



Published in final edited form as:

ANS Adv Nurs Sci. 2015 ; 38(4): E1–E12. doi:10.1097/ANS.0000000000000094.

The Influence of Religiosity and Spirituality on Rural Parents' Health Decision-Making and Human Papillomavirus Vaccine Choices

Tami Thomas, PhD^b, Amy Blumling, BSN^a [Doctoral student], and Augustina Delaney, BSN^a [Doctoral Student]

Tami Thomas: tami.thomas@emory.edu; Amy Blumling: ablumli@emory.edu; Augustina Delaney: augustina.mara.delaney@emory.edu

^aEmory University, Nell Hodgson Woodruff School of Nursing, 1520 Clifton Rd NE, Atlanta, GA, USA 30322

^bFlorida International University

Abstract

Purpose—General health implications of religiosity and spirituality on health have been associated with health promotion so the purpose of this study was to examine the influence of religiosity and spirituality on rural parents' decision making to vaccinate their children against HPV.

Methods—The associations of religiosity and spirituality with parental HPV vaccine decisions were examined in a sample of parents residing in small rural communities (N = 37). Parents of children aged 9 through 13 participated in focus groups held in rural community contexts.

Results—Religiosity (i.e., participation in religious social structures) was a recurring and important theme when discussing HPV vaccination. Spirituality (i.e., subjective commitment to spiritual or religious beliefs) was found to influence the ways in which parents perceived their control over and coping with health issues potentially related to HPV vaccination.

Conclusions—Together, religiosity and spirituality were found to play integral roles in these parents' lives and influenced their attitudes towards HPV vaccination uptake for their children.

Keywords

Religion/Spirituality; Health Disparities; Nursing; Human Papillomavirus; Parents

Background and Significance

Researchers have consistently implied that spirituality and religiosity are positively associated with physical and mental health in minority communities^{1–3}. These associations have been consistently found among rural populations, where influence of these constructs appear to be linked to attitudes about health, the health decision making processes, and

perceptions of health outcomes⁴⁻⁹. Studies that specifically examine parental human papillomavirus (HPV) vaccination attitudes have substantiated research findings about the importance of religiosity and spirituality on individual health. For example, Author (2013a) found that levels of religiosity and spirituality were essential to recognize in the development of interventions to increase HPV vaccination rates in these rural communities because both religiosity and spirituality shape a parents' willingness to accept or reject information about risk (perceived vulnerability and perceived severity). This is an important finding, given that rates of HPV infection and HPV-related cancers disproportionately affect individuals who are living in rural or isolated communities^{8,9}.

HPV Vaccination, Rural Georgia, and Parental Decision Making

A new vaccine to decrease HPV transmission, HPV infection, and cervical cancer arrived in 2006 when the Food and Drug Administration (FDA) licensed a quadrivalent vaccination to protect against certain types of HPV¹⁰. Incidence rates of HPV are not available because HPV is not a reportable disease, but we do know that HPV types 6, 11, 16 and 18 are responsible for approximately 99% of cervical cancers and 90% of genital warts¹¹⁻¹³. In addition, chronic HPV infection is also responsible for cancers of the head, neck, and throat, as well as cancers of the genitals¹⁴. The CDC's Advisory Committee on Immunization Practices (ACIP) voted unanimously to recommend that both girls and boys as young as 9 to 10 years old receive the HPV vaccine to prevent HPV-related cancers, including cervical cancer and related morbidities¹⁵. Given in a series of three injections over a six-month period, the HPV vaccine can be administered to children as young as 9 and adults up to 26 years old¹⁶. HPV vaccine rates are very low nationally in rural areas (less than 2 % for boys and only 22% for girls) and in the rural isolated counties of Georgia where this study was conducted¹⁶.

Georgia has the highest estimated rate of new cancer cases, including HPV related-cervical cancer, and despite prevention measures, five-year changes in cancer mortality rates reflect a rise in cervical cancer and other HPV-related cancers in Georgia¹⁷. In Georgia's southeastern region, where counties are predominantly rural and isolated, cancer rates are higher than any other region in Georgia¹⁶.

Religiosity and Spirituality

Religiosity and spirituality are major components of an individual's culture and play an important role in rural communities¹⁸. Spirituality and religiosity are substantively related to each other, as both are connected to the idea of the sacred (i.e., things set apart from the ordinary, connected to the divine)^{7,19}. However, research has clearly indicated that there is a need to make distinctions between the two concepts, particularly when examining health behaviors. Although definitions vary, spirituality is typically aligned with subjective, personal beliefs, whereas religiosity is identified with traditional, institutionally-related practices and behaviors, occurring both within and separate from religious institutions²⁰.

