000+ (35.8%)<br>15,000-30,000 | Religion was most significant factor predicting Non-Baptists were 3.6 times more likely to vaccinate. | **Limitations:**<br>Low enrollment (35% of parents<br>Lack of generalization<br><br>**Recommendations:**<br>Educate caregivers, Study religion affiliation and cultural factors | **Design:**<br>Cross sectional descriptive<br><br>**Analysis:**<br>SPSS 19 / SAS 9.2 | 88% |
| Thomas, T., Blumling, A., & Delaney, A. (2015). | To discover the influence of religion and spirituality on health-related decisions such as HPV vaccination | N= 37 African American men and women from rural Georgia<br><br>Ages 14-71<br><br>63.9% (34-52)<br><br><15,000-80,000<br><br>39.9% (16,000-30,000) | *Spirituality*<br>Use of prayer regarding HPV related health outcome<br>Important as emotional support<br>God or a higher power determined results of HPV treatments<br>Long term health being 'in the hands of God'<br><br>*Religiosity*<br>Not connected | **Gaps:**<br>Convenience sampling<br>Not generalizable<br><br>**Recommendations:**<br>Interventions that address religiosity and spirituality<br>Faith based portions of healht education | **Design:**<br>Qualitative with focus groups<br><br>**Analysis**<br>NVivo 10<br>Transcrip-tion<br>Coded into themes<br>Compar-ative analysis | 57% |

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| | | | directly to HPV vaccination but did influence overall health issues<br>Use of church to deliver health information<br>Pastors may/may not be qualified to educate on health issues<br>"Baptist" reported increased rates of HPV vaccination | | | |
| Thompson, V. L. S., Arnold, L. D., & Notaro, S. R. (2011). | Aims: 1) to investigate among AA parents' HPV knowledge, vaccination, Pap smears, and cervical cancer<br>2) to explore intent of HPV vaccination<br>3) to determine cultural factors effecting African American parents | N= 200<br>African American men and women<br><br>Recruited from St. Louis health centers, father support center, and reproductive health center, mobile research vans, grocery stores, laundromats<br><br>Mean age 40<br>47.4% <20,000 | 62% heard of HPV<br>70% do as physician recommends but only 54% approved vaccine for daughters after recommendation<br>43.3% felt it was risky<br>Other nonmajor barriers included transportation, cost, embarrassment, unaware of where to get it and | **Limitations:**<br>Convenience sampling<br>Not generalizable<br><br>**Recommendations:**<br>Identify cultural / social attitudes and norms of AAs to develop interventions focusing on surveillance, education, vaccination, sexual behaviors, sexually transmitted infections, and relationship with cancer | **Design:**<br>Quantitative -Survey Research<br><br>**Analysis:**<br>SPSS (v17)<br>Chi-square<br>T-Test<br>Fishers Exact Test | 69% |

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| | | | possibility of increased sexual activity<br>Benefits- prevent cervical cancer, and reduce worry about daughter's health | | | |
| Watkins, K. L., Reitzel, L. R., Wetter, D. W., & McNeill, L. H. (2015). | To investigate amongst older African American women who attend church HPV knowledge and attitudes. awareness, and knowledge. | N= 795<br>African American women aged 40-80<br><br>82% (40-59)<br>Mean 52.1 | Average spiritualty score was 1.29 and spirituality / knowledge was associated with HPV awareness<br>76.8% strongly agree with the spirituality item (reliance on God for health) amongst those with HPV awareness<br>84.5% among those who had not heard of HPV | **Limitations:**<br>Everyone did not have a daughter<br>Include women who were aware of HPV<br>Did not measure HPV compliance<br><br>**Recommendations:**<br>Investigate vaccine attitudes of older women, access to care | **Design:**<br>Longitudi-nal cohort study<br><br>**Analysis**:<br>SPSS (version 19)<br>Chi- Square<br>Logistic regression analysis | 60% |

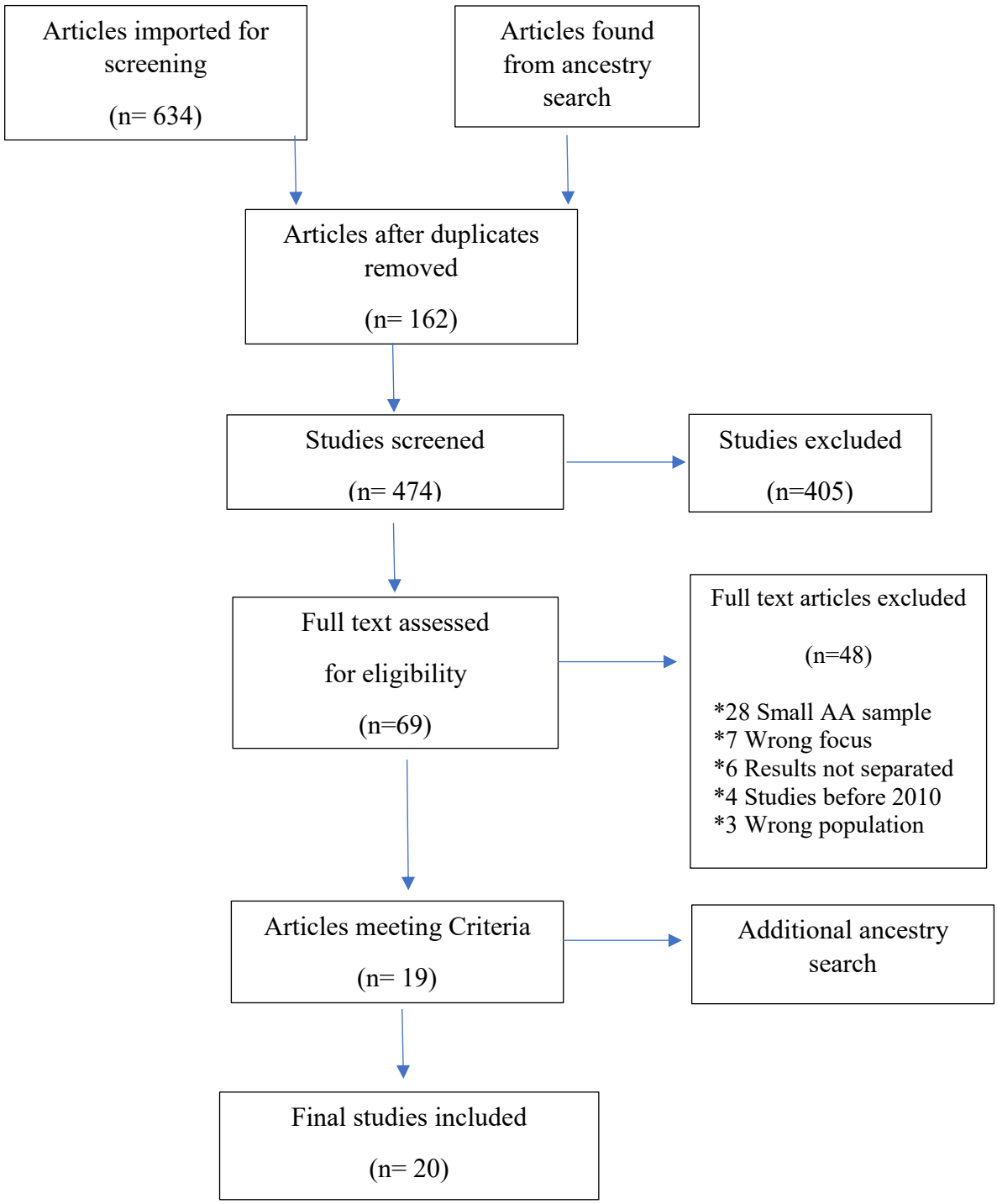
Table 3

*Themes Organized by Articles*

| Theme | Articles addressing the theme |
|---|---|
| Religion | Galbraith- Gyan et al. (2019); Sanders Thompson et al. (2012); Thomas et al. (2012); Thomas et al. (2015) |
| Knowledge | Allen et al. (2012); Bynum et al. (2011); Clark et al. (2014); Cunningham-Erves et al. (2018); Fishman et al. (2016); Galbraith-Gyan et al. (2019); Hamlish et al. (2012); Maness (2016); Shao et al. (2015); Sledge (2015); Strohl et al. (2015); Watkins et al. (2015) |
| Physician Recommendation | Allen et al. (2012); Clark et al. (2014); Cunningham-Erves et al. (2018); Fu et al. (2017); Galbraith-Gyan et al. (2019); Hamlish et al. (2012); Sanders Thompson et al. (2012); Thompson et al. (2011) |
| Social Network | Allen et al. (2012); Clark et al. (2014); Fu et al. (2019); Galbraith-Gyan et al. (2019); Sanders Thompson et al. (2012); Thomas et al. (2015) |
| Attitudes | Bryer (2014); Cunningham-Erves et al. (2018); Galbraith-Gyan et al. (2019); Maness et al. (2016); Sanders Thompson et al. (2012); Shao et al. (2015) |
| Mistrust | Allen et al. (2012); Bynum et al. (2012); Cunningham-Erves et al. (2018); Fu et al. (2019); Sanders-Thompson et al. (2012) |
| Safety | Allen et al. (2012); Cunningham-Erves et al. (2018); Fu et al. (2017); Galbraith-Gyan et al. (2019); Sledge (2015); Sanders-Thompson et al. (2012); Strohl et al. (2015); Thompson et al. (2011) |
| Benefits | Bynum et al. (2012); Cunningham-Erves et al. (2018); Fu et al. (2019); Galbraith-Gyan et al. (2019); Hamlish et al. (2012); Sledge (2015); Sanders Thompson et al. (2012); Thompson et al. (2011) |

Figure 1

*Prisma Figure of Articles*



## DISSERTATION PROPOSAL

## Understanding the Cultural Factors of Human Papillomavirus Vaccination Acceptance in African American Men

### Specific Aims

The Human Papillomavirus is prevalent in African Americans (AA); approximately 85% of sexually active people will be infected (Center for Disease Control and Prevention, 2021d). Persistent cases of HPV linger in the body and cause HPV- related cancers like anal, penile, oropharyngeal, vulvar, and cervical cancer (Center for Disease Control and Prevention, 2021b). From 2013-2017, there were approximately 4,808 HPV- related cancer cases each year (Center for Disease Control and Prevention, 2020a). However, an effective prevention strategy is the HPV vaccine. The Advisory Committee on Immunization Practices Current recommends HPV vaccines for males and females aged 9-26. Children aged 9-14 years receive two doses 6-12 months apart and those 15 years or older require three doses scheduled at 0, 2, and 6 months (Center for Disease Control and Prevention, 2021c).