Past research has found that those individuals with higher rates of religiosity frequently view illness as a punishment from God^{5,21}. Studies have shown that parental religiosity influences adolescent risky sexual behavior and influences their fears that HPV vaccination would

encourage sexual behavior^{22,23}. Other researchers have asserted that there is a disconnection between spirituality attitudes about faith and healing and their actual faith and healing experiences in rural contexts^{8,24}. For example, a study of young women from rural areas of Georgia attending a historically black university in the rural south showed that self-reported religiosity was not protective against sexual risk taking²⁵. These religious and spirituality beliefs have been found to directly impact perceptions of illnesses viewed as connected to sexuality. Although religiosity and spirituality are undeniably a major part of many cultures, consistent evidence regarding the impact of religiosity and spirituality on HPV vaccine decision-making is lacking in rural isolated communities. For this reason, the purpose of this research study was to examine the influences of religiosity and spirituality on rural parents' decision making to vaccinate their children against HPV.

Methods

After Institutional Review Board Approval (IRB) of this study, meetings were held with community members (parents and grandparents) who resided in rural Georgia communities, where HPV- related cervical cancer rates are higher than those in urban areas; suggested location and date to conduct the study and where to recruit and posted IRB flyers. This study chose focus groups to collect qualitative data based on input from parents. A convenience sample of 37 parents participated in this study. Eligibility included living in one of the previously chosen rural Georgia counties (based on geography, economy, and healthcare access) and being a parent or adult caregiver to a child between the ages of 9 and 13. All A total of 8 focus groups were held at a prearranged day and time. A research assistant met each parent and provided an invitation letter with a written description of the study, principle investigator's contact, and IRB contact information. Parents or adult caregivers who chose to participate were screened for inclusion criteria, completed informed consents and a brief 10-question socio-demographic information survey. Participants were then guided to a separated area where trained research assistants conducted the focus group for a maximum of 5 participants. Each focus group ranged from 60 to 90 minutes with research assistants asking questions about HPV knowledge, HPV attitudes, and factors influencing perceptions of HPV. At the conclusion of the focus group, each participant received a \$50 gift card from a local grocery store for participating.

Analysis

Qualitative data analysis was completed in several steps. First, the digital audio recordings were transcribed and checked for accuracy. In addition, notes taken during focus groups were utilized to verify participants by their individual anonymous codes so answers to questions and any additional comments that were made were verified. Transcripts were then preliminarily analyzed by an expert in qualitative analysis and a trained graduate research assistant who were not present during data collection to ensure rigor and eliminate bias during analysis²⁶. After familiarizing themselves with the recordings, each unit of the transcript was assigned to one or more categories. Within each broad category, similar data were grouped together, and subcategories were created based on these data groupings. In the second stage, each focus group transcript was analyzed individually, and then analyzed focus group data was compared between the data generated from one focus group to the next

focus group. Codes (or labels) were designated for all content that appeared to represent a thought, feeling, or behavior related to parents' thoughts on HPV vaccination.

In the third stage, line-by-line coding and constant comparative analyses were completed. This coded data input into NVIVO 10 software. NVIVO results were then compared to the selective coding performed by hand to validate relationships. Selective coding involves the identification of codes that are most robust, identifying if they can be combined to provide a broader understanding of a phenomenon. This systematic approach laid a foundation for a substantive (or data driven) concept analysis regarding parents' perceptions of health, cancer, and HPV vaccination. Finally, the concept analysis generated themes that were compared to extant literature in relation to similarities and dissimilarities in study findings. Demonstrating scientific adequacy (also called trustworthiness) was important to support the rigor of this qualitative research. Themes were not created a priori, but were derived from the dataset and then organized into the larger categories of focus: Religiosity and Spirituality. The themes in the larger focus categories were then examined across the whole dataset, and in relation to each specific interview.

Results

The individual themes presented here are organized around the two larger, overall topics of research: Religiosity and Spirituality, explored in the analysis. From a contextual point of view, these terms were used when discussing health, social support, coping techniques, and communal ties. Parents' statements indicated that both religiosity and spirituality played a central role in their lives and influenced their attitudes toward HPV vaccination uptake for their children. These two main topics, with their individual thematic categories, are discussed below.

Religiosity

Drawing upon Hill & Pargament's research, religiosity was defined as participation in religious social structures. For this reason, religious themes were identified by the occurrences of the words "church", "Sunday", "service", "pastor" and "Bible" in the transcripts. Although religiosity related comments were not always directly related to HPV or HPV vaccination, it did emerge as an important influence discussing how they approach health management issues.