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Unfortunately, vaccination rates among AA men are less than 30% (Braaten & Laufer, 2008). In 2018, vaccine rates for AA men were 29.4% compared to Caucasian and Hispanic men at 26.6% and 24.7%, respectively (Boersma, 2020). Although AA vaccine rate was higher compared to other races, statistics from 2013-2017 show AA men have a higher incidence of HPV-related anal and rectal cancer and lower survival rate of some HPV-related cancers (National Cancer Institute, n.d.).

Low HPV vaccination rate will not help to reduce the rate of HPV-related cancer and decrease the incidence of HPV infections. According to the U.S. Department of Health and Human Services (n.d.), the 2030 Healthy People goal is to reduce the rate by seven percent with

a target of 8.7% from the total rate of HPV infections of 15.1% from 2013-2016 for 20-34 year olds. Furthermore, HPV vaccination rate is lower compared to other vaccines. For example, AAs Pneumococcal vaccine rate is 59.5% and the Influenza vaccine is 39.4% (Center for Disease Control and Prevention, 2019a; National Center for Health Statistics, 2019).

Although the HPV vaccine may prevent cancer, vaccine hesitancy still exists among AA men (Bynum et al., 2011; Sledge, 2015a). The proposed research study will explore the cultural values, beliefs, and perceptions about the HPV vaccine through a qualitative focused ethnography approach. Culture will be defined as an individual's beliefs, customs, and lifestyle that influences health attitudes and the willingness to participate in health behavior like vaccination adherence. Recruitment is projected to reach a goal between 25-30 participants or until saturation of data occurs. The researcher will utilize a semi-structured interview guide with questions based on health practices in the context of culture.

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The research questions for this study will be: What are the cultural values, beliefs, and perceptions about HPV and the HPV vaccine among AA men? What cultural factors influence HPV vaccination decisions for themselves?

By understanding the cultural beliefs and values about vaccine uptake, nurses can provide culturally competent and congruent care. Furthermore, health care providers can address the critical problem of HPV-related cancer, thus, potentially decreasing the incidence rate in AAs. Although this study concentrates specifically on the HPV vaccine, the findings may help steer future research to explain vaccine acceptance with other condition such as the Influenza (Flu) or COVID-19.

## Significance

### Impact of HPV

Approximately eighty percent of sexually active individuals are infected with HPV and in 2018, it impacted 43 million people throughout the United states (Center for Disease Control and Prevention, 2022; Cleveland Clinic, 2021). AAs have a high prevalence rate of oral HPV compared to other races. From 2011-2014, the average oral HPV rate for AA men was 15.8% compared to Caucasian and Asian men at 11.7% and 4.3%, respectively (McQuillan, 2017). The rate of genital HPV is also higher at 65%, compared to Caucasian men at 43% and Asian men at 24% from 2013-2014 (McQuillan, 2017).

African Americans have a higher probability of anal and rectal HPV-associated cancer per 100,000 population of men at a rate of 2.2 for AAs versus 2.1 for Caucasians (National Cancer Institute, n.d.). Plus, AA s only have approximately a 56% survival rate compared to whites at 78% (National Cancer Institute, n.d.). The overall 5-year survival rate is 65% for individuals with oral or oropharyngeal cancer, specifically, for AAs, it is much lower at 48% (American Society of Clinical Oncology, 2020).

Since it is asymptomatic, most transmit HPV unknowingly. There is no cure or treatment, so prevention is key. The HPV vaccine protects against nine high- and low- risk HPV types; as a result, preventing 90% of HPV-related cancers and 100% of the cases of genital warts (Center for Disease Control and Prevention, 2021b; World Health Organization, 2019). Because the vaccine prevents HPV and thus HPV-related cancer, it is important to explore cultural motivations explaining vaccination decisions in AA men.

## HPV Vaccination in the Literature

**Socioeconomic factors.** Oftentimes, the literature focuses primarily on socioeconomic factors like insurance status, income, and education (Laz et al., 2012; Lu et al., 2018; Marshall et al., 2019; Silver & Kobrin, 2020; Ylitalo et al., 2013). Research on insurance showed individuals

without insurance had a lower likelihood of vaccination (Lu et al., 2018; Marshall et al., 2019; Silver & Kobrin, 2020). Income was related to vaccine uptake; a larger income resulted in higher vaccine adherence (Laz et al., 2012; Williams et al., 2013; Ylitalo et al., 2013). Research on education level showed it was associated with an increase in vaccine receipt; the higher the education, the more likely a vaccine was received for themselves or their children (Feiring et al., 2015; Restivo et al., 2018).

**Physician Recommendation.** Physician recommendation is a common theme throughout the literature. Some studies reported vaccine refusal due to lack of input from physicians (Bynum et al., 2011; Cunningham-Erves et al., 2018; K. V. Galbraith-Gyan et al., 2019; Hamlish et al., 2012; Joseph et al., 2015; Sanders Thompson et al., 2012; Thompson et al., 2011). In one study, findings showed AA mothers (n=5, 55%) stated that a physician recommendation contributed to their decision to vaccinate their daughters (Cunningham-Erves et al., 2018). Additionally, in a study of 30 AA parents, results showed that without a physician recommendation, parents were unlikely to vaccinate since most felt it was a major influential factor.

Although an HPV vaccine recommendation is crucial, many physicians neglect to address the vaccine. Research shows 30% of pediatricians and 50% of family practice physicians dismiss the HPV conversation due to hesitancy or lack of time (Allison et al., 2016). Furthermore, lack of recommendation is sometimes based on race; AAs were less likely to receive a recommendation when compared to Caucasians (Gerend et al., 2016; Ylitalo et al., 2013).

**HPV Vaccination Interventions.** Previous research focused on the influence of HPV vaccine interventions. For example, appointment reminders were investigated as a method to increase vaccine acceptance. Reminders were sent by text messages and phone calls. Text messages showed some benefit in increasing vaccine receipt for children under the age of 18

years (Hofstetter et al., 2017; Matheson et al., 2014; Rand et al., 2017). However, for 19-26 year old women, results showed no increase in vaccine uptake (Patel et al., 2014).

**Gaps in HPV Vaccine Research**

Cultural elements, such as family support, insurance, and socioeconomic factors, regarding HPV vaccination have previously been investigated. However, when studies do address culture, AA representation has been minimal recruiting less than 50% AAs in their sample (Nonzee et al., 2018; Otanez & Torr, 2018; Scarinci et al., 2007; Simons et al., 2015). Studies including samples of different races base results on the whole sample and do not differentiate their findings between races (Cui et al., 2010; Teitelman et al., 2011). Therefore, to fully understand the AA cultural perspective, it is imperative to recruit a higher representative sample as well as provide an analysis specifically describing their viewpoint.

When culture is explored with HPV vaccination, limited studies highlight medical mistrust, religion, and politics which are ingrained into AA culture (Allen et al., 2012; Cunningham-Erves et al., 2018; Fu, Zimet, et al., 2019; Thomas et al., 2015; Thomas et al., 2012). Throughout history, AAs have harbored feelings of mistrust for vaccines as well as healthcare in general (Ball et al., 2013; Wall, 2006). Some medical practices contribute to medical mistrust in the AA community (Allen et al., 2012; Ball et al., 2013; Sanders Thompson et al., 2012; Wall, 2006). For instance, the Tuskegee Study recruited AA men based on deceptive intentions to study the effects of untreated syphilis causing death, blindness and even insanity in some individuals (Center for Disease Control and Prevention, 2020b; Nix, 2019). As a result, mistrust impacts healthcare utilization, relationships with care providers, and adherence to preventive treatment like the HPV vaccine (Ball et al., 2013; Cunningham-Erves et al., 2018; Daley et al., 2010; Sanders Thompson et al., 2012).

Political views may influence vaccine hesitancy. Lack of trust in the government trickles down to a negative perception of their intentions with health promotion. Skepticism of federal agencies such as the Center for Disease Control (CDC) or the Food, Drug, and Administration (FDA), exists with accusations of pushing profit instead of health (Reverby, 2021). Additionally, conspiracy theories are spreading throughout communities with views that the government utilizes vaccines to harm or control people (Quinn et al., 2016; Reverby, 2021). Therefore, people assert their right to refuse.

This proposed research study will provide an opportunity for AA men to express their cultural values, beliefs, and perceptions on HPV vaccine behavior and contribute insight and awareness about the healthcare system in general.

**Importance to Nursing**

Findings from the proposed study can inform nurses about culturally congruent and competent care practices related to the HPV vaccine. Nurses are on the frontline providing direct care for patients. As a result, it is important for nurses to learn about culturally congruent care for vulnerable populations like AAs. Disseminating this information to nurses can help to guide their approach to care more effectively. Subsequently, they will be better equipped to promote culturally congruent, and patient centered care.

Familiarity with patients' cultural values and beliefs provides nurses and physicians with an in depth understanding of their patients and their health. Thus, providers may become less judgmental and, in the process, may positively affect patient interaction and health behaviors (Dawadi et al., 2021; Flynn et al., 2020; Koenig et al., 2014). Consequently, patients may start to build trust and feel more comfortable discussing health problems or listening to medical and nursing advice.

Lastly, as a long-term goal, the study's results can inform nurses in their approach to vaccine education. Nurses are in a pivotal position to educate patients about HPV, HPV vaccine, and HPV-related cancer during routine health care visits. Patients often seek answers about side effects, efficacy, and benefits of the HPV vaccine. Unfortunately, vaccine education is often generic and not tailored towards the needs of a population. By learning the barriers and motivating factors of HPV vaccination, nurses will understand their patients better and can provide more culturally centered education.

There is limited research regarding how cultural values effect HPV vaccine acceptance among men especially AA men. Research has focused on women since they are viewed as caretakers and thus make the vaccine decisions (Allen et al., 2012; Clark et al., 2014a; Fu, Haimowitz, et al., 2019a). However, it is critical to gain the male perspective. Plus, some studies showed men have a higher likelihood of having more sexual partners when compared to women. Only 18.6% of men reported having one sexual partner compared to 37.8% women and 32.2% men reported having eight partners or more versus only 13.7% women (Romero-Estudillo et al., 2014). Discovering factors that influence HPV vaccine will help combat HPV-related cancer and decrease the incidence of HPV cases. Since cultural values and beliefs are deeply ingrained into health decisions and can influence health behavior, the proposed study will address a deeper meaning of cultural values, beliefs, and perspectives of HPV vaccine in AA men.

## Innovation

The proposed study is innovative due to the focus of adult AA men ages 18-30, utilization of an ethnographic methodology, and the potential for identification of barriers to improve vaccine uptake. Current HPV adherence research studies primarily include Caucasian women, especially college students aged 18-26 years old (Daley et al., 2010; Vu et al., 2019).

However, studies including AAs predominantly recruit women (Cunningham-Erves et al., 2018; Galbraith-Gyan et al., 2019; Maness et al., 2016), especially with research based on families (Fu et al., 2017; Sanders Thompson et al., 2012). By not recruiting men, researchers fail to capture the unique cultural male perspective and viewpoints. The population for this study will consist of AA men ranging from age 18 years and older.

Studies generally use quantitative methods to assess HPV vaccine coverage. Data is often obtained from surveys, such as the National Immunization Survey-Teen (Dale et al.) or HPV Vaccine Attitudes (Bryer, 2014; Reiter et al., 2013). Furthermore, many quantitative studies utilize the Health Behavior Model to construct their surveys (Donadiki et al., 2014; Gerend & Shepherd, 2012). Findings from quantitative studies do not consistently address the deep significance of culture in explaining vaccine hesitancy. By utilizing a qualitative methodology of a focused ethnography, this study will capture a greater insight of AA cultural values, beliefs and perspectives influencing health behaviors like HPV vaccine acceptance or non-acceptance.

Overall, the study will explore cultural values and beliefs which may influence vaccine behavior. This is imperative for curtailing the rates of HPV and HPV-related cancer among the AA men. The findings may inform ways to address barriers effecting HPV vaccines as well as other vaccines. Culturally based care and education may boost AA patient engagement, promote access to care, and improve patient/provider relationship. The proposed study may positively impact greater HPV vaccine acceptance, improve patient outcomes, and reduce the burden of HPV on patients as well as the health system.

## Approach

### Previous Studies

A mini focused ethnography was completed to further inform nursing about the cultural perceptions of AAs regarding HPV and the HPV vaccine. Recruitment was completed through the snowball method. The inclusion criteria consisted of African Americans aged 18 and over who could speak and read English. Once deemed eligible for the study, participants were interviewed in a location of their choice.

The research question was: What are the cultural values, beliefs, and perceptions of the HPV vaccine in the African American community? A semi-structured interview guide was created by the researcher. It addressed perceptions of family, health, health behaviors, vaccine beliefs, HPV vaccine, and HPV knowledge. Interviews lasted no longer than 60 minutes or less and at the end, participants were given a $10 Target gift card for participation. During the interview, field notes were written to capture observations of nonverbal behavior. Interviews were audio recorded and transcribed through Scribd. The data and field notes were downloaded into NVivo, a software for coding and analysis. The analysis followed Leininger's Four Phases of Data Analysis (McFarland & Wehbe-Alamah, 2019).

A total of four females aged 38-45 participated. All participants had a college education; three had acquired a bachelor's degree and one had a master's degree. Three out of four were married. All of them had at least one child; at least two mothers had a daughter and three had sons. Participant occupations included a nurse, mental health professional, accountant, and financial manager. After reviewing the transcripts, data was coded into 15 distinct categories. Two patterns did emerge from the categorical data but due to a small sample, the analysis did not result in themes. Thus, the two overall preliminary patterns showed AAs were more likely to get vaccinated as a means of protection against diseases and had a lack of knowledge about HPV and the HPV vaccination.

The mini study revealed some intriguing information regarding vaccine acceptance. Although common factors were religion, knowledge, and good health were influential, surprisingly, family traditions and mistrust were only discussed by two participants. So, additional exploration in a full-scale study may show similar results.

Furthermore, important lessons were learned from the mini study to apply to a full-scale study. One lesson was recognizing that knowledge is limited regarding HPV transmission, side effects, and purpose of the vaccine. Participants need a general awareness of HPV to provide honest feedback. Therefore, the researcher should be prepared to provide a brief description if prompted. Next, additional recruitment tactics may be required. In the mini-study, participants were recruited through one gatekeeper; however, for a full-scale study, multiple gatekeepers may be required for a larger and more diverse sample. Spreading the word via social media, health centers, and universities will be advantageous. Lastly, only women participated. Although 3 out of 4 were married, only one mentioned the relevance of their husband's input on vaccines. So, directly recruiting only men may provide a different viewpoint. By applying lessons learned, the researcher proposes to complete a full-scale ethnography with AA men addressing the cultural values, beliefs, and perceptions of the HPV vaccines.

**Research Design**

The design of the proposed study is a focused ethnography. Ethnography is derived from anthropologists who have historically assimilated themselves into people's lives and culture to study their habits, behavior, and interactions. Subsequently, the ethnography methodology studies cultural values, worldviews, beliefs, and historical connections about a phenomenon (Lourdunathan, n.d.; Roper & Shapira, 2000). Ethnographies provide an understanding from the

perspective of the participant (emic view) instead of the researcher (etic view). The differences between perspectives unveils an indication of cultural factors (Leininger, 1990).

A focused ethnography concentrates on a specific topic in a natural setting, for example, how culture is incorporated into health prevention strategies (Roper & Shapira, 2000). Utilizing natural settings to discover health practices will ease participant anxiety and allow them to share their values (Leininger, 1990). Through observations and interviews, the researcher will obtain an in-depth meaning of subjective and objective data to get an extensive view of health care decisions (Roper & Shapira, 2000). Obtaining this data creates an opportunity to develop new theories or approaches to health care problems like HPV vaccination.

For the proposed study, the focused ethnography will take place in person in Pittsburgh following the CDC guidelines for social distancing or virtually across the United States via Zoom, an online teleconferencing platform. The projected participation will be 25-30 participants or until data saturation is reached. Data saturation will occur once no new data is reported. Research questions for the study include: What are the cultural values, beliefs, and perceptions about HPV and the HPV vaccine among AA men? What cultural factors influence HPV vaccination decisions for themselves?

**Sample and Setting**

Inclusion criteria consists of 1) adults ages 18-30 years, 2) born and live in the United States, 3) born and identify as male, 4) self-identify as African American/Black, and 5) able to understand, write, and speak English. If participant is unwilling to meet in person, access to computer or smart phone will be required. Recruitment will initially occur in Pittsburgh, Pennsylvania, and due to snowball sampling, it may spread throughout different cities in the United States. When contacted by potential participants, the researcher will explain the purpose

and requirements of the study. If the individual is interested, eligibility will be determined. After the participant is deemed eligible, the researcher will proceed with scheduling a date and place for the interview, whether in-person or virtual through Zoom.