These parents' statements indicated that religiosity played a central role in their lives as a social space that influenced their worldviews and health attitudes (N= 18 of the 37 participants). Many parents reported attending church services weekly, and six reported that they engaged in church related activities throughout the week. Those that viewed religion as playing a significant role in their lives noted their participation in church related activities as evidence of their commitment. Thematic analysis into the role of religiosity revealed themes including viewing church members as family members, the use of the church as a means to disseminate health information, a need for pastors or preachers to have factual information on health-related matters to deliver to the congregation, and the correlation between denomination and likelihood to vaccinate with the HPV vaccine.

Church members as family members—The church also emerged as an institution that provided a physical space for bringing together like-minded individuals around religious beliefs. Through frequent attendance, churches created an extended family where members in their institution were viewed as influencing their health beliefs. Familial terms were used to describe relationships between individuals in the church, highlighting the value and role these people played in their lives. Several participants expressed their views on the subject of religiosity and the role it plays in their role as parents as part of the spiritual or church family and a broader, church-family life:

“We still have to go back to parents [to gather HPV vaccination information]. But we still also have to go to the mothers of the church because when I was a child going to church, mothers of the church took all young ladies to the side taught them how to be a young lady and they can listen to them, you know.”

“You know we call [church members] our family, too. Bring them into and give them insight and direction on different things and let them know...”

Use of the church to disseminate health information—Parents who participated in the study expressed that the church was an important site for both the provision and dissemination of health information. Many pointed to seminars, fellowship meetings, revivals, and Sunday programming focusing on health issues as important. As the church was viewed as a safe space, site of shared values, and source of information. More than half of the participants (N=30) noted that it would be ideal to have HPV vaccine information shared through church based programming, as described in the following quotations:

“We have a lot of things at church, but health seminars are not one that we talk about in church. And that should be something we should place in church.”

“Cause we have women’s convention, that would be great, having a women’s convention - we have a bunch of women that get together once a year, that’d be a great little piece to add in a women’s convention.”

Pastors presenting factual HPV knowledge to the congregation—The majority of parents (N=25) reported that their pastors should introduce HPV as a topic for discussion, which could then lead to education efforts in the church. However, it is important to note that 4 parents specifically noted that church leaders should not be involved in HPV education. These parents indicated their belief that HPV and sexuality education went beyond church leaders’ role, and was not an appropriate task, given their other responsibilities. However, this concern was generated from their personal knowledge of their own pastors the lack of training to discuss HPV and health promotion education, as opposed to the information that someone educated on the topic (e.g., a teacher), may have on the subject.

Opposing

“I don’t think the pastor.... [HPV education is] not something he needs to be concerning himself with. That’s the parents or the teachers or the people who are educated to be able to give that insight because you’d have some pastors who’d mess that up.”

Supportive

“If the teacher or the pastor or whatever don’t know the real facts they’re not goin’ to do it as effective as someone that knows the facts about it.”

“The pastors are the center of attention, and so if the pastor wants to come out and start having, like, a discussion about it, I’m pretty sure more people would listen and tell - “reach one teach one” to the next person.”

Correlation between denomination and intent to vaccinate—Beyond being a contextual space, affiliations with specific denominations emerged as an important theme. Participants reported specific religious affiliations on their demographic data form; none selected agnostic or not applicable. Although few participants mentioned their specific affiliation identities in interviews, the demographic data provide interesting insights into religion affiliation and health decision-making. Specifically, those that designated themselves as “Baptist,” a reportedly conservative religion, reported high rates of HPV vaccination and intent to vaccinate their children in the future.

Spirituality

Spirituality themes were identified by the occurrences of the words “God/ Jesus/ Lord”, “He”, “up above”, and “pray/ prayer” in the transcripts (e.g. Hill & Pargament, 2003). Comments that highlighted the importance of spirituality and related beliefs were typically associated with perceptions of control over their health outcomes. Thematic analysis into the role of spirituality revealed themes focusing on the positive psychological and physical benefits of having faith, and the lack of control an individual has in his or her own health, as compared to the control of a higher power.

Positive psychological and physical benefits of spirituality—Spirituality was specifically viewed as a key source of emotional support, a positive influence on health, and contributing to protective health outcomes. Specifically, notions of God and spirituality were central in understanding how much control these parents perceived they had on their overall health. Almost a third of the parents made statements indicating that spiritual and psychological strength in the face of health adversity were closely entwined (N= 12). Prayer and talking to God were strategies used to cope with health concerns. Participants also shared experiences where they perceived God as having a role in ensuring their children were safe and made healthy decisions in situations.

“Participant (P): I think that God gave doctors the ability they have so they can help me. That’s the way I see it, but some people don’t see it that way.”

“Interviewer: How can you help [address cancer concerns]?”