For in person, the initial setting will occur in Pittsburgh, Pennsylvania, an urban region within the Northeastern part of the United States. However, participants may be recruited beyond this geographic area. Location of interviews will be determined according to the participant's preference. Suggested options will be in the participant's home or public places such as the library, university, or church. Participants will be asked to complete the interview in an enclosed room to ensure privacy during the interview. Interviews will be recorded through Zoom unless the internet connection is poor and then, it will be audiotaped. Researcher and participant will remain socially distant from each other during the interview according to compliance of current CDC guidelines.

Virtual interviews will occur online through Zoom. Therefore, participants can be located at any location throughout the United States including Pittsburgh. If participants do not feel comfortable with researcher in their home or out in public, virtual interviews can be offered. Zoom utilizes password protection to maintain confidentiality. For virtual interviews, the researcher will be at home in a private room and the participant will be encouraged to identity a private area of their choice.

Potential participants will be recruited through multiple gatekeepers in the community. Identified gatekeepers include a recent Pitt graduate, a church member of a predominantly AA church, an employee of Pittsburgh Public School system, and a nurse in an urban hospital system. The gatekeepers will be informed about the project and presented with the researcher's contact information. Since gatekeepers are trusted community members, they will be encouraged

to share information during community meetings, at work settings, church, or during personal interactions. The gatekeeper will identify potential participants and gauge interest in the study. Instructions will be given to the potential participants to contact the researcher for further screening questions and additional information regarding the study.

Additional recruitment strategies include sharing through word of mouth, social media, and flyer distribution (See Appendix A). Flyers will list a brief description of the study and the researcher's contact information for interested participants. They will be posted on social media sites, such as Facebook. Other sites include churches, bus stops, grocery stores, barbershops, and local universities such as Duquesne University, University of Pittsburgh, and Carlow University.

**Measures**

**Consent form.** The consent form will be uploaded into Qualtrics, a web-based survey platform utilized to collect data. The Qualtrics link to the forms will be emailed or texted via smart phone or computer prior to the scheduled interview. Before the interview begins, the researcher will explain the consent form (Appendix B) and allow additional time for the participant to review and ask questions. The participant will be instructed to click on the link and sign the consent with the computer mouse (for computer) or their finger (for smart phone). The researcher will download the form and add a signature through editing software. A copy will be provided and offered to the participant, and one will be retained by the researcher.

**Demographic form.** An investigator-designed demographic form (See Appendix C) will be given to participants to complete after the consent is obtained. The participant will receive a link for the form and complete it through Qualtrics for both in person and Zoom interviews. The information solicited is age, income, insurance, education level, occupation, marital status, religion, and number of children along with the children's sex, gender, and age. Participants will

fill in their age, affiliated religion, type of health insurance, and occupation. Annual income is categorized by the following according to the National Institute of Nursing Research (n.d.): a) under $15,000; b) $15,000 to $24,999; c) $25,000 to $34,999; d) $35,000 to $49,999; e) $50,000 to $74,999; f) $75,000 to $99,999; g) $100,000 and over; h) refused; and i) unknown. Marital status options are never married, domestic partnership, married, separated, divorced, or widowed. Education is measured by highest degree attained including grade school, high school diploma/GED, associate, bachelor, master, or doctorate degree. The last two questions address the number of children with a breakdown of the gender; gender choices are limited to male, female, transgender, nonbinary, and prefers not to respond.

**Semi-structured interview guide**. A semi-structured guide (See Appendix D) will be utilized to interview the participants. The guide was created by the researcher based on the Leininger's Culture Care theory which utilized the Sunrise Enabler Model to study culturally care (McFarland & Wehbe-Alamah, 2019). According to Leininger's Culture Care theory, discerning a patient's culture "world views, social structure factors, cultural beliefs or practices" is essential to provide optimal care and advance nursing practice because "these factors are closely linked and interrelated" ( p.544).

Interview questions are derived from Sunrise Enabler Model of which includes various cultural factors like religion, biological, economic, educational, environment, health care practices, and language that may influence cultural care. Additional included factors are general health beliefs, values, practices, preventative health behaviors, and vaccine acceptance. Questions may be added to the interview guide during the course of the study to address new data that may arise during the interviews.

**Data Collection**

The researcher will introduce the study to the participant disclosing each step of the process. First, the researcher will explain the consent form and allow time for the participant to review and ask questions. A copy will be given to the participant, and one will be retained by the researcher. Then, a demographic form will be provided for completion.

Once consent and demographic forms are completed, permission to record the interview through Zoom or audiotaped if there is poor internet connection. Individual interviews may take 30-90 minutes. Field notes of participants' responses and nonverbal behavior will be observed and noted by the researcher. Interviews will be transcribed through Zoom. If the interviews are audiotaped, interviews will be de-identified and the in-person interviews will be sent to a transcription company through a secure service. After the interview, participants will be informed of potential follow up interview for clarification of data during a second interview through Zoom. The researcher will answer any questions and discuss the plan to reveal the finalized results upon completion of the study. At the end, an electronic or physical $10 gift card to Target will be offered to participants. If a follow up interview is required, an additional $10 gift card will be provided.

**Data Analysis**

Descriptive data from the demographic form will be analyzed with descriptive statistics such as percentages, ranges, mean, and median. This analysis will be utilized to describe the summary of qualitative analysis. Leininger's Four Phases of qualitative Data Analysis will be used for the qualitative data. This process for data analysis includes collecting and documenting raw data, identification of descriptors and components, pattern and contextual analysis, and theme formulation (Leininger, 1990). For the first phase, the researcher will collect data from participants and take field notes during the interview. Notes and transcribed interviews will be

utilized for data analysis. Once transcribed, interviews will be entered into NVivo 12, a qualitative data analysis software.

The second phase consists of identifying descriptors or components. The researcher will read the interviews and review the field notes to interpret the contextual meeting of the data. Then, the researcher will look for similar or repetitive words, phrases, and key terms. Like terms will be sorted into the same category.

During the third phase, the established categories will be analyzed for common patterns found in the data. Similar patterns will be analyzed for major themes during the fourth phase. Data will be collected until no new data is reported and thus, data saturation is reached.

To establish credibility of the study, the researcher will document the process in detail to reveal transparency in data interpretation. The data will be reviewed and then reexamined to recheck for consistency of emerging major themes. The researcher will account for personal bias regarding HPV vaccination during the analysis process and will solicit additional expert qualitative researchers to ensure consistency of interpretation of data (Noble & Smith, 2015). Participant input will be included verbatim in analysis to support findings (Noble & Smith, 2015).

**Potential Problems and Strategies**

Recruitment problems, such as distrust of research, may lead to difficulty in recruitment. Historically, AAs have been victims of deceptive research practices so they may be hesitant to participate in research (Scharff et al., 2010). To increase trust, one strategy is to gain and maintain support of the gatekeepers, who are are recognized as trusted members of the community. Having gatekeepers involved may assist the researcher gain acceptance and relieve participant fears. Another critical technique is to maintain consistent dialogue with participants

throughout the study. The researcher will be available for open and honest communication to answer questions and address potential concerns. Furthemore, many AAs do not anticpate the benefits of research espeically since they are not consistently informed of final study results (Scharff et al., 2010). During the consent process, the researcher will discuss benefits of the proposed study as well as plans to share the completed study results.

Due to the qualitative nature of the study, in person interviews may be optional depending on the rise of COVID-19. The current Coronavirus pandemic may be a potential deterrent to engage for some participants. People may be reluctant about meeting in public or welcoming anyone into their homes because of fear of being exposed to the virus. To resolve this issue, meetings can be scheduled virtually on Zoom software to mitigate their apprehension. The challenge of persuading men to speak openly about their views may exist especially in the presence of a female interviewer. Due to the sensitive nature of the topic, participants may provide answers perceived as morally acceptable instead of relaying their true feelings. Asking clarifying questions, encouraging openness, and active listening and will be key strategies. Structuring the interview to be more of a conversation may reduce some anxiety for the participant. If necessary, the researcher will turn off the audiotape if the participant feels more comfortable.

**Protection of Research Subjects**

Duquesne University Research Institutional Review Board approval will be obtained prior to initiation of study. Ethical considerations for participants will be followed according to Article IV of Duquesne University Institutional Review Board for Human Subjects Protection. Participants will receive information about the study in advance, but the consent form will be administered at point of participation in the study. The researcher will explain the consent form

and give participants a copy. Subjects will be informed that participation is voluntary, and withdrawal can occur at any time from the study without consequences. Withdrawal procedures will be disclosed. Risks and benefits will be explained. There are minimal risks to participants but if they do experience any risks, participants will be given the option to withdrawal or discuss further with researcher.

Maintaining confidentiality is a high priority. Confidentiality will be maintained by de-identifying interviews. Audio and zoom recording will be stored on researcher's computer which is password protected. Data will be kept on an encrypted flash drive and only utilized on a password protected computer. At completion of the study, all data and documents pertaining to the study will be erased. Field notes will be stored for three years in a locked office and then shredded. If participants report any emotional suffering during the interview, they will be offered an opportunity to end the interview. If the distress continues the participant will be referred to their health care provider.

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Duquesne University
Institutional Review Board
Protocol #: 2022/01/7
Verified On 01/30/2022
Expires: No Expiration Date

Appendix A

# Let's talk about HPV!

- **Come and share your thoughts about the HPV vaccine!**
- **The purpose of the study through Duquesne University School of Nursing is to explore the culture values, beliefs, and perceptions about the Human Papilloma Virus vaccine in African American men.**
- **You will be interviewed.**
- **It will take 30-90 minutes.**
- **$20 Target Gift card**

Location

- Interviews can be done at an enclosed room in the community or virtual through Zoom

Are you eligible?