“P: Pray, prayer. [When getting awaiting cancer results] I just keep thinking that ‘There’s something there’. And I just keep praying we can find it. “

Health outcomes controlled by a higher power—Similarly, some parents/ participants (n= 14) did not view health as a something an individual controls but one’s own

health trajectory is controlled by a higher power. Faith and trust in God need to be relied upon, and this required having a strong sense of spirituality according to these participants.

“All these parents saying ‘My child is healthy, they don’t need [the HPV vaccine]’
... So you could be healthy- but you could still get sick no matter what.

It’s all [up to] God.”

“I just keep thinking that there’s something there and I just keep praying we can find it [to cure cancer].

Demographic Data

Quantitative demographic data was collected in the form of a brief survey prior to the beginning of focus groups. Demographic data results identify the majority of participants as female parents between the ages of 34 and 52 years. Sixty-four percent of all participants self-described themselves as Rural, and 55.6% responded that their religious denomination was Baptist. In addition, 58.3% responded that they had an annual household income less than \$30,000 per year (Table 1).

Discussion

This study found that a variety of themes, such as “use of a church to disseminate health information” and “correlation between denomination and intent to vaccinate children”, relating to religion and spiritually influenced participants’ negotiation of messages regarding health decision-making processes and attitudes toward HPV vaccination for their children. This supports prior research findings that indicate these phenomena are defining features of rural families and their health care decision making^{5,6,18,24}. In a meta-analysis of 49 empirical studies (including stress due to cancer, aging, hospitalization, and waiting to see a doctor), spiritual and religious coping resources were associated with important psychological benefits for many individuals¹. Further, studies examining other sexual and general health behaviors have similarly found that both religion and spirituality inform this population’s health decision- making processes²⁷.

Religion

For many Americans living in rural areas, churches play a central role in their community, providing spiritual comfort and social resources²⁸. Historically, churches have been foundational institutions in the broader Black community through their political activism, social services, and the establishment of both community and familial values^{28–32}. The shared religious beliefs that bring individuals to their church further provide a context in which individuals can connect with others about health concerns. It is for this reason that rural parents often cite families and church interchangeably as their preferred source of support for social and health related needs³³.

Studies show that the networking occurring in church settings increases social bonds and creates an extended family^{24,27,34,35}. Church attendance then provides a multi- level support and social bonding that has led to the Black church being described as “quasi-family”^{28,33}. It is this sense of having a “church family” that directly affects both psychological and

physical wellbeing and impacts health decision-making, such as whether or not to vaccinate a child with the HPV vaccine series.

Participants in our study pointed out that other health issues and sexual health values are often disseminated in religious contexts during church meetings. However, none had ever discussed HPV or HPV vaccination specifically. The connections that individuals often make between HPV and sexuality may explain why churches are hesitant to engage in discussions about vaccination³⁶. Many avoid any discussion of sexuality, despite the clear needs in the rural communities to address important health promotion issues and decision making³⁶. Despite such resistance, public health researchers have provided clear evidence of the importance of rural churches mobilizing around sexual health issues in light of the high rates of sexually transmitted infections and chronic illness^{6,31,32}.

Most parents in this study voiced their support of discussing health care decision-making and sexuality in church. Further, many voiced that they believed that churches should be involved in educating its members about HPV vaccination. Church-based health promotion interventions have been noted for their ability to reach broad populations and their potential for influencing members' behaviors at multiple levels of change.^{28,29,31,32} DeHaven et al. (2004) examined the published literature on health programs in faith-based organizations to determine the effectiveness of these programs. They found that across all types of illness or health concerns, faith-based programs contributed to improved health outcomes. Further, HPV vaccination education could be integrated into church programming, given that nearly 20% of the published studies on faith-based education programs focus on cancers. Future research should examine the ways in which HPV education could be conducted in manners that respected and reflected congregants' values, while providing accurate and accessible information. A collaborative partnership approach utilizing principles of community-based participatory research, and involving churches in program design and delivery, is essential for recruitment, participation, and sustainability.

While parents' beliefs about the degree to which church leaders should be involved in HPV education efforts varied, these parents all agreed that pastors must support the provision of HPV education. As was found in prior research conducted with rural communities^{29,32,37,38}, pastors and similar church leaders, by virtue of their position, were respected authority figures in the community. Thus, pastors' involvement and education on the topic would increase congregants' trust in HPV vaccine uptake information being disseminated by educators and their desire to get more information to make informed decisions. Furthermore, in their position, pastors can greatly facilitate both access to hard-to-reach community and the implementation of programs designed for church members that would most benefit from HPV-related information and education.