- Born and living in the U.S.
- Between the ages of 18-30
- Identity as African American / Black
- Born and identify as male
- Speak, understand, and write English

If you are interested or if you are unsure if you meet the requirements, call or email the researcher:

- Rashida Henderson, PhD Student
- 412-613-9348
- Hendersonr1@duq.edu

Rashida Henderson 412-613-9348
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Rashida Henderson 412-613-9348
Rashida Henderson 412-613-9348
Rashida Henderson 412-613-9348

Appendix B

**DUQUESNE UNIVERSITY**
**PITTSBURGH,**
**PENNSYLVANIA**

**CONSENT TO PARTICIPATE IN A RESEARCH STUDY**

**TITLE:**

Understanding the Cultural Factors of Human Papilloma Virus Vaccination Acceptance in African American Men

**INVESTIGATOR:**

Rashida Henderson, BS, MSN, MBA, CMSRN, RN
Duquesne University
PhD Student

**ADVISOR:**

Rick Zoucha, PhD, PMHCNS-BC, CTN-A, FAAN
Duquesne University School of Nursing

**SOURCE OF SUPPORT:**

This study is being conducted as fulfillment of requirements for the Dissertation for the Doctoral degree in Nursing at Duquesne University.

**STUDY OVERVIEW:**

This is a study to learn more about cultural values and beliefs about the Human Papilloma virus. The study consists of an in person or virtual interview lasting 30-90 minutes. There are minimal risks for participating in the study.

**PURPOSE:**

You are being asked to participate in a research project that seeks to investigate cultural values, beliefs, and perceptions about the Human Papilloma Virus (HPV) vaccine in African American community.

In order to qualify for participation, you must:

- Adults aged 18 years to 30 years
- Born and identify as male
- Born / living in the United States
- Self- identify as African American / Black
- Able to understand, write, and speak English.

**PARTICIPANT PROCEDURES:**

If you provide your consent to participate, you will be asked to share your thoughts, beliefs, and values about the HPV vaccine. You will be asked to complete a demographic form. In addition, you will be asked to allow me to interview and record you during the interview. You will be interviewed by yourself at an enclosed room in a community setting chosen by you or virtually through Zoom to maintain your privacy. The initial interview may take 30-90 minutes. You may be asked to participate in 1-3 interviews. The interviews will be recorded through Zoom or audiotaped and transcribed. You may be contacted for follow up information after the interview.

**RISKS AND BENEFITS:**

There are minimal risks associated with participating in this study but no greater than those encountered in everyday life. Benefits of participation include your expression of perceptions values, and beliefs may contribute to the understanding of cultural beliefs and values of HPV vaccination as an African American man.

**COMPENSATION:**

For participation in this study, you will be compensated $20 Target gift card at the completion of each interview. There will be no partial compensation if interview is not fully completed. Participation in this project will require no monetary cost to you.

**CONFIDENTIALITY:**

Your participation in this study and any personal information that you provide will be kept confidential at all times and to every extent possible. All written and electronic forms and study materials will be kept in a secure locked desk of the researcher.

All taped interviews will be secure in a locked desk drawer in researcher's work office. All participants will be assigned a random number and transcribed interviews will be connected to that number to maintain confidentiality. Notes and transcribed interviews will be kept on an encrypted flash drive and only utilized on a password protected computer. Principal investigator and principal investigator's mentor will have access to the data. Your data may appear in de-identified summaries. Data collected and utilized for published articles will maintain participants' confidentiality by not including individual names or identification factors. Data will be kept for three years then destroyed. At that time, all paper data will be discarded through

shredding procedures. Electronic information will be erased from flash drive and deleted from the computer.

**RIGHT TO WITHDRAW:**

You are under no obligation to start or continue this study. You are free to withdraw your consent without penalty or consequence at any time by informing the principal investigator through email at hendersonr1@duq.edu or phone at (412) 400-8488. All interview data will be destroyed.

**SUMMARY OF RESULTS:**

A summary of the results of this study will be provided to at no cost. You may request this summary by contacting the researchers and requesting it. The information provided to you will not be your individual responses, but rather a summary of what was discovered during the research project as a whole.

**FUTURE USE OF DATA**:

Any information collected that can identify you will have the identifiers removed and be kept for use in future related studies, and/or provided to other researchers for potential secondary data analysis. Data may be reviewed and analyzed by future researchers for publishing of articles.

**COVID-19 CONSIDERATIONS**

I understand that the researcher(s) running this study have put in place the following guidelines to address concerns related to COVID-19:

Electronic forms for consent signature, demographic data
Offered virtual options for interviews

Duquesne University
Institutional Review Board
Protocol #: 2022/01/7
Verified On: 01/30/2022
Expires: No Expiration Date

In person interviews will follow CDC guidelines of masking and social distance

**VOLUNTARY CONSENT:**

I have read the above statements and understand what is being requested of me. I also understand that my participation is voluntary and that I am free to withdraw my consent at any time, for any reason. On these terms, I certify that I am willing to participate in this research project.
I understand that should I have any further questions about my participation in this study, I may call Rashida Henderson at 412-400-8488 or Dr. Rick Zoucha at 412-396-6545. Should I have any questions regarding protection of human subject issues, I may contact Dr. David Delmonico, Chair of the Duquesne University Institutional Review Board, at 412-396-1886 or irb@duq.edu

This project has been approved/verified by Duquesne University's Institutional Review Board.

Proceeding to the next page indicates your voluntary consent to participate in this project.

Duquesne University
Institutional Review Board
Protocol #: 2022/01/7
Verified On 01/30/2022
Expires: No Expiration Date

Name_____ Date_____

Principal Investigator_____ Date_____

Appendix C

Demographic Form

1) What is your age? _____

2) Do you have a religion? If yes, what religion do you identify?_____

3) What city / state do you currently reside? _____

4) What is your marital status?

a) Never Married ___ b) Married___ c) Domestic Partnership ___

d) Separated___ e) Divorced___ f) Widowed__

5) What is your annual income (or combined annual income if you have a spouse)?

a) under $15,000 b) $15,000 to $24,999 c) $25,000 to $34,999

d) $35,000 to $49,999 e) $50,000 to $74,999 f) $75,000 to $99,999

g) $100,000 and over h) refused i) unknown

6) What type of health insurance do you have?

a) Medicaid

b) Employer-sponsored disability insurance

c) National Health Insurance

d) No Insurance/Self-pay

e) Veterans Affair/Military

f) Medicare

g) Private or group health insurance

h) Other, specify__

i) Unknown

7) What is your highest degree attained?

a) High School Diploma/GED_____ b) Associates_____ c) Bachelors_____

d) Masters_____ e) Doctorate_____

8) What is your occupation? _____

9) How many total children do you have or that you serve as the guardian? If so, how many of those children are under the age of 18?

Girls_____ Boys_____ Transgender_____Nonbinary_____Prefers not to respond_____

Appendix D

Interview Questions

1. Tell me a little about yourself.
2. Can you share with me about who you consider family and why?
3. Tell me about your family.
4. How would you define health?
    a. Do you have any major health concerns for you? For your family?
    b. Can you tell me if there are things that you think may influence your health? How about your family's health?
    c. What impact does sickness have on your family?
5. What are some things you do to keep yourself healthy? How about your family?
6. What / Who is your primary source of health information?
7. Tell me about religion. Does it play any role in your health?
    a. Are there any spiritual leaders / customs that may influence your health?
    b. Any spiritual leaders / customs that influence healht care decisions.
8. Can you share with me any practices you do to prevent health and disease? This can be things that may have been done in your family for years or things recommended by a health professional.
    a. Any health traditions?
    b. Any natural treatments?
    c. Any family customs?
9. What preventative health practices have been shared with you by our doctor that you may or may not follow?
10. Any preventative practices shared by your peer network (family, friends) that you may or may not follow?
11. Tell me about vaccines.
12. We have talked about you, your family, your health, and thank you for sharing. I'd like to switch to something more specific.
13. Can you tell me what you might know about HPV?
14. Can you tell me about the first time you heard about the HPV vaccine? What did you think you first heard about it?
15. Have you received the HPV vaccine? When?
16. What are your thoughts about the HPV vaccine now?
17. Can you tell me about how you first heard about the HPV vaccine? How do you get information about it now? Did you get any information from your health care provider?
18. When you think about the HPV vaccine, what do you think about it?
19. Would you recommend receiving the vaccine for yourself?
    a. If not, why?
    b. If yes, why?
20. How about for a family member? Why or why not?
21. What is the best way to get HPV information out?

22. When you think about the HPV vaccine, is there anything a nurse could do to assist you with your knowledge of the vaccine?
23. Is there anything else you would like to share in addition to everything we talked about?
24. Do you have any questions for me? Or about the study?
25. Thank you so much for your time. It is very much appreciated.

**Manuscript# 2**

# EXPLORING CULTURAL VALUES, BELIEFS, AND PERCEPTIONS OF HUMAN PAPILLOMAVIRUS VACCINE ACCEPTANCE IN AFRICAN AMERICAN MEN


## ABSTRACT

**Introduction:** African American (AA) /Black men have a higher rate of anal and rectal HPV-associated cancer, which the HPV vaccine can prevent. **Purpose:** This study aimed to understand the cultural values, perceptions, and beliefs of the HPV vaccine in African American/Black Men. **Method:** Through a focused ethnography, a semi-structured guide was utilized to interview 24 AA men. Inclusion criteria included identifying as AA/Black, aged 18-30 years, born and living in the United States, identify and born as male, and able to understand, read, and write English. **Results:** Through Leininger's Four Phases of Analysis, three themes emerged: 1) lack of knowledge of HPV & HPV vaccine, 2) lack of seeking care from health professionals, 3) expression of interest in the vaccine but remain hesitant based on mistrust. **Discussion:** Results showed similarities to previous literature. By learning about cultural factors influencing HPV vaccination, nurses can promote cultural congruent care and culturally appropriate education.

The Human Papillomavirus (HPV) is a common sexually transmitted disease (STD) with over 200 strains which can evolve into advanced health complications such as genital warts or cancer (Meites, 2021). In the African American (AA)/Black community, men, compared to women, have a higher rate of high-risk HPV (Lewis et al., 2018). However, it can effectively be prevented through the HPV vaccine, but adherence is low among African American/Black men. This study explored beliefs about the HPV vaccine in AA/Black Men.

**Background**

HPV is the most frequently transmitted STD; over 80% of sexually active people have contracted it during their lifetime (American Sexual Health Association, 2022; Center for Disease Control and Prevention, 2022). Statistics report that in 2018, the HPV incidence was approximately 13.5 million, diagnosed and undiagnosed (Center for Disease Control and Prevention, 2021e). Because HPV is asymptomatic, many spread the disease unknowingly. Unfortunately, there is no treatment or cure.

HPV is categorized into high and low risk. High-risk types of HPV (HPV 16, 18, 31, 33, 35, 49, 51, 52, 56, etc.) cause 60% HPV- related penile and 90% anal cancer in men, 90% cervical and 70% vaginal cancer in women, and 60% oropharyngeal cancer in both sexes (Center for Disease Control and Prevention, 2021a; Meites, 2021). Although low-risk types (6, 11, etc.) are less likely to lead to disease, they can cause 90% of genital warts.

Disparities exist for some HPV-related diseases. Although incidence rates of some HPV-related cancers are low, disparities exist. For example, Anal cancer has an annual incidence of about 3100 men of all races, but the survival rate for AAs is only 56% compared to whites at 78% (American Cancer Society, 2022; National Cancer Insititute, n.d.). Survival rate is lower when compared to Whites with oropharyngeal cancer at 64% vs 80% and rectal cancer 63% vs

72%, respectively (National Cancer Insititute, n.d.). Furthermore, an additional reason why HPV vaccine research is significant is the rates for genital warts are higher in AAs at 65% compared to Whites at 43.7% (Lewis et al., 2018).

Although the HPV vaccine prevents 90% of HPV-related cancer, less than 50% of AAs receive at least one dose (Center for Disease Control and Prevention, 2021b). Furthermore, AA rates are significantly lower for men at 29.4% than for AA women at 44.7% (Boersma, 2020; Center for Disease Control and Prevention, 2021b). Current HPV vaccine recommendations are two to three injections for males and females aged 9-26 years old. Children aged 9-14 years receive two doses 6-12 months apart, and those 15 years or older require three doses scheduled at 0, 2, and 6 months (Center for Disease Control and Prevention, 2019b).

The literature describes various factors that influence vaccine decisions, such as insurance, mistrust, and age (Dang et al., 2021; Nan et al., 2019). Limited research has focused on cultural factors, especially among AA men. Amboree and Darkoh (2021) reviewed 47 studies addressing barriers to HPV vaccination. Results showed three overarching themes influencing HPV vaccination: a) HPV knowledge gaps and lack of physician recommendation, b) sense of mistrust and questions about safety, and c) cultural and religious beliefs (Amboree & Darkoh, 2021). However, of those 47 studies, only Sledge (2015) focused on AA men and the others were predominantly AA women or consisted of a mixture of different races. Sledge (2015) recruited African American St. Louis students aged 18-26 years old to study HPV beliefs and knowledge. The top three factors influencing HP vaccine included concerns over health insurance covering vaccine, vaccine cost, and safety.

Researching cultural factors associated with HPV vaccine uptake is critical. “Culturally based care factors influence the health, well-being, illness, or death of individuals” (Leininger,

2002, p. 190). Leininger's Culture Care theory states that discerning a patient's "world views, social structure factors, cultural beliefs or practices" is essential to provide optimal care and advance nursing practice because "these factors are closely linked and interrelated" (p.544). This study can provide nursing with a greater understanding of vaccine uptake factors which can influence culturally competent and congruent care and patient education. Thus, health care providers can address the critical problem of HPV-related cancer, and potentially decreasing the incidence rate in AA men.

**Purpose and Research Questions**

The aims of this study are to understand the cultural values, perceptions, and beliefs of the HPV vaccine in African American/Black men. The research questions for this study were: 1) What are the cultural values, beliefs, and perceptions about HPV and HPV vaccine among AA men? 2) What cultural factors hinder or contribute to the decision to vaccinate?

**Method & Research Design**

This study's method was a focused ethnography specific to researching cultural values, beliefs, and historical connections about a phenomenon (Lourdunathan, n.d.; Roper & Shapira, 2000). A focused ethnography is an "interactive process of inquiry between the investigator and participants" to provide a perspective of the participant (etic) view instead of researcher (etic view) (Roger & Shapira, 2000, p. 11). As a result, the difference unveils an explanation of cultural factors (Leininger, 1990). The researcher is able to obtain an in-depth meaning of data through interviews and observations to get a comprehensive view of HPV vaccination (Roper & Shapira, 2000).

Participants were evaluated to determine eligibility and if eligible, interviews were scheduled. Before the interview, a consent form and demographic form was provided through

Qualtrics, an electronic platform for collecting data. Participants gave permission to record the interview through Zoom or digital voice recorder which were completed individually using a semi-structured interview guide. Field notes of participants' responses and observed nonverbal behavior and context were written down as field notes by the researcher during the interview. After completing of the interview, participants were offered a $20 gift certificate to Target and for each follow-up interview.

**Setting**

The study occurred virtually and in person following current CDC recommendations related to COVID-19 guidelines. The in-person location was a large metropolitan area located in the northeast region in the United States. The virtual option, via Zoom, was available for those who preferred to meet online, and participants were recruited from across the United States. Recruitment flyers were shared with community gatekeepers and posted on social media.

**Participants**

Participants were recruited through snowball sampling. Inclusion criteria consisted of 1) adults ages 18-30 years, 2) born and living in the United States, 3) born and identified as male, 4) self-identify as African American/Black, and 5) able to understand, write, and speak English. Twenty-four AA/Black men participated in the study. Data saturation occurred at interview number 22 and two additional interviews were completed to confirm data saturation.

**Instruments**

The researcher designed the demographic form and semi-structured interview guide. The demographic form solicited the following information: age, income, insurance, education level, occupation, marital status, religion, and the number of children, along with the children's sex, gender, and age. The semi-structured interview guide was based on the Sunrise Enabler Model of

Leininger's Culture Care theory. The Sunrise Enabler Model describes "a cognitive map to discover embedded and multiple factors related to the theory, tenets, and assumptions with the specific domain of inquiry under study" (Wehbe-Alamah & McFarland, 2015, p. 75). The Sunrise Enabler served as a guide for the interview to capture components of culture. Interview questions addressed cultural components such as religion, family, education, environment, healthcare practices, and language that may influence healthcare decisions. Additional questions were general health beliefs, values, traditions, preventative health behaviors, and vaccine acceptance.

**Data Collection**

Participants were contacted once they expressed interest based on the information provided by the gatekeeper and flyers. The study was described, and eligibility was determined. Interviews were scheduled at participants' convenience and location according to their preference. Fourteen were conducted virtually. Ten interviews were conducted in person at a place of participants' choosing. Second interviews were completed with four participants for clarification and confirmation of the data.

**Data Analysis**

Data collection and analysis were completed concurrently throughout the study. Data was collected until no new data was reported and thus, data saturation was reached. Descriptive data from the demographic form was analyzed with descriptive statistics such as percentages, ranges, and mean. Qualitative data was transcribed from interviews via Zoom or a transcription service. Data was managed utilizing NVivo 20, qualitative data analysis software, following Leininger's Four Phases of Qualitative Data Analysis. The four phases include a) collecting and documenting

raw data, b) identification of descriptors and components, c) pattern and contextual analysis, and d) theme formulation (Leininger, 1990).

**Ethical Consideration**

A University Internal Review Board approved the research study. Consent was obtained from participants and data was collected with minimal risk. Participants were informed of their right to withdraw during any part of the research. Confidentiality was maintained throughout the study. Audio and zoom recordings are stored on researcher's computer which is password protected. Field notes and paper consents are stored in a locked office for three years and then will be shredded. At completion of the study, all data and documents pertaining to the study will be destroyed.