Spirituality

Prior research on spirituality in rural communities has found that it is a mechanism that supports coping with and experiencing illnesses such as cancers^{39,40} and sexually transmitted infections.^{41,42} This supports our current findings that spirituality influenced these parents' perceptions of control over their health outcomes. This spirituality was central in shaping: 1) the ways in which individuals were able to cope with illness, 2) health

systems' ability to address illness, and 3) the degree to which a higher being determined health outcomes.

In our qualitative study, spirituality played a central role in the ways in which these parents viewed God as being a part of their coping mechanisms with health issues, including HPV related outcomes for their children. These parents noted that prayer was a way of seeking emotional support from a higher being, had a positive influence on their health perceptions, and contributed to protective health outcomes. Prior research would assert that this occurs because prayer is one of the most commonly used means of coping with a particularly upsetting event or condition, particularly when it is related to an individual's health⁴³. In fact, several studies have pointed to the value of prayer in helping patients and caregivers feel a part of the health decision-making processes, and as a means of integrating their beliefs into medical procedures^{34,35,43,44}.

The relevance of prayer is an important consideration when in light of past research findings and result of this study when researchers use cross cultural approaches to increase HPV vaccination. Interventions that incorporate prayer to increase participants' sense of empowerment and reduce negative health trajectories have been found to be effective in many communities, especially in rural African American communities. A cardiovascular health promotion intervention for African American women, for example, found that incorporating group prayers and health messages together increased participants' sense of control and allowed participants to "bring God" into their health care experience⁴⁵. Prior research has shown that validating the power of prayer increases individuals' adherence to health regimes and increases their involvement in health decision-making processes^{6,19,27,43,45}.

The role of spirituality also extended into the realm of health systems, such that these parents felt a higher power determined doctors and their related treatments' abilities to work. HPV infection and its long term implications, these parents asserted, was determined by God; thus, individuals need to have a strong sense of spirituality to ensure they are making the right health decisions. Further, an individuals' long-term health trajectory was viewed as being in the "hands of God," such that there was only so much a person could do in terms of making health decisions and following health regimes. This attitude supports the research asserting that rural African Americans view their body as a temple of God that individuals do not control, but work to keep healthy and "clean"⁶.

Conclusions

These qualitative findings provide information about the influence of religiosity and spirituality on rural parents' decision to vaccinate their child with the HPV vaccination. The rural communities included in this study had no local pediatrician, and parents often had to drive more than 60 minutes to receive primary health care for their children. While local health departments in these rural areas provided health care for children, and had the HPV vaccine, the hours of operation and availability of the HPV vaccine secondary to dispensing costs were often limiting for parents who are working fulltime. So, overcoming barriers to HPV vaccination may require collaborative efforts among rural parents. Our findings

suggest that in the context of faith-based initiatives the inclusion of parents would be beneficial to increase HPV vaccination. Through the use of community churches and faith-based approaches, HPV prevention and vaccine uptake activities could be improved in this population and in other underserved communities where culture contexts highly value religion and spirituality.

Several intervention points are implied by the qualitative findings of this research. The most notable is to understand the effects of religiosity and spirituality and how these cultural tenets, including values and specific faith based contexts, can be integrated into efforts seeking to educate parents or caregivers about HPV-related cancers, HPV transmission, and HPV vaccination. Future research must examine the feasibility of integrating spirituality and religiosity into HPV vaccine interventions targeting rural communities.

An additional intervention point would be to include community members' input regarding the inclusion of faith based portions of health promotion or health care decision making. Given the influence of spirituality, religiosity and faith-based contexts on perceptions of health and health decision-making, it is imperative that spirituality, prayer and religiosity are included in the development of interventions in small rural communities. As religiosity, prayer and spirituality contribute to rural culture and are viewed as important components to develop culturally appropriate tools for health education - not only HPV vaccination, but also other important health promotion topics. Health care providers and educators can utilize these qualitative findings as they engage in both evidenced based practice, community engaged research on immunization and the development of other cross cultural approaches to decreasing health disparities.

Acknowledgements

This work was funded in part by:

Robert Wood Johnson Foundation Nurse Faculty Scholars Program, #67893: Prevalence and Correlates of HPV Vaccination in Rural Areas; **1R03NR013558-01 National Institutes of Health, National Institute of Nursing Research:** Tailoring an Intervention with Parents in Rural Areas to Reduce HPV Transmission; and **L60MD007271 National Institutes of Health, National Institute of Minority Health and Health Disparities:** HPV in Rural Areas.

The authors extend their appreciation to the participating communities in rural Georgia, and the research assistants who assisted in data collection and entry. The authors would also like to acknowledge Dr. Stephens of FIU for her help in data analysis.