**Results**

*Demographics*. Twenty-four AA/Black men participated but one chose not to complete the demographic from. Participants were aged 18-30 years, with a mean of 24.1 years (SD = 3.48) and one did not report his age. See Table 1 for detailed characteristics. The majority (87.5%) were never married and 65% had a High School/ GED degree as their highest degree. Seventy-three percent reside (n=19) in a state located in the northeast region of the US and 16 (84%) live in a large metropolitan area located in that state (n=1 did not report location). Income ranged from less than $15,000 to $99,000 with a mean income of approximately $30,000 - $46,469. Six refused to answer the income question; 58% (10/17) had an income of $34,999 or less and 17% (3/17) reported higher income of $75,000 to $99,999. Private/group health insurance (50%) was the most common type of insurance. Five participants were fathers. Participants reported their occupation; the most common occupation was students (n=4) and

three were analysts. HPV vaccine uptake data was collected as part of the qualitative interview. Only four participants knew they received the vaccine.

The first phase of analysis was the collection and repeated review of the raw data. The researcher identified 19 categories or descriptors in the second phase of data analysis: All about Health, Approaches to Share HPV Knowledge, COVID, Family & Family Health, Family Influence, Perception of own Health, Physician Visits, Portrayal of Self, Positive Vaccine Attitudes, Protection from Disease, Receipt of HPV Vaccine, Research Health information, Sense of Mistrust, Spiritual Beliefs and Health, STD Knowledge, Vaccine Hesitancy, Vaccine Safety, Vaccine Side Effects, Receipt of HPV Vaccine.

The third phase consisted of identifying patterns in the data. Seven patterns emerged from the data, Pattern of apprehensions of Contracting STDs, Pattern of Healthy Perception of Self, Pattern of Gap in Knowledge of HPV and HPV vaccine, Pattern of Lack of Primary Care Physician Visits, Patterns of Researching Health Information through the Internet, Pattern of Vaccine Hesitancy, and Pattern of Vaccines Protect from Disease.

The final and fourth phase of data analysis resulted in the identification of three themes: 1) Expressed Lack of Knowledge about HPV and HPV vaccine, 2) Perception of Seeking Care from Health Professional because it was not currently needed, and 3) Expressed Interest in the Vaccine but Hesitant due to Mistrust of the Health Care System.

*Theme 1: Expressed Lack of Knowledge about HPV and HPV Vaccine.* Participants in this study suggested a generalized lack of knowledge of HPV and HPV Vaccine. Common STDs named were HIV, gonorrhea, and chlamydia. This was supported by a few quotes.

> "I have [heard about it], but I know little to nothing about it…I wasn't completely sure it was STD" (Participant #22).

"That's not really an STD I know of" (Participant #11).

When asked about HPV, one participant researched it before the interview but still could not provide any information on the topic. Another participant had heard of HPV due to his past job as a teenager teaching sex education for Planned Parenthood. However, he did not know there was a vaccine.

Although the participants' knowledge was limited, some recalled hearing about HPV. Six remembered HPV discussions in school, and three remembered an introduction to HPV from TV and commercials; one recalled learning about HPV from both. "I learned about it at high school and forgot about it since then" (Participant #4). Not only is HPV inconsistently discussed in schools; it is not always address in physician offices either. One participant reported he see has seen his health provider regularly from ages 15 to 30 years, but the health care provider has never discussed the HPV or the HPV vaccine.

> According to Participant #20, "I've been to the doctor….let's just say I go one time a year. I am a black male, so you figure from 15 to 30 I have never once had my physician ask me anything about HPV ever….never had him ask me anything other than are you sexually active."

Only three of 24 participants recalled receiving a recommendation from a health care provider for the HPV vaccine. "I walked into a check-up, and they're like hey, we're offering HPV vaccine" (Participant #2). Others were unaware if they received the vaccine. Nine did not receive the vaccine, nine reported they probably did, and only four knew they received it. "I would say yeah then just because I feel like that was something my mom always kept us up to date on like the newest, and we always had everything" (Participant #16). After the interview, another two participants texted the researcher to confirm they did receive the vaccine.

*Theme 2: Perception of Seeking Care from Health Professional because it was not currently needed.* Over half (n=14) of the participants in this study reported they did not see their health care provider regularly. Seeking care was designated for emergencies and not routine visits. This is supported by the following quotes. Participant #17 stated, "haven't had a primary care doctor since I was a child." Participant #2 stated, "And I only see... Go to the doctor when it's like a dire emergency."

Pride is a deterrent to seeking care indicated by two participants. Participant #11 stated, "There's a lot of men out there that are almost too prideful to go to the doctors after they feel an itch". When asked about having any major health concerns, 17 of them had no concerns; some attributed it to their young age with reservations for future concerns.

> "Right now, no, since I'm so young, but like you know, 10-15 years down the line, I should probably start worrying about stuff" (Participant #1).
>
> "At the moment, no. I think once I get older, I'm worried about my right knee, lower back, and my right shoulder" (Participant #10).

Instead of seeking advice from health care providers, participants do their own research to learn health information. Sources explored were websites, social media, newspapers, or books; common examples included Google, TikTok and others searched WebMD, The Washington Post, and Fitness channels. One participant stated they would go to Barnes and Noble to learn more about a health condition

*Theme 3: Expressed Interest in the Vaccine but Hesitant due to Mistrust of the Health Care System.* Once participants heard or were informed about the vaccine, many were genuinely interested in getting it mostly due to the protection from cancer and protection from STDs. STDs were viewed negatively, and participants reported relief as they discussed never being diagnosed

with one. Furthermore, they were very apprehensive about potentially contracting one. This data is supported by the following quotes.

> Participant #11 stated, “sexually transmitted diseases, those are rough. I’ve never personally had one and pray I never get one.”
>
> Participant #17 stated, "penis cancer sounds extremely painful.”
>
> “It's real life, and I feel like STDs have skyrocketed in my generation. So due to not having these vaccines and not wearing safe sex practices and stuff like that, so yeah, I would totally be open to getting the HPV vaccine if I didn't have it" (Participant #14)

Even though participants expressed interest, there was still some hesitancy due to mistrust of health care. Participants were willing to accept the vaccine without concern if their parent/parents approved it for them at a younger age. Participants in this study trusted their mother. However, if left to make the decision on their own, they hold onto a sense of mistrust. Mistrust of the health care system stems from deception such as the Tuskegee experiment which lead sickness and sometimes death among AA/Blacks. Due to this history, AA men are skeptical of the vaccines which can be viewed as harmful or a way to control AA/Blacks. These beliefs and experiences are passed down from generation to generation.

> “They were doing experiments, and then they gave us syphilis”(Participant#1).
>
> “Yeah, well, history for one, looking back at obviously what's been done in the past to just black people, especially even when it comes …and just medicine in general” (Participant #18).

> “So, for the older generation of black people, they don't necessarily trust hospitals and stuff, 'cause of the history...and they pass that stuff down. ” (Participant #4).

Side effects and long-term effects of the vaccine are a concern. Not knowing how it will directly affect the body causes some apprehension.

> “I mean it could possibly be beneficial, but it could possibly be... like the side effects, you said” (Participant #3).
>
> "If I'm not mistaken, it takes three years or four years to actually make a vaccine with... And when I say, ‘make it,’ I mean that involves the entire testing process to know the exact... Not the exact, but to know... Have a very good idea on what are the effects, long-term and short-term, of the vaccination” (Participant #11).

## Discussion

This study explored the cultural values, beliefs, and practices for HPV vaccination among AA/Black men. In this study, AA/Black men highlighted the need for HPV education and the importance of being well informed when making health care decisions. A general lack of awareness of HPV and the vaccine was apparent throughout the study. These findings reflect previous literature results. In Thompson et al. (2011), AA women were more likely to be aware of HPV compared to AA men. Out of 124 participants aware of HPV, 19.7% were AA men and 80.3% were AA women. Statistics (Adjei Boakye et al., 2017) showed AA males had less awareness of HPV, vaccine, and knowledge that HPV is an STD (52.6%, 49.8%, 46.5%) when compared to AA females (68.8%, 68%, 47.2%) and White males (63.8%, 62.8%, 65.1%).

Findings showed that AA/Black men do not consistently seek health care which supports previous literature (Cheatham et al., 2008; Griffith et al., 2011; Hammond et al., 2010; Powell et

al., 2019). Griffith et al. (2011) reported that AA men do not seek health care. Health care is for "serious health problems" not routine visits (p. 340). Additional reasons were fear, insufficient money, lack of desire to change behaviors and limited knowledge. Unfortunately, many avoid care and die unnecessarily at younger ages of their health issues.

New knowledge generated from this study included participants reporting that they routinely research health information using the internet instead of routinely visiting their primary health care provider. Websites and social media were a common resource. Previous findings were inconsistent. In Birnbaum et al. (2017), young adults reached out to social media for help with mental health, the cause of their symptoms, and how to stop them. Although young adults and adolescents consistently search the internet or social media, not all utilize it as health resources. Hausmann et al. (2017) reported that within the last month, 51.5% of adolescents and young adults aged 12 years and up posted on their social media about health, but only 25% sought out health information from it.