References

1. Ano GG, Vasconcelles EB. Religious coping and psychological adjustment to stress: a meta-analysis. *Journal of Clinical Psychology*. 2005 Apr; 61(4):461–480. [PubMed: 15503316]
2. Koenig, HG.; McCullough, ME.; Larson, DB. *Handbook of Religion and Health*. Oxford, England: Oxford University Press; 2001.
3. Seybold KSH, P C. The Role of Religion and Spirituality in Mental and Physical Health. *Current Directions in Psychological Science*. 2001; 10(1):21–24.
4. Cates JR, Brewer NT, Fazekas KI, Mitchell CE, Smith JS. Racial differences in HPV knowledge, HPV vaccine acceptability, and related beliefs among rural, southern women. *The Journal of Rural Health : Official Journal of the American Rural Health Association and the National Rural Health Care Association*. 2009 Winter;25(1):93–97.

5. Holt CL, Clark EM, Roth D, et al. Development and Validation of Instruments to Assess Potential Religion-Health Mechanisms in an African American Population. *The Journal of Black Psychology*. 2009 May 1; 35(2):271–288. [PubMed: 19774107]
6. Holt CL, McClure SM. Perceptions of the religion-health connection among African American church members. *Qualitative Health Research*. 2006 Feb; 16(2):268–281. [PubMed: 16394214]
7. Pargament KI, Magyar-Russell G, Murray-Swank NA. The Sacred and the Search for Significance: Religion as a Unique Process. *Journal of Social Issues*. 2005; 61(4):665–687.
8. Strickland O, DiClemente R, Higgins M. Author. 2013a. An Opportunity for Cancer Prevention During Preadolescence and Adolescence: Stopping HPV Related Cancer through HPV Vaccination. *Special Supplement to the Journal of Adolescent Health*. 2013; 52(2013):S60–S68.
9. Strickland O, DiClemente R, Haber M, Higgins M. Author. 2013b. Rural African American Parents' Knowledge and Decisions about HPV Vaccination. *the Journal of Nursing Scholarship*. 2013; 44:4, 358–367. Epub 2012 Nov. 5.
10. Jain N, Euler GL, Shefer A, Lu P, Yankey D, Markowitz L. Human papillomavirus (HPV) awareness and vaccination initiation among women in the United States, National Immunization Survey-Adult 2007. *Preventive Medicine*. 2009 May; 48(5):426–431. [PubMed: 19100762]
11. Dunne EF, Nielson CM, Stone KM, Markowitz LE, Giuliano AR. Prevalence of HPV infection among men: A systematic review of the literature. *The Journal of Infectious Diseases*. 2006 Oct 15; 194(8):1044–1057. [PubMed: 16991079]
12. Hu D, Goldie S. The economic burden of noncervical human papillomavirus disease in the United States. *American Journal of Obstetrics and Gynecology*. 2008 May; 198(5):500.e501–507.e501. [PubMed: 18455524]
13. Joseph DA, Miller JW, Wu X, et al. Understanding the burden of human papillomavirus-associated anal cancers in the US. *Cancer*. Nov 15; 2008 113(10 Suppl):2892–2900. [PubMed: 18980293]
14. Lee GY, Kim SM, Rim SY, Choi HS, Park CS, Nam JH. Human papillomavirus (HPV) genotyping by HPV DNA chip in cervical cancer and precancerous lesions. *International Journal of Gynecological Cancer : Official Journal of the International Gynecological Cancer Society*. 2005 Jan-Feb;15(1):81–87. [PubMed: 15670301]
15. Centers for Disease Control and Prevention. ACIP recommends all 11–12 year-old males get vaccinated against HPV. 2011
16. National and state vaccination coverage among adolescents aged 13 through 17 years--United States, 2010. *MMWR. Morbidity and mortality weekly report*. 2011 Aug 26; 60(33):1117–1123. [PubMed: 21866084]
17. Jemal A, Siegel R, Ward E, Murray T, Xu J, Thun MJ. Cancer statistics, 2007. *CA: a Cancer Journal for Clinicians*. 2007 Jan-Feb;57(1):43–66. [PubMed: 17237035]
18. Foster ML, Arnold E, Rebhook G, Kegeles SM. 'It's my inner strength': spirituality, religion and HIV in the lives of young African American men who have sex with men. *Culture, Health & Sexuality*. 2011 Oct; 13(9):1103–1117.
19. Pargament, KI. *The Psychology of Religion And Coping: Theory, Research Practice*. New York: Guilford; 1997.
20. Hill PC, Pargament KI. Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist*. 2003; 58:64–74. [PubMed: 12674819]
21. Strickland O, Diclemente R, Higgins M. Author. An opportunity for cancer prevention during preadolescence and adolescence: stopping human papillomavirus (HPV)-related cancer through HPV vaccination. *The Journal of adolescent health : official publication of the Society for Adolescent Medicine*. May; 2013 52(5 Suppl):S60–S68. [PubMed: 23298993]
22. Landor A, Simons LG, Simons RL, Brody GH, Gibbons FX. The role of religiosity in the relationship between parents, peers, and adolescent risky sexual behavior. *Journal of youth and adolescence*. Mar; 2011 40(3):296–309. [PubMed: 21052800]
23. Waller J, Marlow LA, Wardle J. Mothers' attitudes towards preventing cervical cancer through human papillomavirus vaccination: a qualitative study. *Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology*. 2006 Jul; 15(7):1257–1261.

24. Gonnerman ME Jr, Lutz GM, Yehieli M, Meisinger BK. Religion and health connection: a study of African American, Protestant Christians. *Journal of health care for the poor and underserved*. 2008 Feb; 19(1):193–199. [PubMed: 18263995]
25. Freeman A. Author. 2011. Project Genesis: Self-Reported Religiosity, Spirituality and Sexual Risk Taking in Young African-American Women Attending a Historically African American College (HBCU). *Journal of the National Black Nurses Association*. 2011 Aug; 22(1):27–35. Additionally cited in IBCSR Research Review, 2011. [PubMed: 21888148]
26. Glaser BS, A. Atherton: Aldine Transaction. 1967
27. Holt CL, Lewellyn LA, Rathweg MJ. Exploring religion-health mediators among African American parishioners. *Journal of Health Psychology*. 2005 Jul; 10(4):511–527. [PubMed: 16014389]
28. Scott LA, Black DR. Health communication and professional preparation: health educator credibility, message learning, and behavior change. *Health Education & Behavior : The Official Publication of the Society for Public Health Education*. 1999 Oct; 26(5):609–620. [PubMed: 10533166]
29. Calvert WJ, Isaac-Savage EP. Motivators and barriers to participating in health promotion behaviors in Black men. *Western Journal of Nursing Research*. 2013 Aug; 35(7):829–848. [PubMed: 23493676]
30. Chatters LM, Taylor RJ, Jackson JS, Lincoln KD. Religious Coping Among African Americans, Caribbean Blacks and Non-Hispanic Whites. *Journal of Community Psychology*. 2008 Apr; 36(3): 371–386. [PubMed: 21048887]
31. DeHaven MJ, Hunter IB, Wilder L, Walton JW, Berry J. Health programs in faith-based organizations: are they effective? *American Journal of Public Health*. 2004 Jun; 94(6):1030–1036. [PubMed: 15249311]
32. Fulton BR. Black churches and HIV/AIDS: factors influencing congregations' responsiveness to social issues. *Journal for the Scientific Study of Religion*. 2011; 50(3):617–630. [PubMed: 22148134]
33. Murry VM, Heflinger CA, Suiter SV, Brody GH. Examining perceptions about mental health care and help-seeking among rural African American families of adolescents. *Journal of Youth and Adolescence*. 2011 Sep; 40(9):1118–1131. [PubMed: 21259067]
34. Cooper DC, Thayer JF, Waldstein SR. Coping with racism: the impact of prayer on cardiovascular reactivity and post-stress recovery in African American women. *Annals of Behavioral Medicine :A Publication of the Society of Behavioral Medicine*. 2014 Apr; 47(2):218–230. [PubMed: 24122482]
35. Levin JS, Chatters LM, Taylor RJ. Religious effects on health status and life satisfaction among black Americans. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*. 1995 May; 50(3):S154–S163.
36. Sutton MY, Parks CP. HIV/AIDS prevention, faith, and spirituality among black/African American and Latino communities in the United States: strengthening scientific faith-based efforts to shift the course of the epidemic and reduce HIV-related health disparities. *Journal of Religion and Health*. 2013 Jun; 52(2):514–530. [PubMed: 21626244]
37. Barnes PA, Curtis AB. A national examination of partnerships among local health departments and faith communities in the United States. *Journal of Public Health Management and Practice : JPHMP*. 2009 May-Jun; 15(3):253–263. [PubMed: 19363406]
38. Cene CW, Haymore LB, Ellis D, et al. Implementation of the power to prevent diabetes prevention educational curriculum into rural African American communities: a feasibility study. *The Diabetes Educator*. 2013 Nov-Dec; 39(6):776–785. [PubMed: 24129595]
39. Aziz NM, Rowland JH. Cancer survivorship research among ethnic minority and medically underserved groups. *Oncology Nursing Forum*. 2002 Jun; 29(5):789–801. [PubMed: 12058154]
40. Mollica M, Nemeth L. Spirituality measurement in African American cancer survivors: a critical literature review. *Journal of Holistic Nursing : Official Journal of the American Holistic Nurses' Association*. 2013 Sep; 31(3):214–225. [PubMed: 23863275]