Mistrust in the government and health care system has historically hindered health care decisions such as vaccine receipt. Deep-rotted mistrust passed down from generations stem from historical events such as the Tuskegee experiment and the work of Dr. Marion J Sims have been ingrained in the AA/Black culture. Men in this study reported feelings of mistrust related to the HPV vaccine. Unfortunately, this is consistent in literature. Nan et al. (2019) reported a higher sense of mistrust in government health information decreased perception of HPV efficacy. Mistrust is prevalent with other vaccines. COVID-19 vaccine adherence was less likely to occur as mistrust increased (Bogart et al., 2022; Jamison et al., 2019; Thompson et al., 2021). In Jamison et al. (2019), one AA male stated regarding the flu vaccine created by pharmaceutical

companies, “They don't make money curing you. They make money selling you drugs. They're drug dealers” (p. 90).

Although many felt some sense of mistrust, the participants were surprisingly still interested in the vaccine. This is new knowledge and the findings of the study suggest that even in the place of mistrust AA/Black young men are willing to consider the vaccine. Interest in the vaccine was peaked due to fear of contracting STDs and its protective factors of cancer. Participants felt strongly about not contracting HPV, STDs in general, and cancer. Vaccines were viewed as a sense of protection to avoid negative outcomes. Pierre Joseph (2014) studied AA, White, Latino, and Haitian adults aged 18-22 years old and their views of the HPV vaccine. One African American/Black male stated, "Cuz, I don’t know when I’m gonna have sex, and I wanna be protected when I do so I don’t infect anybody else” (p.179). Some African American/Black men viewed the vaccine as beneficial to individuals and the public as well. It was believed to be a method “to be protected and to be safe to decrease my chances of getting STDs” (Pierre Joseph et al., 2014, p. 179).

Previous literature shows that religion/spirituality is ingrained in the AA culture and is often utilized as a resource for health care advice (Gross et al., 2018; Hamilton, 2020). This study showed inconsistent findings and generated new knowledge. Not all participants reported they believed in a religion or had any spiritual beliefs. Many participants had religion/spiritual beliefs that were integral part of their lives. However, those beliefs were not utilized as a resource when making health care decisions. Although they understood how it could impact everyday decision, it was just not an influential factor at this point in their life.

There is limited research regarding how cultural values affect HPV vaccine acceptance among men, especially AA men. More studies including young men aged 18-26 years are

critical. Because this study focused primarily in one region of the United States, additional data from African American/Black men across the country may provide additional meaningful data. Furthermore, this study included only five fathers. Targeting fathers with children ages 9-18 years who are currently eligible for the vaccine should be explored. Studying their role in vaccine decisions and determining if the tendency to protect their children influences their perspective on the vaccine. Discovering factors that influence HPV vaccine will help combat HPV-related cancer and decrease the incidence of HPV cases. Since cultural values and beliefs are deeply ingrained into health decisions and can influence health behavior, further research with this focus may address a deeper meaning of cultural values, beliefs, and perceptions of the HPV vaccine in African American/Black men.

*Strengths and Limitations.* This study targeted African American/Black men and their cultural beliefs, values, and perceptions of the HPV vaccine. Findings from this study contribute to awareness of HPV vaccine motivation and hesitancy. Limitations included recruitment through snowball sampling; many participants may have similar characteristics and views based on location. Because most participants were from Pennsylvania, further research is necessary to determine if results are similar among African American/Black men throughout various regions.

**Implications for Practice**

Culturally congruent care is imperative to positively impact vaccine acceptance. Leininger suggests three modes of action, cultural accommodation, re-patterning/restructuring, and cultural preservation/maintenance to achieve this goal (McFarland & Wehbe-Alamah, 2019). Cultural preservation occurs when healthcare providers promote care that assists AA/Black men retain their cultural beliefs without judgement (McFarland & Wehbe-Alamah, 2019). For example, AA men in this study were apprehensive about contracting an STD. Preserving this

desire to be protected against STDs is crucial because this may lead to motivation in acceptance of the HPV vaccine. Healthcare providers can support their belief by presenting facts about the diseases HPV can cause as well as sharing the protective factors of HPV vaccine.

Through Cultural Accommodation, nurses can assist AAs/Black men "adapt to or negotiate with others for a beneficial or satisfying health outcome with professional care providers" (McFarland & Wehbe-Alamah, 2019). For AA/Black men, negotiating their source of health information and feeling of mistrust is important. In this study, some AA Black/ Men preferred to research health information using websites, social media, and books. Although it is essential for them to learn information on their own, it is critical as health care providers that they provide and promote appropriate websites supported by accurate medial science and knowledge.

Negotiating feelings of mistrust from AA/Black men towards the health care system may positively influence rates of vaccination. Discussing openly HPV and the vaccine will inform AA/Black men about both HPV and the benefits of the vaccine. Changes in nurse and other health care provider communication is required to develop and strengthen trusting relationships. For instance, nurses must create an environment of equitable care. AA/Black men need to feel they are receiving the same care as everyone one else and not discriminated against in any manner related to the color of their skin or culture. Another technique is to establish open and honest dialogue with patients and listening to their concerns about HPV and the vaccine will show and offer respect to AA/Black men. As a result, providers will have in-depth understanding of AA/Black men's health care decisions; thus, may become less judgmental and, in the process, may positively affect patient interaction and health behaviors (Dawadi et al., 2021; Flynn et al., 2020; Koenig et al., 2014). Building a trusting relationship gives nurses an opportunity to

provide accurate and consistent facts about HPV and the vaccine. Therefore, AA/Black men may feel more comfortable following their recommendations.

Despite the feelings of mistrust, the participants were very inquisitive about the vaccine, but it was not consistently addressed. Without the appropriate information, it is difficult to make an informed decision regarding vaccination. As a result, lack of HPV and HPV vaccine knowledge was prominent in this study. According to Leininger's modes of action, re-patterning or restructuring care may be necessary to provide congruent care (McFarland & Wehbe-Alamah, 2019). Re-structuring our approach to education to promote sexual health is necessary. Sex education is not consistently required in schools across the US. Furthermore, it does not always occur in medical offices and may be perceived as a taboo topic with parents. Avoiding the sexual education discussion puts our young AA/Black men at risk; therefore, changing the approach to education is necessary. Sex education should not be optional but more integrated into health care visits especially during the teenage years. Using effective teaching strategies and providing clear accurate information in laymen's terms to dispel myths about the vaccine for promoting HPV vaccine and its protective factors. Additionally, it should be tailored to fit the needs of AA/Blacks in a culturally congruent manner.

## Conclusion

HPV and HPV-related cancer can potentially be prevented in the AA community. Continued focus on cultural factors is imperative, especially since they have a pivotal role in vaccine decisions. Findings from this study can guide culturally based initiatives to encourage vaccine usage. Culturally based care and education may increase AA patient engagement, promote access to care, and improve patient/provider relationships. Nurses have the potential to

positively impact greater HPV vaccine acceptance, improve patient outcomes, and reduce the burden of HPV on patients and the health care system.

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Table 1: *Demographic Characteristics*

| | N | % |
|---|---|---|
| **Age** | | |
| 18-24 | 12 | 55.5 |
| 25-30 | 10 | 45.5 |
| **Religion** | | |
| Yes | 10 | 45.5 |
| No | 12 | 54.5 |
| **Type of Religion** | | |
| Christian | 10 | 100 |
| **City / State** | | |
| Il | 1 | 4.5 |
| MD | 1 | 4.5 |
| North Huntingdon, PA | 1 | 4.5 |
| Philadelphia, PA | 2 | 9 |
| Pittsburgh, PA | 16 | 72.7 |
| Redmond, WA | 1 | 4.5 |
| **Marital Status** | | |
| Never Married | 20 | 87 |
| Married | 1 | 4.3 |
| Domestic partnership | 2 | 8.7 |
| **Income** | | |
| Under $15,000 | 4 | 17.4 |
| $15,000 to $24,999 | 3 | 13 |
| $25,000 to $34,999 | 3 | 13 |
| $35,000 to $49,999 | 2 | 8.7 |
| $40,000 to $74,999 | 2 | 8.7 |
| $75,000 to $99,999 | 3 | 13 |
| Refused | 3 | 13 |
| Unknown | 3 | 13 |

| | N | % |
|---|---|---|
| **Insurance** | | |
| Medicaid | 2 | 9 |
| Employee-sponsored disability | 2 | 9 |
| National Health Insurance | 3 | 13.6 |
| No insurance / Self-pay | 1 | 4.5 |
| Medicare | 2 | 9 |
| Private/ Group Health | 11 | 50 |
| Other, Specify | 1 | 4.5 |
| **Education** | | |
| High School Diploma / GED | 15 | 65 |
| Associates Degree | 2 | 9 |
| Bachelor's Degree | 6 | 2.6 |
| **Number of Children** | | |
| Have minor children | 5 | 22 |
| Girls | 4 | NA |
| Boys | 3 | NA |
| **Occupation** | | |
| Analyst | 3 | NA |
| Certified Nursing Assistant | 1 | NA |
| EVS Associate | 1 | NA |
| Fashion Store Manager | 1 | NA |
| Home Health Care Aid | 1 | NA |
| Maintenance Technician | 1 | NA |
| Operations Manager | 1 | NA |
| Patient Care Technician | 2 | NA |
| Process Technician | 1 | NA |
| Refused | 3 | NA |
| Student | 4 | NA |
| Surgical Tech | 1 | NA |
| Virology Research Technician | 1 | NA |
| Wrestling Coach | 1 | NA |