41. Dalmida SG, Holstad MM, DiIorio C, Laderman G. The meaning and use of spirituality among African American women living with HIV/AIDS. *Western Journal of Nursing Research*. 2012 Oct; 34(6):736–765. [PubMed: 22566288]
42. Figueroa LR, Davis B, Baker S, Bunch JB. The influence of spirituality on health care-seeking behaviors among African Americans. *The ABNF journal :Official journal of the Association of Black Nursing Faculty in Higher Education, Inc.* 2006 Spring;17(2):82–88.
43. Ellison CGT, R J. Turning to prayer: SOcial and situational atecedents of religious coping among African Americans. *Review of Religious Research*. 1996; 38(2):111–131.
44. van Olphen J, Schulz A, Israel B, et al. Religious involvement, social support, and health among African-American women on the east side of Detroit. *Journal of General Internal Medicine*. 2003 Jul; 18(7):549–557. [PubMed: 12848838]
45. Yanek LR, Becker DM, Moy TF, Gittelsohn J, Koffman DM. Project Joy: faith based cardiovascular health promotion for African American women. *Public health reports (Washington, D.C. : 1974)*. 2001; 116(Suppl 1):68–81.

Clinical Relevance

In order to increase HPV vaccine uptake in rural Georgia, interventions must emphasize and include parental views on religiosity and spirituality.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 1

Demographic/Quantitative Survey Data

	Frequency	Percent	Valid Percent	Cumulative Percent
Parent Age				
14–33	5	13.9	14.3	14.29
34–52	23	63.9	65.7	80
53–71	7	19.4	20	100
Total	35	97.2	100	
<i>Missing - Refuse to Answer</i>	1	2.8		
Total	36	100		
	Frequency	Percent	Valid Percent	Cumulative Percent
Parent Gender				
Male	6	16.7	17.1	17.1
Female	29	80.6	82.9	100
Total	35	97.3	100	
<i>Missing - Refuse to Answer</i>	1	2.8		
Total	36	100		
	Frequency	Percent	Valid Percent	Cumulative Percent
Child Age				
7–11	7	19.4	20	20
12–15	28	77.8	80	100
Total	35	97.2	100	
<i>Missing - Refuse to Answer</i>	1	2.8		
Total	36	100		
	Frequency	Percent	Valid Percent	Cumulative Percent
Child Gender				
Male	20	55.6	58.8	58.8
Female	14	39.2	41.2	100
Total	34	95.2	100	
<i>Missing - Refuse to Answer</i>	2	5.6		
Total	36	100.8		
	Frequency	Percent	Valid Percent	Cumulative Percent
Will Not Vaccinate				
Disagree	34	94.4	94.4	94.4
Agree	2	5.6	5.6	100
Total	36	100		
	Frequency	Percent	Valid Percent	Cumulative Percent
Intend to Vaccinate with HPV				
Disagree	23	63.9	69.7	69.7
Agree	10	27.8	30.3	100

Total	33	91.7	100	
<i>Missing - Refuse to Answer</i>	3	8.3		
Total	36	100		
	Frequency	Percent	Valid Percent	Cumulative Percent
Race				
Black (Rural or Afro Caribbean)	23	63.9	63.9	63.9
Non-Hispanic (White)	13	36.1	36.1	100
Total	36	100	100	
	Frequency	Percent	Valid Percent	Cumulative Percent
Religion				
Baptist	20	55.6	55.6	55.6
Methodist	4	11.1	11.1	66.7
Bible Church	3	8.3	8.3	75
Pentecostal	7	19.4	19.4	94.4
Other	2	5.6	5.6	100
Total	36	100	100	
	Frequency	Percent	Valid Percent	Cumulative Percent
Education				
Some High School	6	16.7	16.7	16.7
High School	10	27.8	27.8	44.5
Some College	15	41.7	41.7	86.2
Bachelor's Degree	3	8.3	8.3	94.5
Master's Degree	2	5.6	5.6	100
Total	36	100	100	
	Frequency	Percent	Valid Percent	Cumulative Percent
Marital Status				
Single	4	11.1	11.1	11.1
Married	27	75	75	86.1
Divorced	4	11.1	11.1	97.2
Long Term Relationship	1	2.8	2.8	100
Total	36	100	100	
	Frequency	Percent	Valid Percent	Cumulative Percent
Income				
\$15,000 or less	7	19.4	19.4	19.4
\$16–30,000	14	38.9	38.9	58.3
\$31–45,000	5	13.9	13.9	72.2
\$46–60,000	6	16.7	16.7	88.9
\$61–80,000	4	11.1	11.1	100
Total	36	100	100	
	Frequency	Percent	Valid Percent	Cumulative Percent